

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

In the Matter of:

THE APPLICATION OF	)	
CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS	)	
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC	)	CASE NO. 2022-00230
CONVENIENCE AND NECESSITY TO CONSTRUCT	)	
A WIRELESS COMMUNICATIONS FACILITY	)	
IN THE COMMONWEALTH OF KENTUCKY	)	
IN THE COUNTY OF TODD	)	

SITE NAME: CLIFTY

\* \* \* \* \*

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

Cellco Partnership, d/b/a Verizon Wireless (“Applicant”), by counsel, pursuant to (i) KRS §§278.020, 278.040, 278.650, 278.665, and other statutory authority, and the rules and regulations applicable thereto, and (ii) the Telecommunications Act of 1996, respectfully submits this Application requesting issuance of a Certificate of Public Convenience and Necessity (“CPCN”) from the Kentucky Public Service Commission (“PSC”) to construct, maintain, and operate a Wireless Communications Facility (“WCF”) to serve the customers of the Applicant with wireless communications services.

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

1. The complete name and address of the Applicant: Cellco Partnership, d/b/a Verizon Wireless, having a local address of 2902 Ring Road, Elizabethtown, KY 42701.

2. Applicant is a Delaware general partnership and a copy of the Amended Certificate of Assumed Name is on file with the Secretary of State of Commonwealth of Kentucky is included as part of **Exhibit A**.

3. 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.

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

5. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve the Applicant's services to an area currently not served or not adequately served by the Applicant by increasing coverage or capacity and thereby enhancing the public's access to innovative and competitive wireless communications services. A statement from Applicant's RF Design Engineer outlining said need is attached as **Exhibit Q** along with Propagation Maps attached as **Exhibit Qa**. The WCF is an integral link in the Applicant's network design that must be in place to provide adequate coverage to the service area.

6. To address the above-described service needs, Applicant proposes to construct a WCF at 462 Clifty-Kirkmansville Road, Elkton 42220 (36° 59' 26.09" North latitude, 87° 09' 44.12" 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 Stevie

and Brenda Powell pursuant to a Deed recorded at Deed Book 102, Page 489 in the office of the County Clerk. The proposed WCF will consist of a 250-foot tall tower, with an approximately 5-foot tall lightning arrestor attached at the top, for a total height of 255-feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of the Applicant's radio electronics equipment and appurtenant equipment. The Applicant's equipment cabinet or shelter will be approved for use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound will be fenced and all access gate(s) will be secured. A description of the manner in which the proposed WCF will be constructed is attached as **Exhibit C** and **Exhibit D**.

7. A list of utilities, corporations, or persons with whom the proposed WCF is likely to compete along with a map showing the proposed location as well as the identified like facilities is attached as **Exhibit E**.

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

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

10. Applicant has considered the likely effects of the installation of the proposed WCF on nearby land uses and values and has concluded that there is no more suitable location reasonably available from which adequate services can be provided, and that there are no reasonably available opportunities to co-locate Applicant's antennas on an existing structure. When suitable towers or

structures exist, Applicant attempts to co-locate on existing structures such as communications towers or other structures capable of supporting Applicant's facilities; however, no other suitable or available co-location site was found to be located in the vicinity of the site.

11. A copy Federal Aviation Administration (“FAA”) submission for proposed case #2022-ASO-8404-OE which indicates that the filing is under study as is attached as **Exhibit F**.

12. A copy of the Kentucky Airport Zoning Commission (“KAZC”) Application to construct the tower is attached as **Exhibit G**.

13. A geotechnical engineering report was performed at the Collier Engineering Co., Inc., 2949 Nolensville Pike, Nashville, TN 37411, dated May 20, 2022, and is attached as **Exhibit H**. The name and address of the geotechnical engineering firm and the professional engineer registered in Kentucky who prepared the report are included as part of **Exhibit R**.

14. Clear directions to the proposed WCF site from the County seat are attached as **Exhibit I**. The name and telephone number of the preparer of Exhibit I are included as part of this exhibit.

15. Applicant, pursuant to a written agreement, has acquired the right to use the WCF site and associated property rights. A copy of the agreement is attached as **Exhibit J**.

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

17. The Construction Manager for the proposed facility is Larry Rhoads and the identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained in **Exhibit R**.

18. As noted on the Survey attached as part of **Exhibit C**, the surveyor has determined that the tower site and access easement are not within any flood hazard area per Flood Hazard Boundary Map, Community Panel Number 21219C0125C, Dated July 22, 2010.

19. **Exhibit C** 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 C**.

20. Applicant has notified every person who, according to the records of the County Property Valuation Administrator, owns property which is within 500 feet of the proposed tower or contiguous to the site property, by certified mail, return receipt requested, of the proposed construction. Each notified property owner has been provided with a map of the location of the proposed construction, the PSC docket number for this application, the address of the PSC, and will be 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 to be sent by certified mail to each landowner are attached as **Exhibit K** and **Exhibit L**, respectively.

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

22. Notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2) that measure at least 2 feet in height and 4 feet in width and that contain all required language in letters of required height, have been posted, one in a visible location on the proposed site and one on the nearest public road. Such signs shall remain posted for at least two weeks after filing of the Application, and a copy of the posted text is attached as **Exhibit N**. 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 **Exhibit O**.

23. The general area where the proposed facility is to be located is undeveloped and removed a significant distance from any residential structures. The nearest residential structure is 916.8 feet from the proposed tower site.

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

25. The tower must be located at the proposed location and proposed height to provide necessary service to wireless communications users in the subject area, as set out and documented in the RF Design Engineers' Statement of Need and Propagation Maps attached as **Exhibit Q and Qa**. The proposed tower will expand and improve voice and data service for Verizon Wireless customers.

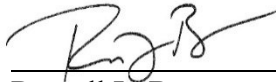
26. All Exhibits to this Application are hereby incorporated by reference as if fully set out as part of the Application.

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

Russell L. Brown  
Clark, Quinn, Moses, Scott & Grahn, LLP  
320 North Meridian Street, Suite 1100  
Indianapolis, IN 46204  
Phone: (317) 637-1321  
FAX: (317) 687-2344  
Email: [rbrown@clarkquinnlaw.com](mailto:rbrown@clarkquinnlaw.com)  
Attorney for Cellco Partnership d/b/a Verizon Wireless

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

Respectfully submitted,



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Russell L. Brown  
Clark, Quinn, Moses, Scott & Grahn, LLP  
320 North Meridian Street, Suite 1100  
Indianapolis, IN 46204  
Phone: (317) 637-1321 / FAX: (317) 687-2344  
Email: [rbrown@clarkquinnlaw.com](mailto:rbrown@clarkquinnlaw.com)  
Attorney for Cellco Partnership d/b/a Verizon Wireless

## LIST OF EXHIBITS

- A Applicant Entity
- B FCC License Documentation
- C Site Development Plan:
  - 500' Vicinity Map Legal Descriptions
  - Flood Plain Certification Site Plan
  - Vertical Tower Profile
- D Tower and Foundation Design
- E Competing Utilities, Corporations, or Persons List  
And Map of Like Facilities in Vicinity
- F FAA Information (Proposed Case)
- G KAZC Application
- H Geotechnical Report
- I Directions to WCF Site
- J Copy of Real Estate Agreement
- K Notification Listing
- L Copy of Property Owner Notification
- M Copy of County Judge/Executive notice
- N Copy of Posted Notices
- O Copy of Newspaper Legal Notice Advertisement
- P Copy of Radio Frequency Design Search Area
- Q Copy of RF Design Engineer State of Need
- Qa Propagation Maps
- R List of Qualified Professionals



A

COMMONWEALTH OF KENTUCKY  
TREY GRAYSON  
SECRETARY OF STATE



Secretary of State  
Received and Filed  
08/21/2008 12:06:00 PM  
Fee Receipt: \$20.00

CERTIFICATE OF ASSUMED NAME

This certifies that the assumed name of  
Verizon Wireless

(Please Underline the Assumed Name)

has been adopted by See Addendum

(Real Name - Not to be Underlined)

which is the "real name" of (YOU MUST CHECK ONE)

- |  |   |
|--|---|
| <input type="checkbox"/> a Domestic General Partnership                      | <input checked="" type="checkbox"/> a Foreign General Partnership           |
| <input type="checkbox"/> a Domestic Registered Limited Liability Partnership | <input type="checkbox"/> a Foreign Registered Limited Liability Partnership |
| <input type="checkbox"/> a Domestic Limited Partnership                      | <input type="checkbox"/> a Foreign Limited Partnership                      |
| <input type="checkbox"/> a Domestic Business Trust                           | <input type="checkbox"/> a Foreign Business Trust                           |
| <input type="checkbox"/> a Domestic Corporation                              | <input type="checkbox"/> a Foreign Corporation                              |
| <input type="checkbox"/> a Domestic Limited Liability Company                | <input type="checkbox"/> a Foreign Limited Liability Company                |
| <input type="checkbox"/> a Joint Venture                                     |   |

organized and existing in the state or country of Delaware, and whose address is

One Verizon Way Basking Ridge NJ 07920

Street Address, P.O. Box

City

State

Zip Code

The certificate of assumed name is executed by

MYNEX PCS Inc.

*Jane A. Schepker*  
\_\_\_\_\_  
Jane A. Schepker-Assistant Secretary

Print or Type Name and Title  
June 15, 2008

Date

\_\_\_\_\_  
Signature  
\_\_\_\_\_  
Name of Person Executing  
\_\_\_\_\_  
Date

0641227.07      dcornish  
 AMD  
 Allison Lundergan Grimes  
 Kentucky Secretary of State  
 Received and Filed:  
 1/22/2013 1:43 PM  
 Fee Receipt: \$20.00



COMMONWEALTH OF KENTUCKY  
 ELAINE N. WALKER, SECRETARY OF STATE

Division of Business Filings Business Filings PO Box 718 Frankfort, KY 40602 (502) 584-3490 www.sos.ky.gov	<b>Amended Certificate of Assumed Name</b> (Domestic or Foreign Business Entity)	<b>AAN</b>
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Pursuant to the provisions of KRS 365, the undersigned applies to amend the certificate of assumed name and, for that purpose, submits the following statement:

- The assumed name is Verizon Wireless  
(The name must be identical to the name on record with the Secretary of State.)
- The certificate of assumed name was filed with the Secretary of State on: 6/21/2006
- The current principal office address (if any) is:  

<u>One Verizon Way</u>	<u>Basking Ridge</u>	<u>NJ</u>	<u>07920</u>
<small>Street Address or Post Office Box Numbers</small>	<small>City</small>	<small>State</small>	<small>Zip</small>
- The principal office address is hereby changed to:  

<u> </u>	<u> </u>	<u> </u>	<u> </u>
<small>Street Address or Post Office Box Numbers</small>	<small>City</small>	<small>State</small>	<small>Zip</small>
- This application will be effective upon filing, unless a delayed effective date and/or time is provided. The effective date or the delayed effective date cannot be prior to the date the application is filed. The date and/or time is    
(Delayed effective date and/or time)
- The changes in the identity of the partners are as follows: See Addendum for current partners

I declare under penalty of perjury under the laws of Kentucky that the foregoing is true and correct.  
 GTE Wireless Incorporated

<u>Jane A. Schepker</u>	<u>Jane A. Schepker</u>	<u>Assistant Secretary</u>	<u>1/21/2012</u>
<small>Signature of Applicant</small>	<small>Printed Name</small>	<small>Title</small>	<small>Date</small>

### **Addendum**

The full name of the Partnership is Cellco Partnership, a Delaware general partnership composed of the following partners:

<b><i>General Partners of Cellco Partnership</i></b>	<b><i>Address</i></b>
Bell Atlantic Mobile Systems LLC	One Verizon Way Basking Ridge, NJ 07920
GTE Wireless Incorporated	One Verizon Way Basking Ridge, NJ 07920
PCS Nucleus, L.P.	Denver Place South Tower 999-18 <sup>th</sup> Street, Suite 1750 Denver, CO 80202
JV PartnerCo, LLC	Denver Place South Tower 999-18 <sup>th</sup> Street, Suite 1750 Denver, CO 80202

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 ENGINEERING  
ALPHARETTA, GA 30022

<b>Call Sign</b> WRAM732	<b>File Number</b> 0009262182
<b>Radio Service</b> WT - 600 MHz Band	

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 01-09-2018	<b>Effective Date</b> 01-13-2021	<b>Expiration Date</b> 01-09-2030	<b>Print Date</b> 03-11-2021
<b>Market Number</b> PEA096	<b>Channel Block</b> A	<b>Sub-Market Designator</b> 1	
<b>Market Name</b> Richmond, KY			
<b>1st Build-out Date</b> 01-09-2024	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

Waivers/Conditions:

NONE

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:** WRAM732

**File Number:** 0009262182

**Print Date:** 03-11-2021

**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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Reference Copy

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 ENGINEERING  
 ALPHARETTA, GA 30022

<b>Call Sign</b> KNKN867	<b>File Number</b> 0009262184
<b>Radio Service</b> CL - Cellular	
<b>Market Numer</b> CMA445	<b>Channel Block</b> B
<b>Sub-Market Designator</b> 0	

FCC Registration Number (FRN): 0003290673

<b>Market Name</b> Kentucky 3 - Meade
--

<b>Grant Date</b> 09-01-2020	<b>Effective Date</b> 01-13-2021	<b>Expiration Date</b> 10-01-2030	<b>Five Yr Build-Out Date</b>	<b>Print Date</b>
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**Site Information:**

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
1	36-50-41.0 N	086-51-27.0 W	243.8	82.3	1043225

Address: 1.3 KM EAST OF SR-100 & JEFF DAVIS HIGHWAY

City: RUSSELLVILLE County: LOGAN State: KY Construction Deadline:

**Antenna: 1**

<b>Maximum Transmitting ERP in Watts:</b>	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
<b>Antenna Height AAT (meters)</b>	133.200	104.800	100.900	107.400	123.200	117.300	105.900	123.700
<b>Transmitting ERP (watts)</b>	153.310	72.160	9.790	0.510	0.420	0.540	11.230	75.590

**Antenna: 2**

<b>Maximum Transmitting ERP in Watts:</b>	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
<b>Antenna Height AAT (meters)</b>	133.200	104.800	100.900	107.400	123.200	117.300	105.900	123.700
<b>Transmitting ERP (watts)</b>	0.870	21.280	113.650	147.250	38.070	3.570	0.330	0.410

**Antenna: 3**

<b>Maximum Transmitting ERP in Watts:</b>	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
<b>Antenna Height AAT (meters)</b>	133.200	104.800	100.900	107.400	123.200	117.300	105.900	123.700
<b>Transmitting ERP (watts)</b>	1.480	0.400	0.430	2.930	40.950	143.640	111.910	19.230

**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: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
2	36-58-11.0 N	086-31-15.0 W	205.4	117.3	1043045

Address: Bowling Green Main, 3.4 KM southwest of

City: BOWLING GREEN County: WARREN 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)	108.200	135.100	135.400	118.600	102.700	103.000	111.100	110.800
Transmitting ERP (watts)	186.450	83.280	10.010	0.510	0.420	0.490	10.730	87.210

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)	47.300	74.100	74.500	57.600	41.800	42.100	50.200	49.900
Transmitting ERP (watts)	0.270	2.540	54.390	78.620	9.450	0.350	0.270	0.270

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)	108.200	135.100	135.400	118.600	102.700	103.000	111.100	110.800
Transmitting ERP (watts)	1.020	0.240	0.310	2.130	24.000	70.020	56.310	11.460

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
3	37-08-47.0 N	086-39-02.0 W	189.0	128.0	1043044

Address: 9.7 KM SOUTH SOUTHEAST OF

City: MORGANTOWN County: BUTLER State: KY Construction Deadline:

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)	126.200	118.800	110.000	116.600	100.700	122.200	119.800	131.300
Transmitting ERP (watts)	0.330	0.690	16.910	90.270	116.960	30.240	2.840	0.260

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)	126.200	118.800	110.000	116.600	100.700	122.200	119.800	131.300
Transmitting ERP (watts)	2.100	0.260	0.330	1.050	21.320	101.470	108.950	23.430

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)	126.200	118.800	110.000	116.600	100.700	122.200	119.800	131.300
Transmitting ERP (watts)	90.270	14.390	1.070	0.260	0.340	2.530	33.930	116.960

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	37-47-53.0 N	086-19-51.0 W	257.3	125.0	1043043

Address: WITHIN THE CITY LIMITS OF

City: GARFIELD County: BRECKINRIDGE State: KY Construction Deadline:

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)	164.300	145.800	148.800	118.100	136.500	132.100	154.800	164.500
Transmitting ERP (watts)	104.850	46.830	5.630	0.290	0.240	0.280	6.030	49.040

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)	164.300	145.800	148.800	118.100	136.500	132.100	154.800	164.500
Transmitting ERP (watts)	0.560	13.820	74.230	95.620	25.740	2.460	0.240	0.270

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)	164.300	145.800	148.800	118.100	136.500	132.100	154.800	164.500
Transmitting ERP (watts)	0.930	0.240	0.280	2.040	27.580	95.620	74.230	12.320

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
6	36-46-32.1 N	086-33-56.0 W	206.3	91.1	1043041

Address: 2.4 KM NORTH OF

City: FRANKLIN County: SIMPSON State: KY Construction Deadline:

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)	78.700	81.100	68.500	56.000	56.400	56.600	64.300	64.200
Transmitting ERP (watts)	144.730	63.540	7.340	0.360	0.300	0.380	8.420	66.540

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)	78.700	81.100	68.500	56.000	56.400	56.600	64.300	64.200
Transmitting ERP (watts)	0.710	17.400	93.440	120.380	32.400	3.090	0.300	0.340

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)	78.700	81.100	68.500	56.000	56.400	56.600	64.300	64.200
Transmitting ERP (watts)	1.280	0.300	0.390	2.690	30.220	88.150	70.900	14.430



Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
7	37-03-33.7 N	087-01-50.4 W	200.0	77.7	1266950

Address: Lake Malone, 1038 Heltsley Road

City: Lewisburg County: LOGAN State: KY Construction Deadline:

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)	120.200	116.000	119.100	120.900	103.100	89.400	78.300	104.000
Transmitting ERP (watts)	102.840	191.490	71.150	7.980	0.430	0.450	0.570	14.860

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)	120.200	116.000	119.100	120.900	103.100	89.400	78.300	104.000
Transmitting ERP (watts)	0.570	14.860	102.840	191.490	71.150	7.980	0.430	0.450

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)	120.200	116.000	119.100	120.900	103.100	89.400	78.300	104.000
Transmitting ERP (watts)	3.330	0.430	0.500	1.560	31.780	148.650	162.990	36.490

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
8	36-47-11.0 N	086-08-35.3 W	253.3	91.1	1043039

Address: 4.8 KM NORTHEAST OF

City: SCOTTSVILLE County: ALLEN State: KY Construction Deadline:

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)	151.400	124.900	113.700	118.200	77.200	108.300	128.800	139.000
Transmitting ERP (watts)	117.640	52.550	6.320	0.320	0.260	0.310	6.770	55.020

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)	151.400	124.900	113.700	118.200	77.200	108.300	128.800	139.000
Transmitting ERP (watts)	0.630	15.510	83.280	107.290	28.880	2.760	0.260	0.300

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)	151.400	124.900	113.700	118.200	77.200	108.300	128.800	139.000
Transmitting ERP (watts)	1.050	0.260	0.310	2.290	30.940	107.290	83.280	13.820

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	37-53-45.0 N	086-49-51.0 W	164.5	65.6	1043711

Address: OLD LEWISPORT OWENSBORO RD, 7.6 KM WEST OF

City: HAWESVILLE County: HANCOCK State: KY Construction Deadline:

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)	81.600	79.800	95.100	59.500	72.200	82.700	89.400	93.100
Transmitting ERP (watts)	7.600	61.740	131.990	58.960	7.090	0.360	0.300	0.350

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)	81.600	79.800	95.100	59.500	72.200	82.700	89.400	93.100
Transmitting ERP (watts)	0.300	0.340	0.710	17.400	93.440	120.380	32.400	3.090

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)	81.600	79.800	95.100	59.500	72.200	82.700	89.400	93.100
Transmitting ERP (watts)	93.440	15.510	1.180	0.300	0.350	2.570	34.720	120.380

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
10	37-16-52.0 N	087-06-06.0 W	150.0	128.0	1043038

Address: 0.4 MI. EAST OF INTERCHANGE OF 58 & W. KY PKWY; IMMED. ESE OF

City: CENTRAL CITY County: MUHLENBERG State: KY Construction Deadline:

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)	126.500	101.500	105.400	104.300	100.200	87.900	94.300	112.900
Transmitting ERP (watts)	50.380	128.750	66.660	8.640	0.500	0.260	0.330	5.430

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)	126.500	101.500	105.400	104.300	100.200	87.900	94.300	112.900
Transmitting ERP (watts)	0.300	0.480	13.100	80.300	122.700	38.140	3.840	0.260

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)	126.500	101.500	105.400	104.300	100.200	87.900	94.300	112.900
Transmitting ERP (watts)	18.570	1.520	0.260	0.340	1.630	26.900	108.950	99.160

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
11	37-27-33.0 N	086-17-41.0 W	220.7	128.0	1043037

Address: 0.8 KM SSE OF INT OF W KY PKWY & SR-259

City: LEITCHFIELD County: GRAYSON State: KY Construction Deadline:

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)	136.500	139.400	136.800	139.500	172.500	127.300	136.600	156.800
Transmitting ERP (watts)	92.370	12.750	0.300	0.450	0.200	0.420	3.510	48.480

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)	136.500	139.400	136.800	139.500	172.500	127.300	136.600	156.800
Transmitting ERP (watts)	3.700	26.630	74.790	73.070	22.660	3.610	0.490	0.490

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)	136.500	139.400	136.800	139.500	172.500	127.300	136.600	156.800
Transmitting ERP (watts)	2.080	0.820	0.770	7.520	42.060	84.790	55.750	12.610

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
12	37-59-17.0 N	086-08-53.0 W	202.4	61.0	1043036

Address: 1.6 km ESE of

City: BRANDENBURG County: MEADE State: KY Construction Deadline:

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)	82.800	58.900	109.700	63.200	40.600	55.600	61.600	100.400
Transmitting ERP (watts)	0.480	12.480	87.870	162.090	56.190	6.380	0.330	0.360

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)	82.800	58.900	109.700	63.200	40.600	55.600	61.600	100.400
Transmitting ERP (watts)	5.570	0.500	0.330	0.330	4.740	24.940	42.710	26.730

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
13	37-24-41.0 N	086-32-12.0 W	233.5	128.0	1043035

Address: 3.2 KM WEST SOUTHWEST OF

City: CANEYVILLE County: GRAYSON State: KY Construction Deadline:

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)	136.900	135.600	147.900	125.100	152.900	161.200	146.000	164.600
Transmitting ERP (watts)	202.510	94.240	14.690	1.160	1.000	8.520	44.320	169.340

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
13	37-24-41.0 N	086-32-12.0 W	233.5	128.0	1043035

Address: 3.2 KM WEST SOUTHWEST OF

City: CANEYVILLE County: GRAYSON 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)	136.900	135.600	147.900	125.100	152.900	161.200	146.000	164.600
Transmitting ERP (watts)	20.040	101.220	204.390	162.460	34.720	3.620	0.410	2.990

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)	136.900	135.600	147.900	125.100	152.900	161.200	146.000	164.600
Transmitting ERP (watts)	4.910	0.410	2.960	14.520	88.120	204.810	176.590	43.820

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
14	36-55-48.0 N	086-56-27.0 W	207.9	60.7	

Address: 6.4 KM SOUTH OF

City: LEWISBURG County: LOGAN State: KY Construction Deadline:

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)	116.400	93.400	82.400	74.500	68.800	70.800	79.200	98.300
Transmitting ERP (watts)	113.650	147.250	38.070	3.570	0.330	0.410	0.870	21.280

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)	116.400	93.400	82.400	74.500	68.800	70.800	79.200	98.300
Transmitting ERP (watts)	0.430	3.180	42.710	147.250	113.650	18.120	1.350	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)	116.400	93.400	82.400	74.500	68.800	70.800	79.200	98.300
Transmitting ERP (watts)	8.230	0.410	0.330	0.420	9.450	74.650	162.390	71.290

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	36-59-27.0 N	086-26-29.0 W	160.9	79.3	1201033

Address: 537 10th Street at Chestnut Street

City: BOWLING GREEN County: WARREN State: KY Construction Deadline:

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)	60.100	54.500	67.300	54.300	51.400	51.700	45.400	61.600
Transmitting ERP (watts)	162.390	71.290	8.230	0.410	0.330	0.420	9.450	74.650

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	36-59-27.0 N	086-26-29.0 W	160.9	79.3	1201033

Address: 537 10th Street at Chestnut Street

City: BOWLING GREEN County: WARREN 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)	60.100	54.500	67.300	54.300	51.400	51.700	45.400	61.600
Transmitting ERP (watts)	0.310	2.780	58.870	89.730	12.030	0.400	0.310	0.310

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)	60.100	54.500	67.300	54.300	51.400	51.700	45.400	61.600
Transmitting ERP (watts)	0.310	0.310	0.310	0.460	21.160	106.060	35.940	1.760

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
16	36-50-40.2 N	087-12-42.0 W	256.6	60.7	

Address: 5.8 KM NW OF

City: ELKTON County: TODD State: KY Construction Deadline:

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)	102.100	95.500	91.800	117.800	119.100	128.800	118.300	103.200
Transmitting ERP (watts)	112.350	104.850	19.980	1.660	0.300	0.350	1.660	27.580

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)	102.100	95.500	91.800	117.800	119.100	128.800	118.300	103.200
Transmitting ERP (watts)	0.940	15.530	144.900	372.460	200.020	26.370	1.550	0.840

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)	102.100	95.500	91.800	117.800	119.100	128.800	118.300	103.200
Transmitting ERP (watts)	4.170	0.300	0.320	0.500	13.510	83.280	126.050	39.860

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
17	37-32-55.4 N	087-16-05.4 W	140.2	93.0	1244911

Address: 235 WEST KY 136

City: CALHOUN County: MCLEAN State: KY Construction Deadline:

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)	81.300	91.000	88.000	100.800	95.300	104.000	105.400	89.700
Transmitting ERP (watts)	30.940	106.670	82.330	13.120	0.980	0.240	0.310	2.310

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
17	37-32-55.4 N	087-16-05.4 W	140.2	93.0	1244911

Address: 235 WEST KY 136

City: CALHOUN County: MCLEAN 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)	81.300	91.000	88.000	100.800	95.300	104.000	105.400	89.700
Transmitting ERP (watts)	0.240	0.310	6.850	54.080	117.640	51.650	5.960	0.290

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)	81.300	91.000	88.000	100.800	95.300	104.000	105.400	89.700
Transmitting ERP (watts)	27.580	2.590	0.240	0.300	0.630	15.420	82.330	106.670

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
18	37-38-33.2 N	086-42-46.0 W	210.3	60.7	

Address: 6 KM EAST OF

City: FORDSVILLE County: OHIO State: KY Construction Deadline:

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)	84.000	65.700	96.800	89.400	105.200	118.300	113.200	109.900
Transmitting ERP (watts)	144.730	63.540	7.340	0.360	0.300	0.380	8.420	66.540

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)	84.000	65.700	96.800	89.400	105.200	118.300	113.200	109.900
Transmitting ERP (watts)	0.780	18.970	101.290	131.240	33.930	3.180	0.300	0.370

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)	84.000	65.700	96.800	89.400	105.200	118.300	113.200	109.900
Transmitting ERP (watts)	1.200	0.300	0.390	2.840	38.070	131.240	101.290	16.150

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
19	38-00-08.4 N	086-19-20.3 W	237.4	103.9	1049227

Address: 1.2 km Northwest of

City: PAYNEVILLE County: MEADE State: KY Construction Deadline:

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)	115.700	125.400	135.500	103.300	111.300	123.300	141.900	137.900
Transmitting ERP (watts)	172.880	116.290	19.640	1.990	0.530	4.460	28.140	120.910

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
19	38-00-08.4 N	086-19-20.3 W	237.4	103.9	1049227

Address: 1.2 km Northwest of

City: PAYNEVILLE County: MEADE 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)	115.700	125.400	135.500	103.300	111.300	123.300	141.900	137.900
Transmitting ERP (watts)	8.740	48.710	165.560	182.540	70.320	9.950	0.770	1.160

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)	115.700	125.400	135.500	103.300	111.300	123.300	141.900	137.900
Transmitting ERP (watts)	4.430	0.370	2.670	13.090	79.440	184.650	159.200	39.500

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
20	37-11-25.0 N	087-11-51.0 W	182.9	66.4	1065886

Address: 701 BASS LANE

City: GREENVILLE County: MUHLENBERG State: KY Construction Deadline:

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)	103.800	96.500	95.100	84.500	77.800	98.000	117.300	91.200
Transmitting ERP (watts)	155.980	120.380	19.190	1.430	0.350	0.460	3.370	45.240

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)	103.800	96.500	95.100	84.500	77.800	98.000	117.300	91.200
Transmitting ERP (watts)	0.510	13.220	93.080	171.700	62.700	6.760	0.350	0.380

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)	103.800	96.500	95.100	84.500	77.800	98.000	117.300	91.200
Transmitting ERP (watts)	2.800	0.350	0.450	1.400	28.440	135.320	145.300	31.240

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
21	37-11-39.2 N	086-15-53.9 W	213.4	52.0	

Address: WATER TOWER ROAD

City: BROWNSVILLE County: EDMONSON State: KY Construction Deadline:

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)	69.000	44.100	63.000	60.300	76.600	76.200	93.300	97.400
Transmitting ERP (watts)	331.960	148.280	17.830	0.910	0.740	0.870	19.100	155.270

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
21	37-11-39.2 N	086-15-53.9 W	213.4	52.0	

Address: WATER TOWER ROAD

City: BROWNSVILLE County: EDMONSON 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)	69.000	44.100	63.000	60.300	76.600	76.200	93.300	97.400
Transmitting ERP (watts)	1.780	43.760	235.010	302.750	81.490	7.780	0.740	0.850

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)	69.000	44.100	63.000	60.300	76.600	76.200	93.300	97.400
Transmitting ERP (watts)	2.960	0.740	0.870	6.470	87.310	302.750	235.010	39.000

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
22	36-40-28.0 N	086-51-30.0 W	192.9	38.1	

Address: WITHIN THE TOWN OF

City: ADAIRVILLE County: LOGAN State: KY Construction Deadline:

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)	35.900	37.000	29.900	34.100	29.900	40.700	57.000	48.700
Transmitting ERP (watts)	148.100	65.400	7.600	0.390	0.300	0.430	8.720	70.070

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)	35.900	37.000	29.900	34.100	29.900	40.700	57.000	48.700
Transmitting ERP (watts)	1.830	30.180	122.250	111.260	20.840	1.700	0.300	0.380

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)	35.900	37.000	29.900	34.100	29.900	40.700	57.000	48.700
Transmitting ERP (watts)	2.360	0.300	0.370	1.180	23.930	113.860	122.250	26.290

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
23	37-13-17.0 N	086-42-02.0 W	190.8	57.9	

Address: Morgantown Downtown, Approx 1.5 KM ( 1.0 MI) ENE OF

City: MORGANTOWN County: BUTLER State: KY Construction Deadline:

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)	102.300	72.100	81.900	88.300	85.600	94.300	111.800	102.700
Transmitting ERP (watts)	42.710	147.250	113.650	18.120	1.350	0.330	0.430	3.180



Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
23	37-13-17.0 N	086-42-02.0 W	190.8	57.9	

Address: Morgantown Downtown, Approx 1.5 KM ( 1.0 MI) ENE OF

City: MORGANTOWN County: BUTLER 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)	102.300	72.100	81.900	88.300	85.600	94.300	111.800	102.700
Transmitting ERP (watts)	0.330	0.420	9.450	74.650	162.390	71.290	8.230	0.410

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)	102.300	72.100	81.900	88.300	85.600	94.300	111.800	102.700
Transmitting ERP (watts)	38.070	3.570	0.330	0.410	0.870	21.280	113.650	147.250

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
24	37-38-30.2 N	086-28-14.9 W	202.7	50.2	

Address: Rough River, 9.5KM (6.0 MI) SW OF

City: KINGSWOOD County: BRECKINRIDGE State: KY Construction Deadline:

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)	43.600	58.600	57.500	57.700	60.100	89.000	70.700	65.400
Transmitting ERP (watts)	264.330	116.050	13.400	0.660	0.540	0.690	15.390	121.520

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)	43.600	58.600	57.500	57.700	60.100	89.000	70.700	65.400
Transmitting ERP (watts)	1.420	34.650	184.990	239.690	61.970	5.820	0.540	0.670

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)	43.600	58.600	57.500	57.700	60.100	89.000	70.700	65.400
Transmitting ERP (watts)	2.200	0.540	0.700	5.180	69.530	239.690	184.990	29.490

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
25	36-51-02.0 N	086-42-26.0 W	198.1	59.4	

Address: JCT. SR-103 & SR-603, APPROX. 3.2 KM SW OF

City: AUBURN County: LOGAN State: KY Construction Deadline:

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)	61.200	65.800	54.700	38.200	54.400	60.300	51.100	56.100
Transmitting ERP (watts)	124.760	162.210	90.940	14.810	1.300	0.640	5.680	30.740

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
25	36-51-02.0 N	086-42-26.0 W	198.1	59.4	

Address: JCT. SR-103 & SR-603, APPROX. 3.2 KM SW OF

City: AUBURN County: LOGAN 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)	61.200	65.800	54.700	38.200	54.400	60.300	51.100	56.100
Transmitting ERP (watts)	1.480	8.260	53.490	159.390	161.650	53.380	6.730	0.530

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)	61.200	65.800	54.700	38.200	54.400	30.300	51.100	56.100
Transmitting ERP (watts)	41.260	4.310	0.490	3.550	23.820	120.300	242.920	193.090

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
26	37-23-00.0 N	086-52-28.0 W	163.4	125.3	1043042

Address: 1.6 KM SSE

City: BEAVER DAM County: OHIO State: KY Construction Deadline:

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)	127.600	102.300	92.500	117.700	113.600	112.400	112.300	132.200
Transmitting ERP (watts)	3.020	33.930	100.130	64.650	9.650	0.650	0.240	0.270

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)	127.600	102.300	92.500	117.700	113.600	112.400	112.300	132.200
Transmitting ERP (watts)	0.240	0.250	0.310	8.140	56.310	104.850	38.950	4.370

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)	127.600	102.300	92.500	117.700	113.600	112.400	112.300	132.200
Transmitting ERP (watts)	100.130	31.660	3.320	0.240	0.260	0.400	10.730	66.150

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	37-02-39.4 N	086-10-59.9 W	212.8	106.4	1213318

Address: 470 Hayes Road

City: Smiths Grove County: WARREN State: KY Construction Deadline:

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)	101.300	97.700	91.800	90.100	117.500	131.500	124.400	116.400
Transmitting ERP (watts)	96.880	58.040	4.690	0.270	0.190	0.360	4.280	56.720

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	37-02-39.4 N	086-10-59.9 W	212.8	106.4	1213318

Address: 470 Hayes Road

City: Smiths Grove County: WARREN 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)	101.600	97.700	91.800	90.100	117.500	131.500	124.400	116.400
Transmitting ERP (watts)	0.970	16.520	117.640	131.230	43.210	2.250	0.300	0.270

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)	101.600	97.700	91.800	90.100	117.500	131.500	124.400	116.400
Transmitting ERP (watts)	0.570	0.190	0.210	1.560	29.210	92.910	81.390	12.800

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
28	36-44-52.5 N	086-11-51.7 W	219.4	77.7	1219613

Address: Downtown

City: Scottsville County: ALLEN State: KY Construction Deadline:

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)	85.000	66.900	61.300	43.400	61.400	63.100	73.600	85.500
Transmitting ERP (watts)	148.300	99.760	16.850	1.700	0.460	3.820	24.140	103.720

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)	85.000	66.900	61.300	43.400	61.400	63.100	73.600	85.500
Transmitting ERP (watts)	7.500	41.790	142.020	156.580	60.320	8.540	0.660	0.990

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)	85.000	66.900	61.300	43.400	61.400	63.100	73.600	85.500
Transmitting ERP (watts)	3.800	0.320	2.290	11.230	68.150	158.400	136.570	33.890

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
29	37-52-14.6 N	086-16-43.1 W	243.8	39.6	

Address: Irvington WT, 1.0 km ESE of

City: Irvington County: BRECKINRIDGE State: KY Construction Deadline:

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)	72.800	71.900	56.800	59.600	69.700	80.000	110.200	67.900
Transmitting ERP (watts)	47.930	165.220	127.520	20.330	1.520	0.370	0.480	3.570

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
29	37-52-14.6 N	086-16-43.1 W	243.8	39.6	

Address: Irvington WT, 1.0 km ESE of

City: Irvington County: BRECKINRIDGE 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)	72.800	71.900	56.800	59.600	69.700	80.000	110.200	67.900
Transmitting ERP (watts)	0.370	0.480	10.610	83.760	182.210	79.990	9.240	0.460

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)	72.800	71.900	56.800	59.600	69.700	80.000	110.200	67.900
Transmitting ERP (watts)	42.710	4.010	0.370	0.460	0.980	23.880	127.520	165.220

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
30	37-56-31.2 N	086-03-37.8 W	193.5	77.7	1221515

Address: 0.8 km North Northwest of

City: Licksillet County: MEADE State: KY Construction Deadline:

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)	63.900	127.200	65.800	54.400	36.100	30.500	59.300	102.600
Transmitting ERP (watts)	61.740	82.330	23.470	2.370	0.260	0.260	0.510	11.360

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)	63.900	127.200	65.800	54.400	36.100	30.500	59.300	102.600
Transmitting ERP (watts)	0.380	3.220	20.310	87.270	124.780	83.940	14.180	1.430

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)	63.900	127.200	65.800	54.400	36.100	30.500	59.300	102.600
Transmitting ERP (watts)	14.180	1.430	0.380	3.220	20.310	87.270	124.780	83.940

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
31	36-57-06.0 N	086-26-12.0 W	166.1	16.8	

Address: Downtown

City: Bowling Green County: WARREN State: KY Construction Deadline:

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)	29.900	29.900	29.900	29.900	29.900	29.900	29.900	29.900
Transmitting ERP (watts)	124.780	83.940	14.180	1.430	0.380	3.220	20.310	87.270

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
31	36-57-06.0 N	086-26-12.0 W	166.1	16.8	

Address: Downtown

City: Bowling Green County: WARREN 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)	29.900	29.900	29.900	29.900	29.900	29.900	29.900	29.900
Transmitting ERP (watts)	6.310	35.160	119.490	131.750	50.750	7.180	0.550	0.830

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)	29.900	29.900	29.900	29.900	29.900	29.900	29.900	29.900
Transmitting ERP (watts)	3.200	0.270	1.930	9.450	57.340	133.270	114.910	28.510

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
32	37-59-31.1 N	086-11-44.3 W	187.7	77.7	1232593

Address: 1.6 km West of

City: Brandenburg County: MEADE State: KY Construction Deadline:

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)	58.400	56.600	82.400	34.400	36.100	41.000	40.100	67.700
Transmitting ERP (watts)	9.710	60.570	96.350	32.270	3.500	0.300	0.300	0.420

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)	58.400	56.600	82.400	34.400	36.100	41.000	40.100	67.700
Transmitting ERP (watts)	0.300	0.380	8.420	66.540	144.730	63.540	7.340	0.360

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)	58.400	56.600	82.400	34.400	36.100	41.000	40.100	67.700
Transmitting ERP (watts)	28.390	3.310	0.300	0.380	0.830	17.510	70.860	87.550

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
33	37-56-46.1 N	085-59-38.4 W	222.8	57.3	1200354

Address: 115 Timber Ct.

City: Muldraugh County: MEADE State: KY Construction Deadline:

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)	84.500	85.900	93.700	56.800	54.600	40.300	67.400	81.700
Transmitting ERP (watts)	57.050	54.960	17.180	1.960	0.330	0.430	1.840	21.320

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
33	37-56-46.1 N	085-59-38.4 W	222.8	57.3	1200354

Address: 115 Timber Ct.

City: Muldraugh County: MEADE 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)	84.500	85.900	93.700	56.800	54.600	40.300	67.400	81.700
Transmitting ERP (watts)	0.380	0.800	19.520	104.850	135.070	36.350	3.470	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)	84.500	85.900	93.700	56.800	54.600	40.300	67.400	81.700
Transmitting ERP (watts)	2.570	0.330	0.390	1.200	24.580	114.960	156.050	28.220

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
34	37-46-03.7 N	086-26-10.4 W	219.5	45.7	

Address: Hardinsburg Water Tank, 3.0 km SE of

City: Hardinsburg County: BRECKINRIDGE State: KY Construction Deadline:

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)	77.900	54.500	36.600	52.000	74.200	60.600	78.300	83.900
Transmitting ERP (watts)	182.210	79.990	9.240	0.460	0.370	0.480	10.610	83.760

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)	77.900	54.500	36.600	52.000	74.200	60.600	78.300	83.900
Transmitting ERP (watts)	0.980	23.880	127.520	165.220	42.710	4.010	0.370	0.460

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)	77.900	54.500	36.600	52.000	74.200	60.600	78.300	83.900
Transmitting ERP (watts)	1.520	0.370	0.480	3.570	47.930	165.220	127.520	20.330

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
35	36-42-08.6 N	086-33-19.0 W	217.0	114.3	1200032

Address: Franklin South, Turners Ford Road

City: Franklin County: SIMPSON State: KY Construction Deadline:

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)	75.500	67.800	58.900	47.700	34.900	56.000	62.700	57.000
Transmitting ERP (watts)	8.520	69.270	148.100	66.150	7.950	0.410	0.330	0.390

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
35	36-42-08.6 N	086-33-19.0 W	217.0	114.3	1200032

Address: Franklin South, Turners Ford Road

City: Franklin County: SIMPSON 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)	75.500	67.800	58.900	47.700	34.900	56.000	62.700	57.000
Transmitting ERP (watts)	0.620	0.330	0.370	6.170	57.620	148.100	79.530	10.480

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)	75.500	67.800	58.900	47.700	34.900	56.000	62.700	57.000
Transmitting ERP (watts)	126.050	28.220	2.570	0.330	0.390	1.200	24.580	114.960

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
36	36-44-58.7 N	087-01-10.9 W	179.8	37.5	

Address: Russellville Southwest, 0.8 km SW of

City: Olmstead County: LOGAN State: KY Construction Deadline:

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)	29.900	29.900	31.500	45.900	38.200	39.100	29.900	29.900
Transmitting ERP (watts)	124.780	83.940	14.180	1.430	0.380	3.220	20.310	87.270

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)	29.900	29.900	31.500	45.900	38.200	39.100	29.900	29.900
Transmitting ERP (watts)	6.310	35.160	119.490	131.750	50.750	7.180	0.550	0.830

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)	29.900	29.900	31.500	45.900	38.200	39.100	29.900	29.900
Transmitting ERP (watts)	3.200	0.270	1.930	9.450	57.340	133.270	114.910	28.510

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
37	36-49-37.9 N	086-18-51.3 W	192.0	77.7	1232590

Address: Allen Northwest cell, 13.7 km Northwest of

City: Scottsville County: ALLEN State: KY Construction Deadline:

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)	91.800	102.800	60.100	49.200	58.900	71.000	89.900	100.000
Transmitting ERP (watts)	0.540	4.010	53.770	185.380	143.070	22.810	1.700	0.420

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
37	36-49-37.9 N	086-18-51.3 W	192.0	77.7	1232590

Address: Allen Northwest cell, 13.7 km Northwest of

City: Scottsville County: ALLEN 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)	91.800	102.800	60.100	49.200	58.900	71.000	89.900	100.000
Transmitting ERP (watts)	0.400	0.290	0.290	0.290	5.380	93.450	104.850	10.250

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)	91.800	102.800	60.100	49.200	58.900	71.000	89.900	100.000
Transmitting ERP (watts)	211.380	60.790	7.140	0.540	2.800	11.880	85.700	226.550

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
38	36-55-15.1 N	086-25-38.5 W	171.0	62.5	1210120

Address: 1140 Three Springs Road

City: Bowling Green County: WARREN State: KY Construction Deadline:

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)	62.400	67.900	45.500	40.600	40.900	36.000	40.900	56.100
Transmitting ERP (watts)	41.740	24.340	4.420	0.400	0.330	0.330	3.510	21.690

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)	62.400	67.900	45.500	40.600	40.900	36.000	40.900	56.100
Transmitting ERP (watts)	0.870	21.280	113.650	147.250	38.070	3.570	0.330	0.410

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)	62.400	67.900	45.500	40.600	40.900	36.000	40.900	56.100
Transmitting ERP (watts)	1.130	0.260	0.370	2.600	30.680	93.270	73.680	13.650

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
39	36-49-54.5 N	086-29-39.3 W	192.6	66.1	1202759

Address: Warren South, 3184 Woodburn-Allen Springs Road

City: Woodburn County: WARREN State: KY Construction Deadline:

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)	58.500	58.500	57.100	39.300	32.800	33.900	35.000	49.400
Transmitting ERP (watts)	157.120	103.520	17.130	1.570	0.350	3.440	23.000	104.220



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File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
39	36-49-54.5 N	086-29-39.3 W	192.6	66.1	1202759

Address: Warren South, 3184 Woodburn-Allen Springs Road

City: Woodburn County: WARREN 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)	58.500	58.500	57.100	39.300	32.800	33.900	35.000	49.400
Transmitting ERP (watts)	6.890	41.510	144.360	164.760	61.880	8.540	0.570	0.780

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)	58.500	58.500	57.100	39.300	32.800	33.900	35.000	49.400
Transmitting ERP (watts)	0.610	0.310	0.310	0.310	2.120	58.290	121.780	19.300

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
40	37-03-19.5 N	086-35-24.6 W	184.4	67.1	1219414

Address: Warren Northwest cell, Old Morgantown Road

City: Bowling Green County: WARREN State: KY Construction Deadline:

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)	91.800	71.100	64.500	67.200	57.900	67.700	67.900	70.300
Transmitting ERP (watts)	0.430	11.130	78.320	144.460	52.750	5.690	0.300	0.320

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)	91.800	71.100	64.500	67.200	57.900	67.700	67.900	70.300
Transmitting ERP (watts)	0.560	0.300	0.370	6.090	56.530	144.460	74.790	9.690

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)	91.800	71.100	64.500	67.200	57.900	67.700	67.900	70.300
Transmitting ERP (watts)	101.290	16.150	1.200	0.300	0.390	2.840	38.070	131.240

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
41	37-08-05.9 N	087-01-05.2 W	187.8	77.7	1278320

Address: Muhlenberg South, 21 Myers Chapel Road

City: Belton County: MUHLENBERG State: KY Construction Deadline:

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)	110.500	126.100	111.400	114.500	86.400	73.900	100.200	112.200
Transmitting ERP (watts)	124.780	83.940	14.180	1.430	0.380	3.220	20.310	87.270

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File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
41	37-08-05.9 N	087-01-05.2 W	187.8	77.7	1278320

Address: Muhlenberg South, 21 Myers Chapel Road

City: Belton County: MUHLENBERG 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)	110.500	126.100	111.400	114.500	86.400	73.900	100.200	112.200
Transmitting ERP (watts)	6.310	35.160	119.490	131.750	50.750	7.180	0.550	0.830

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)	110.500	126.100	111.400	114.500	86.400	73.900	100.200	112.200
Transmitting ERP (watts)	3.200	0.270	1.930	9.450	57.340	133.270	114.910	28.510

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
42	37-00-06.1 N	086-19-52.5 W	161.2	77.4	1207196

Address: Bowling Green Corvette site, 1188 Red Pond Road

City: Bowling Green County: WARREN State: KY Construction Deadline:

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)	48.300	48.300	47.300	66.500	54.700	68.100	79.200	59.700
Transmitting ERP (watts)	149.820	65.780	7.600	0.370	0.310	0.390	8.720	68.880

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)	48.300	48.300	47.300	66.500	54.700	68.100	79.200	59.700
Transmitting ERP (watts)	0.850	18.620	85.580	108.340	31.760	3.380	0.310	0.410

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)	48.300	48.300	47.300	66.500	54.700	68.100	79.200	59.700
Transmitting ERP (watts)	1.320	0.310	0.430	3.020	35.640	108.340	85.580	15.850

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
43	37-50-10.4 N	086-35-44.7 W	225.6	77.7	1242951

Address: Breckinridge West, 1.6 km ENE of

City: Cloverport County: BRECKINRIDGE State: KY Construction Deadline:

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)	138.300	128.300	120.400	132.900	123.200	133.200	139.400	156.600
Transmitting ERP (watts)	63.170	117.640	43.710	4.900	0.260	0.280	0.350	9.130

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
43	37-50-10.4 N	086-35-44.7 W	225.6	77.7	1242951

Address: Breckinridge West, 1.6 km ENE of

City: Cloverport County: BRECKINRIDGE 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)	138.300	128.300	120.400	132.900	123.200	133.200	139.400	156.600
Transmitting ERP (watts)	0.310	2.290	30.940	107.290	83.280	13.820	1.050	0.260

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)	138.300	128.300	120.400	132.900	123.200	133.200	139.400	156.600
Transmitting ERP (watts)	4.400	0.370	0.370	0.530	12.230	76.250	121.300	40.630

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
44	37-51-15.4 N	086-06-03.2 W	303.9	67.4	1042711

Address: Garrett, State Road 44 (092010 / Fort Knox)

City: FORT KNOX County: MEADE State: KY Construction Deadline:

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)	153.600	154.600	149.600	132.900	121.400	131.200	143.100	146.300
Transmitting ERP (watts)	79.530	54.370	13.580	1.630	0.410	3.580	18.240	54.730

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)	153.600	154.600	149.600	132.900	121.400	131.200	143.100	146.300
Transmitting ERP (watts)	5.460	32.920	114.480	130.660	49.070	6.770	0.450	0.620

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)	153.600	154.600	149.600	132.900	121.400	131.200	143.100	146.300
Transmitting ERP (watts)	2.950	0.270	1.500	8.200	53.810	130.660	112.910	27.380

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
45	37-52-54.4 N	086-12-42.9 W	274.3	29.0	

Address: Meade South, 1.4 km southeast of

City: Guston County: MEADE State: KY Construction Deadline:

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)	109.800	103.800	82.400	63.100	79.200	105.900	114.800	76.100
Transmitting ERP (watts)	4.970	37.720	85.280	49.710	8.130	0.540	0.260	0.330

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
45	37-52-54.4 N	086-12-42.9 W	274.3	29.0	

Address: Meade South, 1.4 km southeast of

City: Guston County: MEADE 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)	109.800	103.800	82.400	63.100	79.200	105.900	114.800	76.100
Transmitting ERP (watts)	1.870	0.260	0.280	0.860	17.310	81.910	91.780	21.270

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)	109.800	103.800	82.400	63.100	79.200	105.900	114.800	76.100
Transmitting ERP (watts)	67.960	31.280	4.680	0.260	0.300	0.380	7.690	41.430

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
46	36-54-15.9 N	086-36-29.1 W	202.7	83.8	1200363

Address: Warren-Logan cell, 11372 Russellville Road

City: Rockfield County: WARREN State: KY Construction Deadline:

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)	105.100	84.600	84.000	77.200	66.700	61.500	67.700	81.100
Transmitting ERP (watts)	19.380	98.240	108.110	44.550	2.720	0.270	0.230	1.010

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)	105.100	84.600	84.000	77.200	66.700	61.500	67.700	81.100
Transmitting ERP (watts)	0.270	0.270	5.300	90.270	100.820	9.580	0.400	0.270

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)	105.100	84.600	84.000	77.200	66.700	61.500	67.700	81.100
Transmitting ERP (watts)	0.880	0.230	0.310	2.530	42.550	110.630	96.000	20.290

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
47	37-24-19.0 N	086-42-17.0 W	199.9	94.5	1213965

Address: Ohio West, 3893 State Route 505 South

City: Horse Branch County: OHIO State: KY Construction Deadline:

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)	112.900	104.700	91.700	117.300	127.400	134.600	135.400	100.900
Transmitting ERP (watts)	117.640	63.170	8.330	0.490	0.260	0.300	4.900	45.770

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
47	37-24-19.0 N	086-42-17.0 W	199.9	94.5	1213965

Address: Ohio West, 3893 State Route 505 South

City: Horse Branch County: OHIO 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)	112.900	104.700	91.700	117.300	127.400	134.600	135.400	100.900
Transmitting ERP (watts)	1.260	33.960	209.410	316.960	100.230	10.500	0.740	0.810

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)	112.900	104.700	91.700	117.300	127.400	134.600	135.400	100.900
Transmitting ERP (watts)	1.480	0.260	0.310	1.480	24.580	100.120	93.440	17.800

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
48	36-57-24.8 N	086-28-42.2 W	167.0	84.1	1056469

Address: 3090 Fitzgerald Industrial Drive

City: Bowling Green County: WARREN State: KY Construction Deadline:

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)	71.400	63.700	65.900	62.600	44.100	41.900	36.500	59.500
Transmitting ERP (watts)	61.180	69.730	7.330	0.310	0.310	0.310	0.310	3.930

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)	71.400	63.700	65.900	62.600	44.100	41.900	36.500	59.500
Transmitting ERP (watts)	0.310	2.460	45.980	65.510	8.220	0.390	0.310	0.310

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)	71.400	63.700	65.900	62.600	44.100	41.900	36.500	59.500
Transmitting ERP (watts)	1.080	0.260	0.280	1.840	17.800	47.490	39.840	10.320

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
49	36-49-53.1 N	086-54-51.9 W	253.9	78.6	1043422

Address: RUSSELLVILLE WEST, 0.64 KM NORTH OF HWY 79, 0.16 KM WEST OF HWY 68 BYPASS

City: LEWISBURG County: LOGAN State: KY Construction Deadline:

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)	107.500	100.000	79.700	100.100	113.000	110.200	90.700	106.900
Transmitting ERP (watts)	151.070	101.210	20.030	2.250	0.630	5.060	28.690	105.230

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
49	36-49-53.1 N	086-54-51.9 W	253.9	78.6	1043422

Address: RUSSELLVILLE WEST, 0.64 KM NORTH OF HWY 79, 0.16 KM WEST OF HWY 68 BYPASS

City: LEWISBURG County: LOGAN 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)	107.500	100.000	79.700	100.100	113.000	110.200	90.700	106.900
Transmitting ERP (watts)	9.170	55.270	192.200	219.360	82.390	11.370	0.760	1.030

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)	107.500	100.000	79.700	100.100	113.000	110.200	90.700	106.900
Transmitting ERP (watts)	4.520	0.380	2.720	13.340	81.000	188.260	162.320	40.280

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
50	37-05-38.9 N	086-25-49.5 W	217.6	103.6	1232131

Address: Richardsville, 604 Scroggins Road

City: Bowling Green County: WARREN State: KY Construction Deadline:

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)	108.300	97.200	74.500	103.300	110.500	127.000	127.000	111.000
Transmitting ERP (watts)	144.730	63.540	7.340	0.360	0.300	0.380	8.420	66.540

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)	108.300	97.200	74.500	103.300	110.500	100.500	127.000	111.000
Transmitting ERP (watts)	0.780	18.970	101.290	131.240	33.930	3.180	0.300	0.370

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)	108.300	97.200	74.500	103.300	110.500	100.500	127.000	111.000
Transmitting ERP (watts)	1.200	0.300	0.390	2.840	38.070	131.240	101.290	16.150

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
51	37-31-30.4 N	086-55-04.2 W	195.7	97.8	1214609

Address: Beda, 729 Sherwood Drive

City: Hartford County: OHIO State: KY Construction Deadline:

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)	107.800	100.300	110.100	108.400	122.200	117.000	103.100	107.200
Transmitting ERP (watts)	38.070	131.240	101.290	16.150	1.200	0.300	0.390	2.840

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
51	37-31-30.4 N	086-55-04.2 W	195.7	97.8	1214609

Address: Beda, 729 Sherwood Drive

City: Hartford County: OHIO 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)	107.800	100.300	110.100	108.400	122.200	117.000	103.100	107.200
Transmitting ERP (watts)	0.340	0.540	14.700	90.110	137.670	42.790	4.300	0.300

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)	107.800	100.300	110.100	108.400	122.200	117.000	103.100	107.200
Transmitting ERP (watts)	52.750	5.690	0.300	0.320	0.430	11.130	78.320	144.460

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
52	37-29-36.0 N	086-11-16.5 W	221.9	83.8	1217206

Address: Braton Road

City: Clarkson County: GRAYSON State: KY Construction Deadline:

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)	80.100	57.600	68.100	71.000	82.900	101.700	77.300	93.100
Transmitting ERP (watts)	23.930	113.860	122.250	26.290	2.360	0.300	0.370	1.180

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)	80.100	57.600	68.100	71.000	82.900	101.700	77.300	93.100
Transmitting ERP (watts)	2.360	0.300	0.370	1.180	23.930	113.860	122.250	26.290

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)	80.100	57.600	68.100	71.000	82.900	101.700	77.300	93.100
Transmitting ERP (watts)	103.640	9.240	0.340	0.270	0.270	0.270	5.700	92.370

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
53	37-31-11.9 N	087-09-13.7 W	141.7	95.4	1018270

Address: 550 SCHNEIDER TANNER ROAD

City: LIVERMORE County: MCLEAN State: KY Construction Deadline:

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)	86.400	69.100	70.300	81.600	92.100	93.900	102.600	85.400
Transmitting ERP (watts)	73.900	149.230	118.620	25.350	2.650	0.300	2.180	14.630

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File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
53	37-31-11.9 N	087-09-13.7 W	141.7	95.4	1018270

Address: 550 SCHNEIDER TANNER ROAD

City: LIVERMORE County: MCLEAN 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)	86.400	69.100	70.300	81.600	92.100	93.900	102.600	85.400
Transmitting ERP (watts)	0.570	5.060	27.400	111.190	144.570	81.050	13.200	1.160

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)	86.400	69.100	70.300	81.600	92.100	93.900	102.600	85.400
Transmitting ERP (watts)	47.570	6.000	0.480	1.320	7.360	47.670	142.060	144.070

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
54	37-19-05.4 N	086-12-12.3 W	231.6	83.8	1235514

Address: Nolin Lake North, 1900 Dickey's Mill Road

City: Mammoth Cave County: EDMONSON State: KY Construction Deadline:

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)	93.200	91.500	87.800	91.400	103.800	115.800	129.600	104.400
Transmitting ERP (watts)	117.640	54.390	6.620	0.360	0.300	0.330	6.460	54.390

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)	93.200	91.500	87.800	91.400	103.800	115.800	129.600	104.400
Transmitting ERP (watts)	3.300	11.570	54.260	67.250	19.880	3.340	0.340	0.490

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)	93.200	91.500	87.800	91.400	103.800	115.800	129.600	104.400
Transmitting ERP (watts)	1.110	0.300	0.320	2.200	30.710	107.710	83.920	14.420

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
55	36-40-20.5 N	086-15-11.1 W	239.6	60.7	

Address: Allen South, 371 Andrew Jackson Highway

City: Adolphus County: ALLEN State: KY Construction Deadline:

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)	87.000	70.200	64.700	57.200	44.500	66.500	82.700	88.700
Transmitting ERP (watts)	117.640	63.170	8.330	0.490	0.260	0.300	4.900	45.770



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Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
55	36-40-20.5 N	086-15-11.1 W	239.6	60.7	

Address: Allen South, 371 Andrew Jackson Highway

City: Adolphus County: ALLEN 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)	87.000	70.200	64.700	57.200	44.500	66.500	82.700	88.700
Transmitting ERP (watts)	0.490	8.150	38.780	44.150	11.680	1.200	0.260	0.260

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)	87.000	70.200	64.700	57.200	44.500	66.500	82.700	88.700
Transmitting ERP (watts)	4.900	0.260	0.280	0.350	9.130	63.170	117.640	43.710

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
56	36-42-03.8 N	086-23-15.8 W	226.2	77.7	1263047

Address: Alonzo, 4651 Perrytown Road

City: Franklin County: ALLEN State: KY Construction Deadline:

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)	114.500	97.300	87.900	75.000	66.000	77.000	88.300	100.400
Transmitting ERP (watts)	111.060	68.480	3.430	0.250	0.370	0.250	1.220	16.430

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)	114.500	97.300	87.900	75.000	66.000	77.000	88.300	100.400
Transmitting ERP (watts)	1.480	24.580	100.120	93.440	17.800	1.480	0.260	0.310

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)	114.500	97.300	87.900	75.000	66.000	77.000	88.300	100.400
Transmitting ERP (watts)	10.730	0.730	0.260	0.300	3.390	38.070	112.340	72.530

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
57	36-53-20.1 N	086-12-48.7 W	203.9	77.7	1264536

Address: Allen North, 173 Ray Vernon Lane

City: Scottsville County: ALLEN State: KY Construction Deadline:

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)	94.400	87.800	105.100	69.200	68.400	92.400	105.300	118.000
Transmitting ERP (watts)	12.040	74.220	112.340	35.530	3.720	0.260	0.290	0.450

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
57	36-53-20.1 N	086-12-48.7 W	203.9	77.7	1264536

Address: Allen North, 173 Ray Vernon Lane

City: Scottsville County: ALLEN 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)	94.400	87.800	105.100	69.200	68.400	92.400	105.300	118.000
Transmitting ERP (watts)	0.260	0.310	1.480	24.580	100.120	93.440	17.800	1.480

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)	94.400	87.800	105.100	69.200	68.400	92.400	105.300	118.000
Transmitting ERP (watts)	63.170	8.330	0.490	0.260	0.300	4.900	45.770	117.640

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
58	37-07-58.9 N	086-13-12.8 W	197.8	77.7	1263384

Address: Edmonson South, 466 Rhea Road

City: Smiths Grove County: EDMONSON State: KY Construction Deadline:

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)	70.900	74.500	47.600	73.500	83.900	88.000	89.200	76.800
Transmitting ERP (watts)	128.990	56.630	6.540	0.320	0.260	0.340	7.510	59.300

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)	70.900	74.500	47.600	73.500	83.900	88.000	89.200	76.800
Transmitting ERP (watts)	0.690	16.910	90.270	116.960	30.240	2.840	0.260	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)	70.900	74.500	47.600	73.500	83.900	88.000	89.200	76.800
Transmitting ERP (watts)	1.070	0.260	0.340	2.530	33.930	116.960	90.270	14.390

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
59	37-13-31.0 N	086-07-40.6 W	262.1	58.0	

Address: Near entrance to Mammoth Cave Park

City: Mammoth Cave County: EDMONSON State: KY Construction Deadline:

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)	122.200	91.300	119.200	86.600	117.300	116.700	135.200	124.600
Transmitting ERP (watts)	170.670	78.910	9.600	0.520	0.430	0.480	9.380	78.910

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
59	37-13-31.0 N	086-07-40.6 W	262.1	58.0	

Address: Near entrance to Mammoth Cave Park

City: Mammoth Cave County: EDMONSON 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)	122.200	91.300	119.200	86.600	117.300	116.700	135.200	124.600
Transmitting ERP (watts)	0.920	21.900	118.970	156.260	43.540	4.210	0.430	0.450

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)	122.200	91.300	119.200	86.600	117.300	116.700	135.200	124.600
Transmitting ERP (watts)	1.600	0.430	0.470	3.190	44.550	156.260	121.750	20.910

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
60	37-23-49.1 N	087-08-43.7 W	135.0	94.2	1244765

Address: Bremen, 12849 Kentucky Highway

City: CENTRAL CITY County: MUHLENBERG State: KY Construction Deadline:

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)	90.200	93.400	74.900	83.100	73.300	66.600	87.200	92.000
Transmitting ERP (watts)	122.700	78.480	11.150	0.740	0.260	0.340	3.750	40.860

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)	90.200	93.400	74.900	83.100	73.300	66.600	87.200	92.000
Transmitting ERP (watts)	0.330	5.430	50.380	128.750	66.660	8.640	0.500	0.260

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)	90.200	93.400	74.900	83.100	73.300	66.600	87.200	92.000
Transmitting ERP (watts)	3.840	0.260	0.300	0.480	13.100	80.300	122.700	38.140

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
61	37-57-06.1 N	086-24-38.3 W	260.0	96.3	1043429

Address: HWY 144, 4.8 KM (3 MILES) EAST OF

City: UNION STAR County: BRECKINRIDGE State: KY Construction Deadline:

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)	155.100	133.800	120.800	135.100	151.300	176.200	170.600	164.100
Transmitting ERP (watts)	100.130	64.650	9.560	0.650	0.240	0.270	3.020	33.930

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
61	37-57-06.1 N	086-24-38.3 W	260.0	96.3	1043429

Address: HWY 144, 4.8 KM (3 MILES) EAST OF

City: UNION STAR County: BRECKINRIDGE 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)	155.100	133.800	120.800	135.100	151.300	176.200	170.600	164.100
Transmitting ERP (watts)	0.310	8.140	56.310	104.850	38.950	4.370	0.240	0.250

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)	155.100	133.800	120.800	135.100	151.300	176.200	170.600	164.100
Transmitting ERP (watts)	1.820	0.240	0.280	0.850	17.400	81.390	89.240	19.980

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
62	37-32-44.1 N	086-18-58.4 W	200.9	77.7	1258451

Address: 2408 Hanging Rock Road

City: Leitchfield County: GRAYSON State: KY Construction Deadline:

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)	75.500	84.400	70.100	67.400	67.900	86.700	82.300	95.400
Transmitting ERP (watts)	97.150	35.730	4.550	0.310	0.380	0.580	13.630	68.070

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)	75.500	84.400	70.100	67.400	67.900	86.700	82.300	95.400
Transmitting ERP (watts)	0.630	15.510	83.280	107.290	28.880	2.760	0.260	0.300

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)	75.500	84.400	70.100	67.400	67.900	86.700	82.300	95.400
Transmitting ERP (watts)	1.050	0.260	0.310	2.290	30.940	107.290	83.280	13.820

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
63	36-41-48.4 N	087-07-44.2 W	176.5	60.7	1274279

Address: 4799 Russellville Road

City: Allensville County: TODD State: KY Construction Deadline:

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)	39.500	56.100	59.000	64.900	64.800	67.600	57.500	49.800
Transmitting ERP (watts)	19.520	91.310	100.120	22.420	2.040	0.260	0.310	0.960

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
63	36-41-48.4 N	087-07-44.2 W	176.5	60.7	1274279

Address: 4799 Russellville Road

City: Allensville County: TODD 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)	39.500	56.100	59.000	64.900	64.800	67.600	57.500	49.800
Transmitting ERP (watts)	0.260	0.290	0.450	12.040	74.220	112.340	35.530	3.720

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)	39.500	56.100	59.000	64.900	64.800	67.600	57.500	49.800
Transmitting ERP (watts)	72.530	10.730	0.730	0.260	0.300	3.390	38.070	112.340

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
64	37-14-00.7 N	086-28-02.1 W	183.2	103.6	1231934

Address: 109 Peach Road North

City: Roundhill County: BUTLER State: KY Construction Deadline:

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)	64.400	90.500	87.200	101.000	93.800	118.600	91.600	91.500
Transmitting ERP (watts)	363.980	159.800	18.450	0.910	0.740	0.950	21.190	167.330

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)	64.400	90.500	87.200	101.000	93.800	118.600	91.600	91.500
Transmitting ERP (watts)	1.950	47.700	254.680	329.990	85.310	8.010	0.740	0.920

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)	64.400	90.500	87.200	101.000	93.800	118.600	91.600	91.500
Transmitting ERP (watts)	3.030	0.740	0.970	7.140	95.740	330.050	254.730	40.610

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
65	37-52-03.2 N	086-41-39.8 W	149.0	60.7	

Address: Hancock South, 4586 Midway Lane

City: Hawesville County: HANCOCK State: KY Construction Deadline:

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)	42.800	44.700	66.200	57.400	29.900	51.200	52.700	89.200
Transmitting ERP (watts)	115.500	73.040	10.410	0.540	0.280	0.490	4.480	36.360

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
65	37-52-03.2 N	086-41-39.8 W	149.0	60.7	

Address: Hancock South, 4586 Midway Lane

City: Hawesville County: HANCOCK 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)	42.800	44.700	66.200	57.400	29.900	51.200	52.700	89.200
Transmitting ERP (watts)	3.060	20.470	92.740	139.820	92.120	15.240	1.400	0.310

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)	42.800	44.700	66.200	57.400	29.900	51.200	52.700	89.200
Transmitting ERP (watts)	14.390	1.320	0.300	2.890	19.320	87.550	132.000	86.970

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
66	37-48-20.2 N	086-28-22.4 W	213.7	98.8	1215268

Address: Hardinsburg North, West side of Finley/Dowell Road

City: Hardinsburg County: BRECKINRIDGE State: KY Construction Deadline:

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)	117.700	128.800	92.100	83.000	91.500	112.900	146.900	129.700
Transmitting ERP (watts)	65.140	85.560	23.840	2.300	0.240	0.240	0.510	11.990

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)	117.700	128.800	92.100	83.000	91.500	112.900	146.900	129.700
Transmitting ERP (watts)	0.260	1.750	24.390	85.560	66.660	11.450	0.880	0.240

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)	117.700	128.800	92.100	83.000	91.500	112.900	146.900	129.700
Transmitting ERP (watts)	5.250	0.290	0.240	0.260	5.140	43.210	93.440	43.210

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
67	37-31-51.2 N	086-28-23.9 W	192.0	123.4	1244902

Address: 3690 FALLS OF ROUGH ROAD

City: SHORT CREEK County: GRAYSON State: KY Construction Deadline:

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)	81.800	72.500	68.000	60.600	85.600	82.500	104.300	89.800
Transmitting ERP (watts)	30.940	107.290	83.280	13.820	1.050	0.260	0.310	2.290

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Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
67	37-31-51.2 N	086-28-23.9 W	192.0	123.4	1244902

Address: 3690 FALLS OF ROUGH ROAD

City: SHORT CREEK County: GRAYSON 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)	81.800	72.500	68.000	60.600	85.600	82.500	104.300	89.800
Transmitting ERP (watts)	0.260	0.310	6.770	55.020	117.640	52.550	6.320	0.320

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)	81.800	72.500	68.000	60.600	85.600	82.500	104.300	89.800
Transmitting ERP (watts)	28.880	2.760	0.260	0.300	0.630	15.510	83.280	107.290

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
68	37-19-34.6 N	086-57-44.7 W	167.0	83.8	1217201

Address: Western KY Parkway, 256 Pond Run Church Road

City: Beaver Dam County: OHIO State: KY Construction Deadline:

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)	94.000	93.500	89.600	96.400	94.000	100.700	102.100	97.600
Transmitting ERP (watts)	33.930	116.960	90.270	14.390	1.070	0.260	0.340	2.530

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)	94.000	93.500	89.600	96.400	94.000	100.700	102.100	97.600
Transmitting ERP (watts)	3.840	0.260	0.300	0.480	13.100	80.300	122.700	38.140

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)	94.000	93.500	89.600	96.400	94.000	100.700	102.100	97.600
Transmitting ERP (watts)	88.210	8.620	0.340	0.240	0.240	0.240	4.520	78.620

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
69	37-16-08.2 N	086-40-27.4 W	175.0	77.7	1268018

Address: Welcome, 224 Cook Road

City: Morgantown County: BUTLER State: KY Construction Deadline:

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)	94.800	67.500	90.400	96.600	102.900	98.300	116.100	103.600
Transmitting ERP (watts)	117.640	52.550	6.320	0.320	0.260	0.310	6.770	55.020

Licensee Name: CELLCO PARTNERSHIP

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File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
69	37-16-08.2 N	086-40-27.4 W	175.0	77.7	1268018

Address: Welcome, 224 Cook Road

City: Morgantown County: BUTLER 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)	94.800	67.500	90.400	96.600	102.900	98.300	116.100	103.600
Transmitting ERP (watts)	0.630	15.510	83.280	107.290	28.880	2.760	0.260	0.300

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)	94.800	67.500	90.400	96.600	102.900	98.300	116.100	103.600
Transmitting ERP (watts)	1.050	0.260	0.310	2.290	30.940	107.290	83.280	13.820

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
70	37-12-05.9 N	087-02-26.4 W	153.0	111.3	1231935

Address: 1317 US HWY 431

City: DRAKESBORO County: MUHLENBERG State: KY Construction Deadline:

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)	106.300	109.400	98.200	89.900	81.000	80.100	89.600	94.400
Transmitting ERP (watts)	102.460	44.990	5.190	0.260	0.210	0.270	5.960	47.110

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)	106.300	109.400	98.200	89.900	81.000	80.100	89.600	94.400
Transmitting ERP (watts)	0.550	13.430	71.710	92.910	24.020	2.250	0.210	0.260

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)	106.300	109.400	98.200	89.900	81.000	80.100	89.600	94.400
Transmitting ERP (watts)	0.850	0.210	0.270	2.010	26.950	92.910	71.710	11.430

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
71	36-58-34.3 N	086-57-59.8 W	190.2	93.0	1246006

Address: Lewinsburg Downtown, Spa Road

City: LEWISBURG County: LOGAN State: KY Construction Deadline:

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)	107.500	103.300	93.900	90.700	82.900	85.300	84.200	89.200
Transmitting ERP (watts)	100.120	93.440	17.800	1.480	0.260	0.310	1.480	24.580



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File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
71	36-58-34.3 N	086-57-59.8 W	190.2	93.0	1246006

Address: Lewinsburg Downtown, Spa Road

City: LEWISBURG County: LOGAN 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)	107.500	103.300	93.900	90.700	82.900	85.300	84.200	89.200
Transmitting ERP (watts)	0.300	4.900	45.770	117.640	63.170	8.330	0.490	0.260

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)	107.500	103.300	93.900	90.700	82.900	85.300	84.200	89.200
Transmitting ERP (watts)	2.040	0.260	0.310	0.960	19.520	91.310	100.120	22.420

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
72	37-02-45.0 N	086-21-53.0 W	167.6	102.7	1046177

Address: Bristow, KY Hwy 526, 5.9 MI (9.5 km) NE of

City: BOWLING GREEN County: WARREN State: KY Construction Deadline:

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)	48.600	42.800	42.800	67.000	66.800	77.800	53.600	55.000
Transmitting ERP (watts)	144.730	63.540	7.340	0.360	0.300	0.380	8.420	66.540

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)	48.600	42.800	42.800	67.000	66.800	77.800	53.600	55.000
Transmitting ERP (watts)	0.640	15.100	82.010	107.710	30.010	2.900	0.300	0.310

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)	48.600	42.800	42.800	67.000	66.800	77.800	53.600	55.000
Transmitting ERP (watts)	1.180	0.300	0.350	2.570	34.720	120.380	93.440	15.510

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
73	36-48-17.7 N	087-09-29.0 W	195.1	37.0	

Address: Elkton Downtown, Water Tank within the Town of

City: Elkton County: TODD 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)	29.900	29.900	36.400	49.400	47.700	51.300	46.600	29.900
Transmitting ERP (watts)	0.330	0.390	2.890	38.950	135.070	104.850	17.400	1.320

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
73	36-48-17.7 N	087-09-29.0 W	195.1	37.0	

Address: Elkton Downtown, Water Tank within the Town of  
 City: Elkton County: TODD State: KY Construction Deadline:

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)	29.900	29.900	36.400	49.400	47.700	51.300	46.600	29.900
Transmitting ERP (watts)	186.670	22.440	1.150	0.940	1.100	24.050	195.470	417.910

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)	29.900	29.900	36.400	49.400	47.700	51.300	46.600	29.900
Transmitting ERP (watts)	69.360	324.400	355.700	79.630	7.260	0.940	1.100	3.400

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
74	36-45-37.5 N	086-43-02.9 W	197.2	77.7	1268208

Address: Middleton, 2514 Neely Road  
 City: Franklin County: SIMPSON State: KY Construction Deadline:

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)	65.100	67.700	65.900	61.000	73.500	89.900	84.400	76.100
Transmitting ERP (watts)	108.950	99.160	18.570	1.520	0.260	0.340	1.630	26.900

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)	65.100	67.700	65.900	61.000	73.500	89.900	84.400	76.100
Transmitting ERP (watts)	0.340	7.510	59.300	128.990	56.630	6.540	0.320	0.260

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)	65.100	67.700	65.900	61.000	73.500	89.900	84.400	76.100
Transmitting ERP (watts)	6.540	0.320	0.260	0.340	7.510	59.300	128.990	56.630

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
75	36-44-33.6 N	086-30-05.7 W	209.4	74.7	1057217

Address: Simpson I-65, 680 Phillips Lane  
 City: Franklin County: SIMPSON State: KY Construction Deadline:

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)	74.500	60.400	58.100	45.300	43.900	54.700	56.900	65.000
Transmitting ERP (watts)	113.860	122.250	26.290	2.360	0.300	0.370	1.180	23.930

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
75	36-44-33.6 N	086-30-05.7 W	209.4	74.7	1057217

Address: Simpson I-65, 680 Phillips Lane

City: Franklin County: SIMPSON 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)	74.500	60.400	58.100	45.300	43.900	54.700	56.900	65.000
Transmitting ERP (watts)	0.430	11.130	78.320	144.460	52.750	5.690	0.300	0.320

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)	74.500	60.400	58.100	45.300	43.900	54.700	56.900	65.000
Transmitting ERP (watts)	0.830	0.300	0.380	4.210	45.850	137.670	88.060	12.510

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
76	36-41-45.2 N	086-08-55.9 W	299.9	42.7	

Address: Allen Southeast, 7.0 km southeast of

City: Scottsville County: ALLEN State: KY Construction Deadline:

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)	108.900	124.900	127.700	96.400	75.800	97.900	122.100	116.000
Transmitting ERP (watts)	156.880	103.360	17.100	1.570	0.350	3.430	22.970	104.060

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)	108.900	124.900	127.700	96.400	75.800	97.900	122.100	116.000
Transmitting ERP (watts)	6.870	41.440	144.130	164.500	61.780	8.520	0.570	0.770

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)	108.900	124.900	127.700	96.400	75.800	97.900	122.100	116.000
Transmitting ERP (watts)	1.120	0.240	0.870	3.340	18.280	65.860	50.650	9.530

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
77	37-41-44.8 N	086-25-06.2 W	210.6	77.7	1262107

Address: Kingswood, 1065 Stinnett-Taul Lane

City: Harned County: BRECKINRIDGE State: KY Construction Deadline:

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)	78.900	76.900	78.500	81.600	105.100	108.200	91.500	108.400
Transmitting ERP (watts)	6.770	55.020	117.640	52.550	6.320	0.320	0.260	0.310

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
77	37-41-44.8 N	086-25-06.2 W	210.6	77.7	1262107

Address: Kingswood, 1065 Stinnett-Taul Lane

City: Harned County: BRECKINRIDGE 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	76.900	78.500	81.600	105.100	108.200	91.500	108.400
Transmitting ERP (watts)	0.260	0.300	3.390	38.070	112.340	72.530	10.730	0.730

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	76.900	78.500	81.600	105.100	108.200	91.500	108.400
Transmitting ERP (watts)	112.340	35.530	3.720	0.260	0.290	0.450	12.040	74.220

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
78	36-54-24.5 N	086-19-35.4 W	172.8	77.7	1275463

Address: Claypool, 2818 Alvaton-Greenhill Road

City: Bowling Green County: WARREN State: KY Construction Deadline:

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)	82.200	76.200	79.200	52.800	60.600	78.000	69.500	86.500
Transmitting ERP (watts)	18.240	82.650	124.610	82.100	13.580	1.250	0.280	2.730

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)	82.200	76.200	79.200	52.800	60.600	78.000	69.500	86.500
Transmitting ERP (watts)	0.450	0.620	5.460	32.920	114.480	130.660	49.070	6.770

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)	82.200	76.200	79.200	52.800	60.600	78.000	69.500	86.500
Transmitting ERP (watts)	112.910	27.380	2.950	0.270	1.500	8.200	53.810	130.660

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
79	37-54-07.2 N	086-31-56.1 W	185.9	30.3	

Address: 1.0 km SSW of

City: Stephensports County: BRECKINRIDGE State: KY Construction Deadline:

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)	69.900	29.900	49.700	43.700	40.700	48.900	79.700	37.400
Transmitting ERP (watts)	20.210	136.640	63.910	3.510	0.310	0.310	0.310	0.340

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
79	37-54-07.2 N	086-31-56.1 W	185.9	30.3	

Address: 1.0 km SSW of

City: Stephensports County: BRECKINRIDGE 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)	69.900	29.900	49.700	43.700	40.700	48.900	79.700	37.400
Transmitting ERP (watts)	0.310	0.310	3.510	82.330	124.620	15.330	0.570	0.310

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)	69.900	29.900	49.700	43.700	40.700	48.900	79.700	37.400
Transmitting ERP (watts)	5.190	0.310	0.310	0.310	0.310	13.660	127.520	78.630

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
80	37-42-39.3 N	086-31-34.6 W	218.5	77.7	1272916

Address: 245 Dejarnette Lane

City: McQuady County: BRECKINRIDGE State: KY Construction Deadline:

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)	122.000	93.600	90.700	109.100	120.100	106.500	93.000	113.900
Transmitting ERP (watts)	128.360	93.210	17.180	1.520	0.270	1.720	14.250	71.470

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)	122.000	93.600	90.700	109.100	120.100	106.500	93.000	113.900
Transmitting ERP (watts)	4.860	26.750	105.570	130.690	59.850	9.030	0.640	0.460

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)	122.000	93.600	90.700	109.100	120.100	106.500	93.000	113.900
Transmitting ERP (watts)	3.780	0.270	1.280	5.690	46.750	127.920	120.460	33.780

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
81	37-29-16.7 N	086-16-14.7 W	231.6	44.2	

Address: Leitchfield WT, 1.5 km East of

City: Leitchfield County: GRAYSON State: KY Construction Deadline:

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)	84.200	71.900	49.000	65.200	69.200	59.900	55.400	68.100
Transmitting ERP (watts)	127.520	78.630	5.190	0.310	0.310	0.310	0.310	13.660

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
81	37-29-16.7 N	086-16-14.7 W	231.6	44.2	

Address: Leitchfield WT, 1.5 km East of

City: Leitchfield County: GRAYSON 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)	84.200	71.900	49.000	65.200	69.200	59.900	55.400	68.100
Transmitting ERP (watts)	0.310	0.790	40.320	146.410	38.510	1.570	0.310	0.310

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)	84.200	71.900	49.000	65.200	69.200	59.900	55.400	68.100
Transmitting ERP (watts)	0.570	0.310	0.310	0.310	3.510	82.330	124.620	15.330

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
82	37-12-13.0 N	086-52-35.7 W	161.2	77.7	1263383

Address: 354 New Cut Road North

City: Rochester County: BUTLER State: KY Construction Deadline:

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)	92.200	104.300	79.800	74.100	80.300	95.900	89.700	112.900
Transmitting ERP (watts)	63.170	117.640	43.710	4.900	0.260	0.280	0.350	9.130

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)	92.200	104.300	79.800	74.100	80.300	95.900	89.700	112.900
Transmitting ERP (watts)	0.310	0.960	19.520	91.310	100.120	22.420	2.040	0.260

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)	92.200	104.300	79.800	74.100	80.300	95.900	89.700	112.900
Transmitting ERP (watts)	10.730	0.730	0.260	0.300	3.390	38.070	112.340	72.530

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
83	36-45-39.5 N	086-51-51.6 W	186.6	77.7	1256442

Address: Logan South, 75 Hall Store Road

City: Russellville County: LOGAN State: KY Construction Deadline:

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)	70.500	51.300	69.000	75.700	80.000	87.100	81.800	59.200
Transmitting ERP (watts)	128.990	56.630	6.540	0.320	0.260	0.340	7.510	59.300

Licensee Name: CELLCO PARTNERSHIP

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File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
83	36-45-39.5 N	086-51-51.6 W	186.6	77.7	1256442

Address: Logan South, 75 Hall Store Road

City: Russellville County: LOGAN 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)	70.500	51.300	69.000	75.700	80.000	87.100	81.800	59.200
Transmitting ERP (watts)	0.340	2.530	33.930	116.960	90.270	14.390	1.070	0.260

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)	70.500	51.300	69.000	75.700	80.000	87.100	81.800	59.200
Transmitting ERP (watts)	3.840	0.260	0.300	0.480	13.100	80.300	122.700	38.140

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
84	36-58-47.9 N	086-23-20.0 W	155.1	56.4	1241356

Address: Bowling Green Cemetery Road, 3700 Cumberland Trace Cell

City: Bowling Green County: WARREN State: KY Construction Deadline:

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)	29.900	35.000	33.800	29.900	39.200	29.900	29.900	54.700
Transmitting ERP (watts)	129.890	61.320	3.430	0.310	0.310	0.310	0.450	18.690

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)	29.900	35.000	33.800	29.900	39.200	29.900	29.900	54.700
Transmitting ERP (watts)	0.310	3.260	77.190	119.560	14.880	0.420	0.310	0.310

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)	29.900	35.000	33.800	29.900	39.200	29.900	29.900	54.700
Transmitting ERP (watts)	0.310	0.310	0.310	0.570	26.700	136.640	48.150	2.270

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
85	36-53-34.0 N	086-24-38.0 W	184.4	46.7	

Address: Plano Water Tank, 9.0 SSE of

City: Bowling Green County: WARREN State: KY Construction Deadline:

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)	61.200	49.800	45.800	33.400	35.100	33.600	34.800	46.200
Transmitting ERP (watts)	1.340	39.400	76.830	11.900	0.480	0.240	0.240	0.240

Licensee Name: CELLCO PARTNERSHIP

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File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
85	36-53-34.0 N	086-24-38.0 W	184.4	46.7	

Address: Plano Water Tank, 9.0 SSE of

City: Bowling Green County: WARREN 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)	61.200	49.800	45.800	33.400	35.100	33.600	34.800	46.200
Transmitting ERP (watts)	0.240	0.240	0.240	5.320	66.920	53.150	4.220	0.240

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)	61.200	49.800	45.800	33.400	35.100	33.600	34.800	46.200
Transmitting ERP (watts)	28.550	1.400	0.240	0.240	0.240	0.370	16.810	84.240

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
86	36-53-16.1 N	086-30-48.3 W	183.8	60.6	

Address: Richpond, 608 Skeek Road

City: Bowling Green County: WARREN State: KY Construction Deadline:

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)	69.900	78.100	67.600	58.700	47.300	43.600	56.900	73.400
Transmitting ERP (watts)	87.200	42.220	5.380	0.310	0.260	0.260	4.790	40.320

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)	69.900	78.100	67.600	58.700	47.300	43.600	56.900	73.400
Transmitting ERP (watts)	1.480	24.580	100.120	93.440	17.800	1.480	0.260	0.310

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)	69.900	78.100	67.600	58.700	47.300	43.600	56.900	73.400
Transmitting ERP (watts)	0.490	0.260	0.300	4.900	45.770	117.640	63.170	8.330

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
87	36-44-23.3 N	086-34-22.4 W	211.2	93.6	1007990

Address: Franklin Downtown, Ogles Road (Franklin #9142)

City: Franklin County: SIMPSON State: KY Construction Deadline:

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)	82.400	91.500	77.000	60.200	57.000	65.400	75.500	64.400
Transmitting ERP (watts)	1.890	59.640	119.000	18.430	0.750	0.270	0.270	0.270



Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
87	36-44-23.3 N	086-34-22.4 W	211.2	93.6	1007990

Address: Franklin Downtown, Ogles Road (Franklin #9142)

City: Franklin County: SIMPSON 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)	82.400	91.500	77.000	60.200	57.000	65.400	75.500	64.400
Transmitting ERP (watts)	0.270	0.270	0.270	8.050	101.290	84.250	6.540	0.310

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)	82.400	91.500	77.000	60.200	57.000	65.400	75.500	64.400
Transmitting ERP (watts)	44.210	2.120	0.270	0.270	0.270	0.400	25.440	127.510

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
88	36-50-51.7 N	086-46-11.1 W	198.4	82.3	1237175

Address: Rockcastle, 1365 Echo Valley Road

City: Auburn County: LOGAN State: KY Construction Deadline:

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)	64.000	66.400	63.200	58.100	74.800	70.400	71.300	75.200
Transmitting ERP (watts)	122.700	78.480	11.150	0.740	0.260	0.340	3.750	40.860

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)	64.000	66.400	63.200	58.100	74.800	70.400	71.300	75.200
Transmitting ERP (watts)	0.380	9.920	69.800	128.750	47.020	5.070	0.260	0.280

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)	64.000	66.400	63.200	58.100	74.800	70.400	71.300	75.200
Transmitting ERP (watts)	2.100	0.260	0.330	1.050	21.320	101.470	108.950	23.430

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
89	37-25-24.5 N	086-24-14.9 W	197.8	83.8	1217214

Address: Millwood, 1006 Pleasant View Road

City: Millwood County: GRAYSON State: KY Construction Deadline:

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)	62.400	41.800	60.100	71.500	58.400	67.600	87.100	76.500
Transmitting ERP (watts)	39.870	122.420	126.750	40.620	4.930	0.330	0.900	5.470

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
89	37-25-24.5 N	086-24-14.9 W	197.8	83.8	1217214

Address: Millwood, 1006 Pleasant View Road

City: Millwood County: GRAYSON 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)	62.400	41.800	60.100	71.500	58.400	67.600	87.100	76.500
Transmitting ERP (watts)	0.890	0.350	3.940	22.290	94.500	128.360	70.660	11.140

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)	62.400	41.800	60.100	71.500	58.400	67.600	87.100	76.500
Transmitting ERP (watts)	103.880	21.640	2.140	0.270	1.490	11.530	61.810	130.990

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
90	37-17-38.2 N	086-44-29.7 W	129.8	83.8	1217204

Address: Natcher Parkway, 1 C. Beck Rd.

City: Morgantown County: BUTLER State: KY Construction Deadline:

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)	37.600	36.200	41.100	50.200	36.800	52.200	53.300	52.700
Transmitting ERP (watts)	7.510	59.300	128.990	56.630	6.540	0.320	0.260	0.340

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)	37.600	36.200	41.100	50.200	36.800	52.200	53.300	52.700
Transmitting ERP (watts)	0.260	0.340	3.750	40.860	122.700	78.480	11.150	0.740

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)	37.600	36.200	41.100	50.200	36.800	52.200	53.300	52.700
Transmitting ERP (watts)	122.700	38.140	3.840	0.260	0.300	0.480	13.100	30.300

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
91	37-10-17.8 N	086-46-48.7 W	157.3	90.0	1273826

Address: South Hill, 231 Freeman Staples Road

City: Morgantown County: BUTLER State: KY Construction Deadline:

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)	114.500	84.600	81.200	73.600	93.700	70.900	96.300	102.200
Transmitting ERP (watts)	71.470	128.360	93.210	17.180	1.520	0.270	1.720	14.250

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
91	37-10-17.8 N	086-46-48.7 W	157.3	90.0	1273826

Address: South Hill, 231 Freeman Staples Road

City: Morgantown County: BUTLER 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)	114.500	84.600	81.200	73.600	93.700	70.900	96.300	102.200
Transmitting ERP (watts)	0.620	5.460	32.920	114.480	130.660	49.070	6.770	0.450

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)	114.500	84.600	81.200	73.600	93.700	70.900	96.300	102.200
Transmitting ERP (watts)	21.640	2.140	0.270	1.490	11.530	61.810	130.990	103.880

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
92	36-57-07.6 N	086-47-36.4 W	210.0	77.7	1261473

Address: Chandler, 8773 Morgantown Road

City: Russellville County: LOGAN State: KY Construction Deadline:

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)	122.500	88.200	98.600	86.200	75.500	96.400	126.200	114.800
Transmitting ERP (watts)	122.700	78.480	11.150	0.740	0.260	0.340	3.750	40.860

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)	122.500	88.200	98.600	86.200	75.500	96.400	126.200	114.800
Transmitting ERP (watts)	0.480	13.100	80.300	122.700	38.140	3.840	0.260	0.300

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)	122.500	88.200	98.600	86.200	75.500	96.400	126.200	114.800
Transmitting ERP (watts)	0.500	0.260	0.330	5.430	50.380	128.750	66.660	8.640

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
93	37-03-12.4 N	086-44-45.3 W	184.4	77.7	1273825

Address: Davis Crossroads, 63 Fire Station Lane

City: Morgantown County: BUTLER State: KY Construction Deadline:

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)	90.300	104.500	88.100	79.900	67.600	85.300	105.100	96.800
Transmitting ERP (watts)	94.500	128.360	70.660	11.140	0.890	0.350	3.940	22.290

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
93	37-03-12.4 N	086-44-45.3 W	184.4	77.7	1273825

Address: Davis Crossroads, 63 Fire Station Lane

City: Morgantown County: BUTLER 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)	90.300	104.500	88.100	79.900	67.600	85.300	105.100	96.800
Transmitting ERP (watts)	0.350	3.940	22.290	94.500	128.360	70.660	11.140	0.890

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)	90.300	104.500	88.100	79.900	67.600	85.300	105.100	96.800
Transmitting ERP (watts)	17.180	1.520	0.270	1.720	14.250	71.470	128.360	93.210

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
94	36-49-14.6 N	087-02-42.8 W	198.7	77.7	1261471

Address: Daysville, 1270 Daysville Road

City: Russellville County: LOGAN State: KY Construction Deadline:

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)	80.600	79.200	75.600	95.700	90.500	86.800	61.000	55.000
Transmitting ERP (watts)	2.290	30.940	107.290	83.280	13.820	1.050	0.260	0.310

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)	80.600	79.200	75.600	95.700	90.500	86.800	61.000	55.000
Transmitting ERP (watts)	0.490	0.260	0.300	4.900	45.770	117.640	63.170	8.330

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)	80.600	79.200	75.600	95.700	90.500	86.800	61.000	55.000
Transmitting ERP (watts)	112.340	35.530	3.720	0.260	0.290	0.450	12.040	74.220

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
95	36-41-25.9 N	086-04-02.1 W	237.1	77.7	1278967

Address: Holland, 359 Lafayette Road

City: Scottsville County: ALLEN State: KY Construction Deadline:

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)	114.100	88.200	100.700	73.600	49.300	69.400	81.800	87.800
Transmitting ERP (watts)	12.260	67.850	91.320	22.470	1.930	0.240	0.240	1.460

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
95	36-41-25.9 N	086-04-02.1 W	237.1	77.7	1278967

Address: Holland, 359 Lafayette Road

City: Scottsville County: ALLEN 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)	114.100	88.200	100.700	73.600	49.300	69.400	81.800	87.800
Transmitting ERP (watts)	0.230	1.100	4.900	40.250	110.140	103.720	29.080	3.250

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)	114.100	88.200	100.700	73.600	49.300	69.400	81.800	87.800
Transmitting ERP (watts)	93.210	17.180	1.520	0.270	1.720	14.250	71.470	128.360

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
96	36-59-23.5 N	086-28-21.6 W	146.6	76.2	1277050

Address: Lampkin Park, Behind Dept of Hwys Dist. Office on Old Morgantown Rd. off Hwy 231

City: Bowling Green County: WARREN State: KY Construction Deadline:

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)	30.300	29.900	37.300	29.900	29.900	29.900	29.900	29.900
Transmitting ERP (watts)	111.310	29.890	1.180	0.240	0.240	0.240	0.710	29.750

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)	30.300	29.900	37.300	29.900	29.900	29.900	29.900	29.900
Transmitting ERP (watts)	0.240	2.330	51.180	79.740	9.900	0.320	0.240	0.240

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)	30.300	29.900	37.300	29.900	29.900	29.900	29.900	29.900
Transmitting ERP (watts)	0.240	0.240	0.240	0.280	10.010	96.730	60.750	3.910

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
97	37-25-27.1 N	086-13-46.7 W	252.1	41.1	1280487

Address: Johnson Crossroads, 2601 St. Augustine Road

City: Clarkson County: GRAYSON State: KY Construction Deadline:

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)	97.900	73.900	78.500	96.700	106.000	108.500	99.600	95.600
Transmitting ERP (watts)	157.100	105.670	17.850	1.800	0.480	4.050	25.570	109.870

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKN867

File Number: 0009262184

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
97	37-25-27.1 N	086-13-46.7 W	252.1	41.1	1280487

Address: Johnson Crossroads, 2601 St. Augustine Road

City: Clarkson County: GRAYSON 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)	97.900	73.900	78.500	96.700	106.000	108.500	99.600	95.600
Transmitting ERP (watts)	7.940	44.270	150.440	165.870	63.900	9.040	0.700	1.050

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)	97.900	73.900	78.500	96.700	106.000	108.500	99.600	95.600
Transmitting ERP (watts)	4.030	0.340	2.430	11.890	72.190	167.790	144.670	35.900

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
98	37-54-31.9 N	085-59-25.9 W	236.2	35.0	

Address: Fort Knox IV, 5800 Block of Adams Street

City: Fort Knox County: MEADE State: KY Construction Deadline:

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)	94.000	74.300	90.800	60.900	57.100	53.800	55.700	114.300
Transmitting ERP (watts)	36.310	138.730	165.910	77.210	12.030	0.950	0.820	6.980

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)	94.000	74.300	90.800	60.900	57.100	53.800	55.700	114.300
Transmitting ERP (watts)	1.300	0.640	5.680	30.740	124.760	162.210	90.940	14.810

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)	94.000	74.300	90.800	60.900	57.100	53.800	55.700	114.300
Transmitting ERP (watts)	117.350	21.640	1.920	0.340	2.170	17.950	89.980	161.610

Control Points:

Control Pt. No. 1

Address: 216 W LINCOLN TRAIL

City: RADCLIFF County: State: KY Telephone Number:

Waivers/Conditions:

NONE

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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 ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WPZV472), File Number (0009262040), and Radio Service (CW - PCS Broadband).

FCC Registration Number (FRN): 0003290673

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

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.

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).

**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WPZV472

**File Number:** 0009262040

**Print Date:** 03-10-2021

**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

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

Table with Call Sign (WQGA718), File Number (0009793647), and Radio Service (AW - AWS (1710-1755 MHz and 2110-2155 MHz)).

FCC Registration Number (FRN): 0003290673

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations.

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.

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).

**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WQGA718

**File Number:** 0009793647

**Print Date:** 02-23-2022

**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

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

Table with Call Sign (WQGA959), File Number (0009775569), and Radio Service (AW - AWS (1710-1755 MHz and 2110-2155 MHz)).

FCC Registration Number (FRN): 0003290673

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations.

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.

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).

**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WQGA959

**File Number:** 0009775569

**Print Date:** 01-05-2022

**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

Table with Call Sign (WQJQ692), File Number, and Radio Service (WU - 700 MHz Upper Band (Block C)).

FCC Registration Number (FRN): 0003290673

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

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.

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:** 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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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> WQVN764	<b>File Number</b>
<b>Radio Service</b> AT - AWS-3 (1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz)	

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 04-08-2015	<b>Effective Date</b> 02-24-2017	<b>Expiration Date</b> 04-08-2027	<b>Print Date</b>
<b>Market Number</b> BEA071	<b>Channel Block</b> H	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Nashville, TN-KY			
<b>1st Build-out Date</b> 04-08-2021	<b>2nd Build-out Date</b> 04-08-2027	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

Waivers/Conditions:

NONE

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:** WQVN764

**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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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

Table with Call Sign (WQVN765), File Number, and Radio Service (AT - AWS-3) details.

FCC Registration Number (FRN): 0003290673

Table containing license details: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, and Build-out Dates.

Waivers/Conditions:

NONE

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.

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).

**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WQVN765

**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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Federal Communications Commission  
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

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

<b>Call Sign</b> WRAM746	<b>File Number</b> 0009262184
<b>Radio Service</b> WT - 600 MHz Band	

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 01-09-2018	<b>Effective Date</b> 01-13-2021	<b>Expiration Date</b> 01-09-2030	<b>Print Date</b> 03-11-2021
<b>Market Number</b> PEA112	<b>Channel Block</b> A	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Bowling Green, KY			
<b>1st Build-out Date</b> 01-09-2024	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

Waivers/Conditions:

NONE

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:** WRAM746

**File Number:** 0009262184

**Print Date:** 03-11-2021

**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 ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WREV449), File Number (0009262184), and Radio Service (UU - Upper Microwave Flexible Use Service).

FCC Registration Number (FRN): 0003290673

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

NONE

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.

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).

**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WREV449

**File Number:** 0009262184

**Print Date:** 03-11-2021

**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  
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RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

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

<b>Call Sign</b> WREV451	<b>File Number</b> 0009262184
<b>Radio Service</b> UU - Upper Microwave Flexible Use Service	

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 12-11-2019	<b>Effective Date</b> 01-13-2021	<b>Expiration Date</b> 12-11-2029	<b>Print Date</b> 03-11-2021
<b>Market Number</b> PEA112	<b>Channel Block</b> B	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Bowling Green, 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:

NONE

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:** WREV451

**File Number:** 0009262184

**Print Date:** 03-11-2021

**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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RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

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

<b>Call Sign</b> WREV453	<b>File Number</b> 0009262184
<b>Radio Service</b> UU - Upper Microwave Flexible Use Service	

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 12-11-2019	<b>Effective Date</b> 01-13-2021	<b>Expiration Date</b> 12-11-2029	<b>Print Date</b> 03-11-2021
<b>Market Number</b> PEA112	<b>Channel Block</b> C	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Bowling Green, 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:

NONE

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:** WREV453

**File Number:** 0009262184

**Print Date:** 03-11-2021

**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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RADIO STATION AUTHORIZATION

LICENSEE: STRAIGHT PATH SPECTRUM, LLC

ATTN: REGULATORY  
STRAIGHT PATH SPECTRUM, LLC  
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
ALPHARETTA, GA 30022

<b>Call Sign</b> WRHF210	<b>File Number</b>
<b>Radio Service</b> UU - Upper Microwave Flexible Use Service	

FCC Registration Number (FRN): 0012576435

<b>Grant Date</b> 06-04-2020	<b>Effective Date</b> 06-04-2020	<b>Expiration Date</b> 06-04-2030	<b>Print Date</b>
<b>Market Number</b> PEA112	<b>Channel Block</b> M1	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Bowling Green, 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:

NONE

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:** STRAIGHT PATH SPECTRUM, LLC

**Call Sign:** WRHF210

**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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RADIO STATION AUTHORIZATION

LICENSEE: STRAIGHT PATH SPECTRUM, LLC

ATTN: REGULATORY  
STRAIGHT PATH SPECTRUM, LLC  
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
ALPHARETTA, GA 30022

<b>Call Sign</b> WRHF211	<b>File Number</b>
<b>Radio Service</b> UU - Upper Microwave Flexible Use Service	

FCC Registration Number (FRN): 0012576435

<b>Grant Date</b> 06-04-2020	<b>Effective Date</b> 06-04-2020	<b>Expiration Date</b> 06-04-2030	<b>Print Date</b>
<b>Market Number</b> PEA112	<b>Channel Block</b> M10	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Bowling Green, 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:

NONE

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:** STRAIGHT PATH SPECTRUM, LLC

**Call Sign:** WRHF211

**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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RADIO STATION AUTHORIZATION

LICENSEE: STRAIGHT PATH SPECTRUM, LLC

ATTN: REGULATORY  
STRAIGHT PATH SPECTRUM, LLC  
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
ALPHARETTA, GA 30022

<b>Call Sign</b> WRHF212	<b>File Number</b>
<b>Radio Service</b> UU - Upper Microwave Flexible Use Service	

FCC Registration Number (FRN): 0012576435

<b>Grant Date</b> 06-04-2020	<b>Effective Date</b> 06-04-2020	<b>Expiration Date</b> 06-04-2030	<b>Print Date</b>
<b>Market Number</b> PEA112	<b>Channel Block</b> M2	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Bowling Green, 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:

NONE

Conditions:

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**Licensee Name:** STRAIGHT PATH SPECTRUM, LLC

**Call Sign:** WRHF212

**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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RADIO STATION AUTHORIZATION

LICENSEE: STRAIGHT PATH SPECTRUM, LLC

ATTN: REGULATORY
STRAIGHT PATH SPECTRUM, LLC
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WRHF213), File Number, and Radio Service (UU - Upper Microwave Flexible Use Service).

FCC Registration Number (FRN): 0012576435

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

NONE

Conditions:

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**Licensee Name:** STRAIGHT PATH SPECTRUM, LLC

**Call Sign:** WRHF213

**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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RADIO STATION AUTHORIZATION

LICENSEE: STRAIGHT PATH SPECTRUM, LLC

ATTN: REGULATORY
STRAIGHT PATH SPECTRUM, LLC
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Table with 2 columns: Call Sign (WRHF214), File Number, and Radio Service (UU - Upper Microwave Flexible Use Service).

FCC Registration Number (FRN): 0012576435

Table with 4 columns: Grant Date (06-04-2020), Effective Date (06-04-2020), Expiration Date (06-04-2030), Print Date, Market Number (PEA112), Channel Block (M4), Sub-Market Designator (0), Market Name (Bowling Green, KY), 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

NONE

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.

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**Licensee Name:** STRAIGHT PATH SPECTRUM, LLC

**Call Sign:** WRHF214

**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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RADIO STATION AUTHORIZATION

LICENSEE: STRAIGHT PATH SPECTRUM, LLC

ATTN: REGULATORY
STRAIGHT PATH SPECTRUM, LLC
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WRHF215), File Number, and Radio Service (UU - Upper Microwave Flexible Use Service).

FCC Registration Number (FRN): 0012576435

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

NONE

Conditions:

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**Licensee Name:** STRAIGHT PATH SPECTRUM, LLC

**Call Sign:** WRHF215

**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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RADIO STATION AUTHORIZATION

LICENSEE: STRAIGHT PATH SPECTRUM, LLC

ATTN: REGULATORY
STRAIGHT PATH SPECTRUM, LLC
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WRHF216), File Number, and Radio Service (UU - Upper Microwave Flexible Use Service).

FCC Registration Number (FRN): 0012576435

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

NONE

Conditions:

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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).

**Licensee Name:** STRAIGHT PATH SPECTRUM, LLC

**Call Sign:** WRHF216

**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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RADIO STATION AUTHORIZATION

LICENSEE: STRAIGHT PATH SPECTRUM, LLC

ATTN: REGULATORY
STRAIGHT PATH SPECTRUM, LLC
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WRHF217), File Number, and Radio Service (UU - Upper Microwave Flexible Use Service).

FCC Registration Number (FRN): 0012576435

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

NONE

Conditions:

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**Licensee Name:** STRAIGHT PATH SPECTRUM, LLC

**Call Sign:** WRHF217

**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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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: STRAIGHT PATH SPECTRUM, LLC

ATTN: REGULATORY
STRAIGHT PATH SPECTRUM, LLC
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Table with Call Sign (WRHF218), File Number, and Radio Service (UU - Upper Microwave Flexible Use Service).

FCC Registration Number (FRN): 0012576435

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

NONE

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.

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**Licensee Name:** STRAIGHT PATH SPECTRUM, LLC

**Call Sign:** WRHF218

**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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Federal Communications Commission  
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: STRAIGHT PATH SPECTRUM, LLC

ATTN: REGULATORY  
STRAIGHT PATH SPECTRUM, LLC  
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING  
ALPHARETTA, GA 30022

<b>Call Sign</b> WRHF219	<b>File Number</b>
<b>Radio Service</b> UU - Upper Microwave Flexible Use Service	

FCC Registration Number (FRN): 0012576435

<b>Grant Date</b> 06-04-2020	<b>Effective Date</b> 06-04-2020	<b>Expiration Date</b> 06-04-2030	<b>Print Date</b>
<b>Market Number</b> PEA112	<b>Channel Block</b> M9	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Bowling Green, 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:

NONE

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:** STRAIGHT PATH SPECTRUM, LLC

**Call Sign:** WRHF219

**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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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

Table with Call Sign (WRNF682), File Number, and Radio Service (PM - 3.7 GHz Service).

FCC Registration Number (FRN): 0003290673

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

Operation for this combination license grants both interim and final rights for this PEA and is not impacted by the relocation process pursuant to 47 CFR ? 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:

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**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WRNF682

**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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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> WRNF683	<b>File Number</b>
<b>Radio Service</b> PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 07-23-2021	<b>Effective Date</b> 07-23-2021	<b>Expiration Date</b> 07-23-2036	<b>Print Date</b>
<b>Market Number</b> PEA112	<b>Channel Block</b> A2	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Bowling Green, KY			
<b>1st Build-out Date</b> 07-23-2029	<b>2nd Build-out Date</b> 07-23-2033	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

Waivers/Conditions:

Operation for this combination license grants both interim and final rights for this PEA and is not impacted by the relocation process pursuant to 47 CFR ? 27.1412(g).

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**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WRNF683

**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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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

Table with Call Sign (WRNF684), File Number, and Radio Service (PM - 3.7 GHz Service).

FCC Registration Number (FRN): 0003290673

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

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**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WRNF684

**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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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

Table with 2 columns: Call Sign (WRNF685), File Number, and Radio Service (PM - 3.7 GHz Service).

FCC Registration Number (FRN): 0003290673

Table with 4 columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

Operation for this combination license grants both interim and final rights for this PEA and is not impacted by the relocation process pursuant to 47 CFR ? 27.1412(g).

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**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WRNF685

**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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LICENSEE: CELLCO PARTNERSHIP

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

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FCC Registration Number (FRN): 0003290673

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**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WRNF686

**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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RADIO STATION AUTHORIZATION

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

Table with Call Sign (WRNF687), File Number, and Radio Service (PM - 3.7 GHz Service).

FCC Registration Number (FRN): 0003290673

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

This interim license, in conjunction with one or more final licenses, collectively provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR ? 27.1412(g). Assignment application(s) and transfers of control filed for this interim license must be done in conjunction with any linked final license.

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**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WRNF687

**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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**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> WRNF688	<b>File Number</b>
<b>Radio Service</b> PM - 3.7 GHz Service	

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

<b>Grant Date</b> 07-23-2021	<b>Effective Date</b> 07-23-2021	<b>Expiration Date</b> 07-23-2036	<b>Print Date</b>
<b>Market Number</b> PEA112	<b>Channel Block</b> B2	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Bowling Green, KY			
<b>1st Build-out Date</b> 07-23-2029	<b>2nd Build-out Date</b> 07-23-2033	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

This interim license, in conjunction with one or more final licenses, collectively provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR ? 27.1412(g). Assignment application(s) and transfers of control filed for this interim license must be done in conjunction with any linked final license.

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**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WRNF688

**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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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

Table with Call Sign (WRNF689), File Number, and Radio Service (PM - 3.7 GHz Service).

FCC Registration Number (FRN): 0003290673

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**Licensee Name:** CELLCO PARTNERSHIP

**Call Sign:** WRNF689

**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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Reference Copy

# CELLCO PARTNERSHIP

## D/B/A Verizon wireless

2421 HOLLOWAY RD  
LOUISVILLE, KY 40299

**NEW 250' SELF-SUPPORT TOWER  
W/5' LIGHTNING ROD  
TOTAL TOWER HEIGHT 255'**

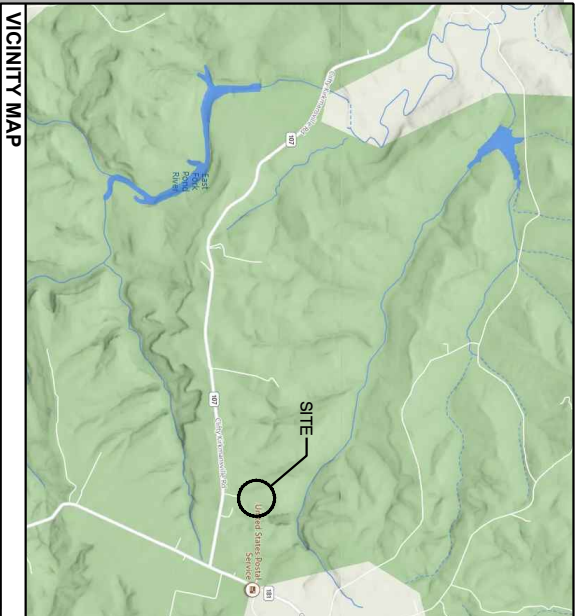
# CK CLIFTY

617103749  
462 CLIFTY KIRKSMANVILLE ROAD  
ELKTON, KY 42220  
TODD COUNTY

**TENANT: LEGAL BUSINESS ENTITY d/b/a VERIZON WIRELESS  
"CK CLIFTY"**

FROM LOUISVILLE MTSO: 2441 HOLLOWAY RD LOUISVILLE KY: HEAD SOUTH ON HOLLOWAY R TOWARD CHUTTE STATION P1 (0.3MI.). ROAD NAME CHANGES TO PLANTSIDE DR (0.6MI.). TURN LEFT ONTO BLANKENBAKER PKWY (0.7MI.). TAKE THE RAMP ON THE RIGHT FOR I-64E (1.6MI.). AT EXIT 19A, HEAD ON THE RAMP RIGHT AND FOLLOW SINS FOR I-265S (2.8MI.). ROAD NAME CHANGES TO I-265W (12.5MI.). AT EXIT 10B, HEAD RIGHT ON THE RAMP FOR I-65S (33.9MI.). AT EXIT 91, HEAD RIGHT ON THE RAMP FOR KY-61 (75.6MI.). ROAD NAME CHANGES TO WESTERN KENTUCKY PKWY (2.1MI.). ROAD NAME CHANGES TO WESTERN KENTUCKY PKWY W (6.9MI.). AT EXIT 53, HEAD RIGHT ON THE RAMP FOR KY-181 (0.4MI.). TURN RIGHT ONTO KY-181 (2.6MI.). TURN LEFT ONTO KY-181 (0.9MI.). TURN RIGHT ONTO KY-107 (0.5MI.). SITE ON THE RIGHT.

<b>TOWER OWNER SITE</b> CK CLIFTY SITE #: 617103749	<b>POLICE</b> TODD COUNTY SHERIFF 202 E WASHINGTON ST ELKTON, KY 42220 PHONE: 270-265-9966
<b>VERIZON WIRELESS SITE</b> CK CLIFTY PROJECT #: 20212296998 MARKET ID: CK LOCATION CODE: 706080	<b>FIRE</b> CLIFTY VOLUNTEER FIRE DEPT. 1640 GREENVILLE RD CLIFTY, KY 42216 PHONE: 270-277-6762
<b>SITE ADDRESS</b> 462 CLIFTY KIRKSMANVILLE ROAD ELKTON, KY 42220 TODD COUNTY E911 ADDRESS: TBD	<b>GENERAL INFORMATION</b> LATITUDE = 35° 58' 26.00" N LONGITUDE = 87° 09' 44.12" W 1983 (NAD83) ELEVATION = 798.00' AMSL 1988 (NAVD83)
<b>TOWER OWNER</b> VERIZON WIRELESS 250 E. 96TH ST, SUITE 300 INDIANAPOLIS, IN 46240 CONTACT: ERIN MORRISON PHONE: (207) 385-5994 E-MAIL: erin.morrison@verizonwireless.com	<b>TOWER OWNER LEASE AREA</b> 100'-0" x 100'-0" (10000 SF)
<b>PROPERTY OWNER</b> STEVE AND BRENDA POWELL 12160 GREENVILLE ROAD ELKTON, KY 42220 CONTACT: STEVE POWELL PHONE: (270) 604-5515 E-MAIL: STEVEPOWELL@GMAIL.COM	<b>VERIZON WIRELESS LEASE AREA</b> 20'-0" x 36'-0" (720 SF)
<b>PROJECT SUMMARY</b>	<b>PROJECT TOTAL DISTURBED AREA</b> COMPOUND: (10000 SF) = (0.23 ACRE) ACCESS DRIVE: (3433 SF) = (0.08 ACRE) GROSS AREA: (1346 SF) = (0.31 ACRE)



**PROJECT DESCRIPTION:**  
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. ITEMS LISTED BELOW:

**TOWER OWNER SCOPE:**

- INSTALL A NEW 250' SELF-SUPPORT TOWER w/ 5' LIGHTNING ROD (TOTAL 255')
- INSTALL A NEW TOWER FOUNDATION SYSTEM
- INSTALL A NEW 987X98' FENCED GRAVEL COMPOUND
- INSTALL A NEW ELECTRICAL SERVICE RUN TO SITE H-FRAME
- INSTALL A NEW GRAVEL ACCESS DRIVE TO SITE
- NO. W/INTERIOR WIRE SERVICE TO THE TOWER
- INSTALL NEW VZW SUBSURFACE GROUNDING SYSTEM
- INSTALL A NEW 11'-6"x19'-6" CONCRETE EQUIPMENT PAD
- INSTALL ELECTRICAL SERVICE CONDUIT WITH PULL TAPES FROM ITC ENCLOSURE STUB-UPS WITHIN VZW EQUIPMENT PAD TO UTILITY H-FRAME
- INSTALL NEW CONDUITS WITH PULL TAPES FROM ITC ENCLOSURE STUB-UPS TO EQUIPMENT ENCLOSURES WITH PULL TAPES FROM VZW ITC STUB-UP LOCATION TO THE EQUIPMENT ENCLOSURES WITHIN VZW EQUIPMENT PAD
- INSTALL NEW CONDUITS WITH PULL TAPES FROM RE CABINET TO OVP H-FRAME LIT FIBER LOCATION
- INSTALL (1) NEW "VERIZON WIRELESS ONLY" FIBER OPTIC CONDUIT WITH PULL TAPES AND TRACER WIRE FROM VZW EQUIPMENT TO NEW "VERIZON WIRELESS ONLY" HAND HOLE AT ROW
- INSTALL (1) NEW "VERIZON WIRELESS ONLY" FIBER OPTIC CONDUIT WITH PULL TAPES PERMANENT ELECTRICAL 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 VZW ICE BRIDGE AND FOUNDATIONS
- INSTALL VZW ANTENNA MOUNTING SUPPORT STRUCTURE ON TOWER
- INSTALL VZW ANTENNA MOUNTING SUPPORT STRUCTURE ON TOWER
- INSTALL VZW ANTENNA MOUNTING SUPPORT STRUCTURE ON TOWER
- INSTALL EXISTING SUBSURFACE GROUND LEADS TO VZW EQUIPMENT & FACILITIES
- INSTALL VZW ELECTRICAL SERVICE CONDUCTIONS FROM UTILITY H-FRAME TO VZW ITC ENCLOSURE
- INSTALL CIRCUITS FROM VZW ITC TO VZW EQUIPMENT ENCLOSURES
- INSTALL NEW VZW SUBSURFACE GROUNDING SYSTEM
- INSTALL (1) NEW "VERIZON WIRELESS ONLY" FIBER OPTIC CONDUITS
- 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 (IBC 2012)  
**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** 2009 NATIONAL FUEL GAS CODE (NFPA 54)  
**GAS CODE** 2009 NATIONAL FUEL GAS CODE (NFPA 54)

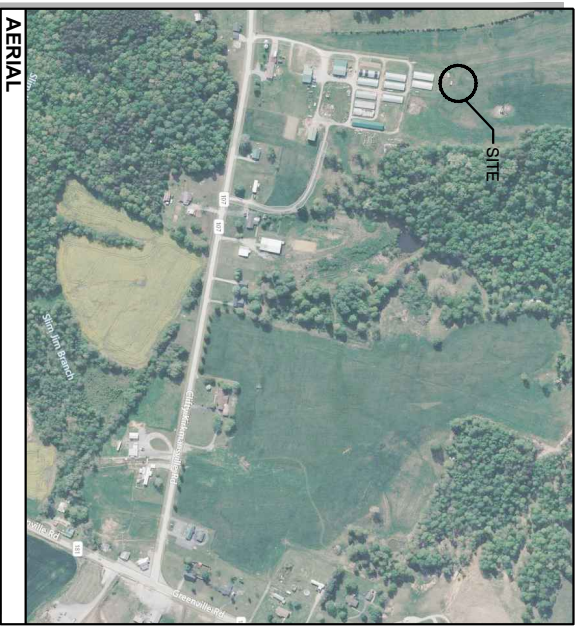
**ACCESSIBILITY REQUIREMENTS:**  
 FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE 2009 IBC BUILDING CODE.

**APPLICABLE CODES**

<b>SUBRECTOR</b> SHARONDALE SURVEYING INC. 161 MARTIN RD BOVA AQUA, TN 37025 PHONE: 615-513-0032	<b>ARCHITECTURAL</b> BITA ENGINEERING 3001 TAYLOR SPRINGS DR LOUISVILLE, KY 40220 CONTACT: JEFFREY LASHBROOK PHONE: 502-459-8402 EMAIL: jlashbrook@bitaeng.com
--	--

**ELECTRICAL**  
 PENNARIE ELECTRIC CO-OP  
 ADDRESS: 204 S. MAIN ST  
 ELKTON, KY 42220  
 CONTACT: N/A  
 PHONE: 270-265-2545  
 EMAIL: N/A

**ELECTRICAL UTILITY COORDINATION IS NOT FINALIZED DO NOT PROCEED WITH CONSTRUCTION.**



<b>SHEET NUMBER</b>	<b>DESCRIPTION</b>
T-1	PROJECT INFORMATION, SITE MAPS, SHEET INDEX SURVEY PLAN (10P2) SURVEY PLAN (20P2) 500' RADIUS & ADDONERS MAP (10P1)
<b>TOWER ELEVATION</b>	TOWER ELEVATION
<b>QUAL</b>	QUAL
C-1	OVERALL SITE PLAN w/ AERIAL OVERLAY
C-1A	OVERALL SITE PLAN w/ PLATFORM DISTANCE TO PROPERTY LINES
C-1B	TOWER DISTANCE TO RESIDENTIAL STRUCTURES
C-1C	COUNTY TOWER MAP
C-2	GROUND AND EAS CONTROL PLAN
C-3	DETAILED SITE PLAN
C-4	DIMENSIONED SITE PLAN
C-5	DETAILED EQUIPMENT PAD PLAN
<b>SITE DETAILS</b>	FENCE DETAILS AND NOTES
D-1	D-1

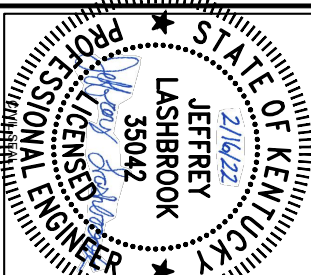
**REFERENCE DRAWINGS**

RF-1 ANTENNA PLAN AND DETAILS (REFERENCE ONLY)

BTM Engineering, Inc.  
a Bowman Company  
CONSULTING ENGINEERS,  
LANDSCAPE ARCHITECTS,  
PLANNERS  
AND SURVEYORS  
3001 TAYLOR SPRINGS DRIVE  
LOUISVILLE, KY 40220  
PHONE: (502) 459-8402  
FAX: (502) 459-8427

CELLCO PARTNERSHIP D/B/A  
**verizon wireless**  
2421 HOLLOWAY RD  
LOUISVILLE, KY 40299  
PHONE (502) 552-0330  
FAX (502) 266-7548

REV.	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT
B	01/26/22	ISSUE FOR ZONING
C	02/16/22	ISSUE FOR ZONING



CK CLIFTY  
462 CLIFTY KIRKSMANVILLE ROAD  
ELKTON, KY 42220  
PROJECT INFORMATION,  
SITE MAPS, SHEET INDEX

ISSUED FOR:	
REVIEW:	
PERMIT:	
CONSTRUCTION:	
RECORD:	
PROJECT MANAGER:	JTL
DESIGNER:	CWS

JOB NUMBER  
210350

T-1

HWY PAD & CANOPY REV 5 08/29/18

**FLOOD HAZARD STATEMENT:**

THIS COMMUNICATIONS SITE (THE SUBJECT SITE AS SHOWN) IS NOT LOCATED WITHIN THE LIMITS OF A DESIGNATED 100 YEAR FLOOD ZONE PER FEMA FIRM MAP COMMUNITY PANEL NUMBER 21219C 0125 C TODD COUNTY, KENTUCKY, EFFECTIVE DATE JULY 22, 2010.

**PROJECT BENCHMARK**

TBM ELEVATION DATUM IS BASED UPON GPS SURVEY METHODS AND PROCEDURES.  
TOP OF "CAPPED" IRON PIN SET THIS SURVEY  
ELEVATION = 798.74' N.A.V.D. 88  
(SEE PLAN FOR LOCATION)

KY SPC (SOUTH ZONE)  
NAD 83 GRID NORTH



Scale 1" = 80'  
GRAPHIC SCALE  
(11" X 17" SHEET SIZE)

CENTERLINE OF PROPOSED  
LESSEE PREMISES  
LATITUDE = 36° 59' 26.09"  
LONGITUDE = 87° 09' 44.12"  
ELEVATION = 798.00' N.A.V.D. 88

**UNDERGROUND UTILITIES**

CALL 2 WORKING DAYS  
**BEFORE YOU DIG**  
KENTUCKY 1-800-752-6007  
UTILITIES PROTECTION SERVICE  
NON-MEMBERS MUST CALL DIRECTLY

**SPECIAL NOTE:**

THIS SURVEY PLAN WAS PERFORMED UNDER THE AUTHORITY OF KENTUCKY REVISED STATUTES (201 KAR 18.150), AND IS NOT TO BE CONSIDERED A GENERAL PROPERTY BOUNDARY SURVEY AS DEFINED WITHIN KENTUCKY REVISED STATUTES. DIMENSIONS (IF SHOWN) ALONG THE PERIMETER OF THE LANDOWNER'S PROPERTY ARE PROVIDED UNDER THIS SURVEYOR'S SCOPE OF SERVICES WITH CELCO PARTNERSHIP, AND ARE TO BE CONSIDERED FOR REFERENCE ONLY. THE EXACT LOCATION OF THE LANDOWNER'S PROPERTY MAY DIFFER UPON THE PREPARATION OF A FULL BOUNDARY SURVEY IN ACCORDANCE WITH REQUIREMENTS ESTABLISHED BY THE STATE OF KENTUCKY.

**CENTERLINE DATA - LESSEE'S 30' WIDE JOINT ACCESS & FIBER/UTILITY EASEMENT**

NO.	DELTA/BEARING	RADIUS	LENGTH	TAN	CHORD
1	23° 41' 32"	550.00'	227.43'	115.36'	N 10° 05' 55" E/225.81'
2	N 21° 56' 41" E	---	53.13'	---	---
3	N 00° 58' 19" W	---	52.37'	---	---

**UTILITY NOTE:**

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS AND/OR MAPS PREPARED BY OTHERS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY.

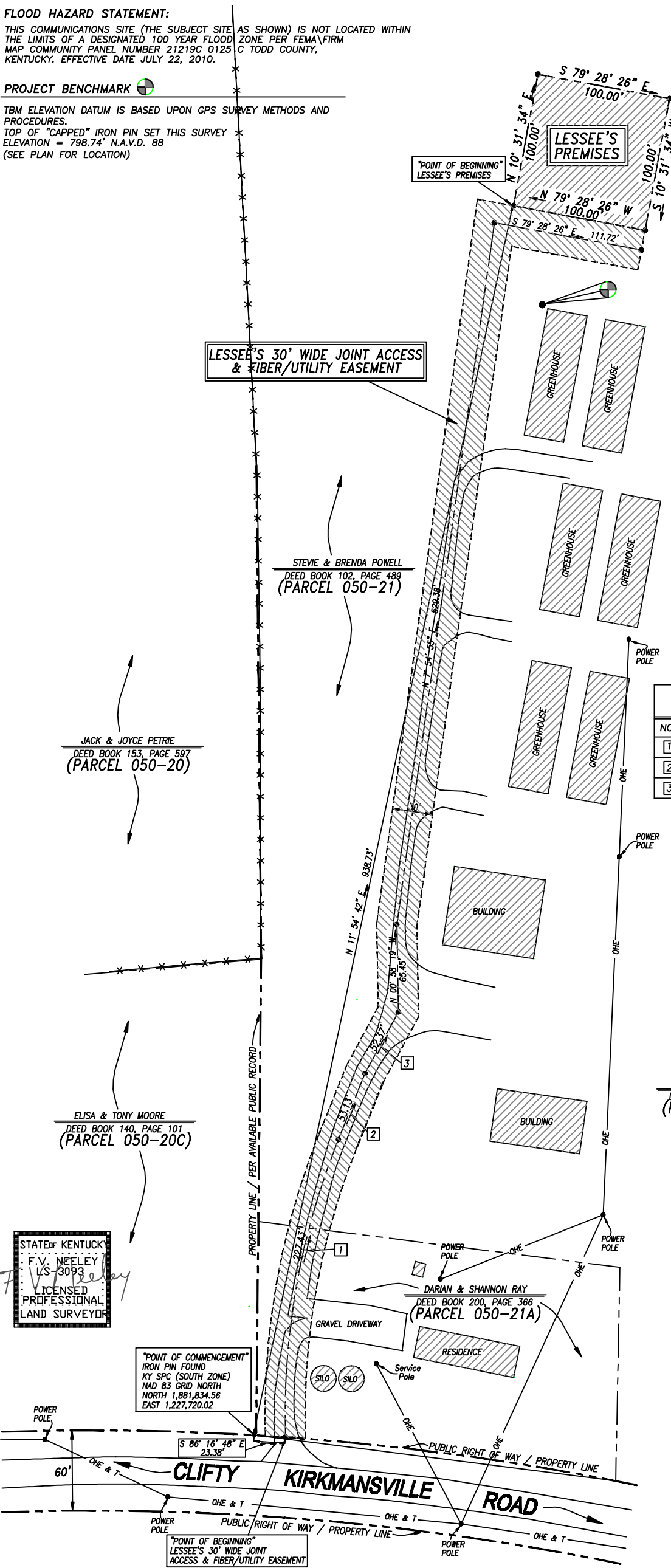
**LEGENDS:**

- IRON PIN SET THIS SURVEY
- IRON PIN FOUND
- RIGHT-OF-WAY/PROPERTY LINE
- 560 --- INDEX CONTOURS
- 1' INTERVAL
- OHE & T --- OVERHEAD ELECTRIC & TELEPHONE LINES
- OHE --- OVERHEAD ELECTRIC
- X X X X --- FENCELINE

**GENERAL NOTES:**

- I HEREBY CERTIFY THAT THE SURVEY DEPICTED BY THIS PLAT WAS PREPARED BY PERSONS UNDER MY DIRECT SUPERVISION BY THE METHOD OF RANDOM TRAVERSE WITH SIDE SHOTS. THE UNADJUSTED PRECISION OF THE TRAVERSE RATIO WAS 1:23,240, AND WAS NOT ADJUSTED. THE SURVEY AS SHOWN HEREON IS AN URBAN SURVEY, AND THE ACCURACY AND PRECISION OF SAID SURVEY MEETS ALL THE SPECIFICATIONS OF THIS CLASS.
- FRANK V. NEELEY, P.L.S. 3093 DATE JANUARY 3, 2022
  - PARCEL NUMBERS SHOWN THUS (00), REFER TO TAX MAP NO. 60, OF THE PROPERTY VALUATION OFFICE OF TODD COUNTY, KENTUCKY.
  - BEARINGS SHOWN ARE REFERENCED FROM GLOBALLY POSITIONED SATELLITE MONUMENTS AS ESTABLISHED FOR THIS SURVEY.
  - PROPERTY OWNERS:  
STEVIE & BRENDA POWELL  
12160 GREENVILLE ROAD  
ELKTON, KY 42220
  - IRON PINS SET ARE 18" MINIMUM LENGTH REINFORCING STEEL BARS WITH A PLASTIC CAPPED EMBOSSED "KY PLS #3093", UNLESS ROCK OR OTHER LIKE MATERIAL IS ENCOUNTERED.
  - DATE OF FIELD SURVEY: TUESDAY, DECEMBER 28, 2021.
  - NOT VALID WITHOUT THE ORIGINAL SIGNATURE OF THE PROFESSIONAL LICENSED SURVEYOR.

PLOT DATE: FEBRUARY 16, 2022



STATE OF KENTUCKY  
F.V. NEELEY  
L.S. 3093  
LICENSED PROFESSIONAL LAND SURVEYOR

"POINT OF COMMENCEMENT"  
IRON PIN FOUND  
KY SPC (SOUTH ZONE)  
NAD 83 GRID NORTH  
NORTH 1,881,834.56  
EAST 1,227,720.02

PROJECT NUMBER:  
221.108.20  
SHEET NUMBER:  
1 OF 2

CELLCO PARTNERSHIP SITE SURVEY: KENTUCKY  
D/B/A/ VERIZON WIRELESS  
"CK CLIFTY" TOWER SITE  
LOCATED IN: CLIFTY, TODD COUNTY, KENTUCKY  
TOWER PREMISES AREA SURVEY  
CELLCO PARTNERSHIP LOCATION CODE: 706080

SHARONDALE  
SURVEYING  
INC.  
161 MARTIN ROAD  
BON AQUA, TN 37025  
(615) 513-0032  
E-Mail: Sharnda@bellsouth.net





**LESSEE'S PREMISES AREA DESCRIPTION**

Commencing at an iron pin found in the north margin of Clifty Kirkmansville Road located at Kentucky State Plane (South Zone) NAD 83 Grid Coordinate North 1,881,834.56, East 1,227,720.02;

Thence, North 11 degrees 54 minutes 42 seconds East, 938.73 feet to a capped "KY PLS #3093" iron pin set at the southwest corner of Lessee's Premises, said iron pin being the point of beginning of the following described Lessee's Premises;

Thence, North 10 degrees 31 minutes 34 seconds East, 100.00 feet to a capped "Sharondale Nashville" iron pin set at the northwest corner of Lessee's Premises;

Thence, South 79 degrees 28 minutes 26 seconds East, 100.00 feet to a capped "Sharondale Nashville" iron pin set at the northeast corner of Lessee's Premises;

Thence, South 10 degrees 31 minutes 34 seconds West, 100.00 feet to a capped "Sharondale Nashville" iron pin set at the southeast corner of Lessee's Premises;

Thence, North 79 degrees 28 minutes 26 seconds West, 100.00 feet to the point of beginning, containing 10,000 square feet, (0.230 acres).

Being a portion of the property conveyed to Stevie Powell and wife, Brenda Powell, of record in Deed Book 102, Page 489, of the Court Clerk's Office of Todd County, Kentucky.

**LESSEE'S 30' WIDE JOINT ACCESS & FIBER/UTILITY EASEMENT AREA DESCRIPTION**

Commencing at an iron pin found in the north margin of Clifty Kirkmansville Road located at Kentucky State Plane (South Zone) NAD 83 Grid Coordinate North 1,881,834.56, East 1,227,720.02;

Being a thirty foot wide joint access and fiber/utility easement extending from the north margin of Clifty Kirkmansville Road to the south margin of Lessee's Premises, at all times being fifteen feet wide each side of and parallel with the following described centerline:

Commencing at an iron pin found in the north margin of Clifty Kirkmansville Road located at Kentucky State Plane (South Zone) NAD 83 Grid Coordinate North 1,881,834.56, East 1,227,720.02;

Thence, South 86 degrees 16 minutes 48 seconds East, 23.38 feet to a survey spike set in the north margin of Clifty Kirkmansville Road, said survey nail being at the point of beginning of the following described thirty foot wide joint access and fiber/utility easement;

Thence, leaving the north margin of Clifty Kirkmansville Road, along a curve to the left with a central angle of 23 degrees 41 minutes 32 seconds, a radius of 550.00 feet, and a chord bearing of North 10 degrees 05 minutes 55 seconds East, 225.81 feet, a total distance of 227.43 feet to a point

Thence, North 21 degrees 56 minutes 41 seconds East, 53.13 feet to a point;

Thence, North 28 degrees 24 minutes 57 seconds East, 52.37 feet to a point;

Thence, North 00 degrees 58 minutes 19 seconds West, 65.45 feet to a point;

Thence, North 7 degrees 54 minutes 55 seconds East, 529.38 feet to a point;

Thence, South 79 degrees 28 minutes 26 seconds East, 111.72 feet to a capped "KY PLS #3093" iron pin set at the point of termination of this easement, containing 31,184 square feet, (0.716 acres).

Being a portion of the property conveyed to Stevie Powell and wife, Brenda Powell, of record in Deed Book 102, Page 489, of the Court Clerk's Office of Todd County, Kentucky.

**UNDERLYING LANDOWNER'S PROPERTY AREA DESCRIPTION**

A certain tract of land in Todd County, Kentucky, located on the North side of KY Hwy. No. 107 approximately 105 miles Southwest of Clifty, and further described from a survey by E. T. Riley, Land Surveyor, KY Reg. No. 128 on April 11, 1978, as follows:

Beginning at a stake in the North right of way line of Hwy. 107, a corner with Gilbert Francis; thence with Francis' line, passing just East of a well house, N 2 degrees 51' W - 14.71 chains to a rock, a corner with same; thence with Francis' line N 14 degrees 34' W - 5.77 chains to a stake in the center of an old road; thence with Francis' line leaving the old road N 57 degrees 02' W - 8.51 chains crossing the branch to a beech on the West side thereof, a corner with Francis and the Petrie Heirs; thence with the line of the Petrie Heirs 12 calls along a bluff crossing the branch N 20 degrees 30' E - 5.71 chains to a point of the bluff, N 36 degrees 04' E - 6.37 chains, S 28 degrees 51' E - 6.37 chains, S 28 degrees 51' E 2.80 chains, East - 7.00 chains, S 52 degrees 53' E - 4.64 chains, S 11 degrees 19' E - 8.67 chains, S 30 degrees 15' W - 1.39 chains, S 86 degrees 11' E - 3.01 chains to a waterfall, a corner with the Petrie Heirs and William Carver; thence up the branch with Carver's line S 6 degrees 20' E - 9.06 chains and South 11 degrees 38' W - 2.78 chains to a point in the fork of the branch; thence with the Southwest fork along Carver's line S 31 degrees 22' W - 4.80 chains and S 9 degrees 03' E - 5.12 chains to an oak tree near the head of the branch, a corner with Carver; thence with the lines of Carver and Harold Shemwell S 9 degrees 27' W - 4.69 chains to a rock on the East side of a gravel drive, said rock being 31 feet North of the North right of way line of KY Hwy. 107; thence along the North side of the old road N 85 degrees 36' W - 5.99 chains to an oak tree in the North right of way line of Hwy. 107 at the junction with the North side of the old road; thence with the said right of way line N 83 degrees 15' W - 3.92 chains and N 86 degrees 51' W - 2.55 chains to the beginning point, containing 63,905 acres.

EXCEPTION: There is excepted from the foregoing described property a certain tract conveyed therefrom by Huston McGehee, widower, to Morris B. McGehee and wife by Deed dated August 5, 1968, and recorded in Deed Book 85, Page 694, records of the Todd County Court Clerk's Office, and more fully described as follows:

Beginning at a stake in the North right of way line of KY Hwy. No. 107, 162 feet West of the Southeast corner of the Huston McGehee property, a new corner with said McGehee; thence on a new line with said McGehee N 9 degrees E 190.4 feet to a stake, thence on a new line with McGehee N 78 degrees W 132.0 feet to a stake; thence on a new line with McGehee S 9 degrees W 197.9 feet to a stake in the North right of way line of KY Hwy. No. 107, a new corner with McGehee, thence with the North right of way line of said Hwy. S 81 degrees E 133.5 feet, to the point of beginning, containing .59 acres.

The above description is according to a survey made by V. Glenn Hughes, Surveyor on August 3, 1968.

LESS AND EXCEPT that portion of property conveyed to Darian Michael Ray and Shannon Denise Powell Ray from Stevie A. Powell and Brenda L. Powell by Deed of Conveyance dated February 22, 2016, and recorded February 23, 2016, in Deed Book 200, Page 366.

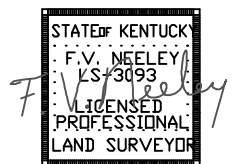
AND BEING the same property conveyed to Stevie A. Powell and Brenda L. Powell from Eleanor Frazier, George Frazier, Uela Adams, Junior McGehee, Patricia McGehee, Audrey Raulston, Ross Raulston, by Dorris McGehee and Morris McGehee, their joint attorney in fact, Dorris McGehee, Karlene McGehee, Morris McGehee, Louise McGehee, William McGehee and Verna McGehee by Deed of Conveyance dated July 25, 1978, and recorded July 25, 1978, in Deed Book 102, Page 489.

Tax Parcel No. 050-21.

**SURVEYOR'S REVIEW OF "SPECIAL EXCEPTIONS"**

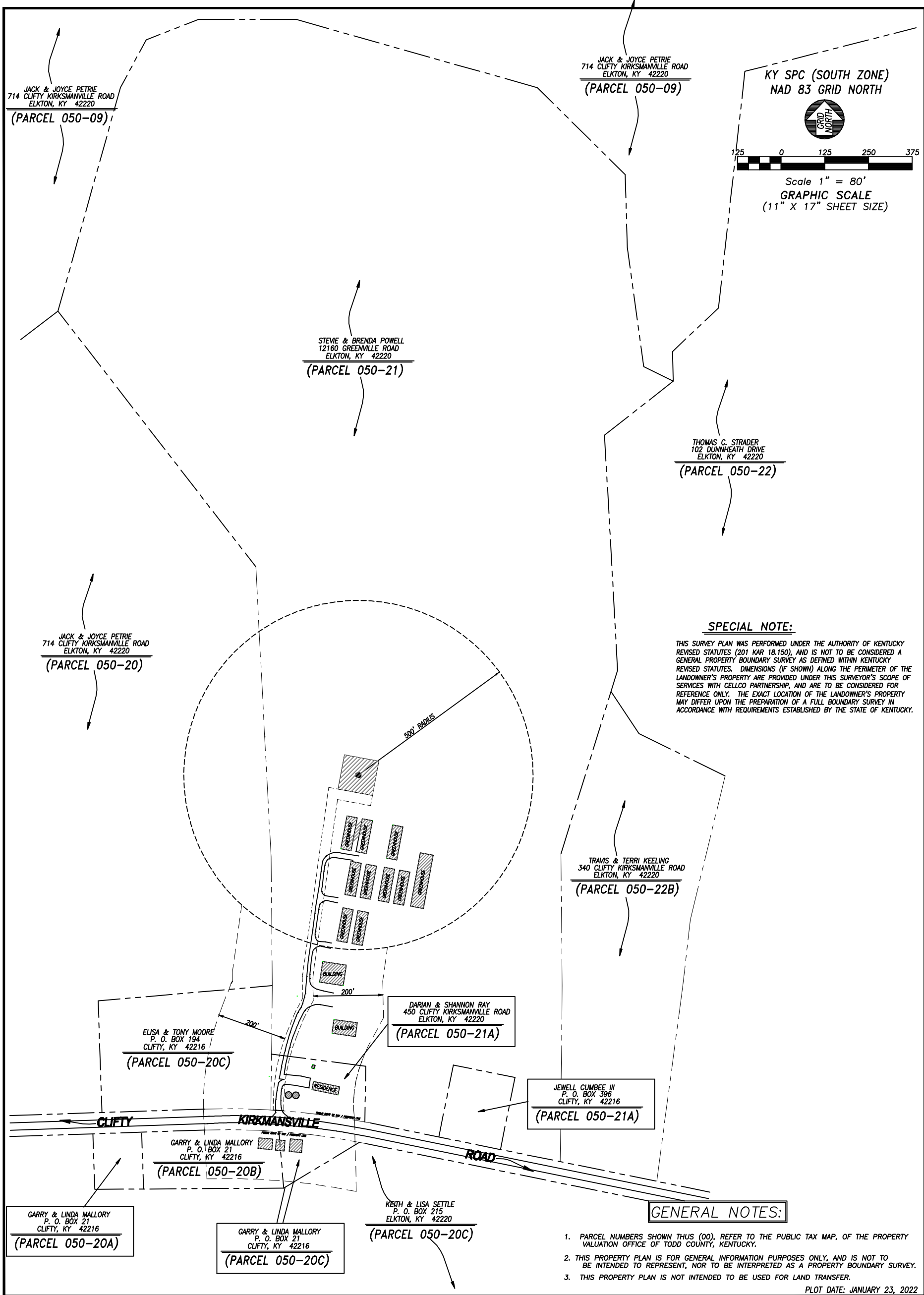
NOTES CORRESPONDING TO FIDELITY NATIONAL TITLE INSURANCE COMPANY'S "REPORT OF TITLE" - ORDER NO. 36483453, ISSUED FEBRUARY 8, 2022.

- ② THE LOCATION OF THE RIGHT OF WAY EASEMENT IN FAVOR OF TODD COUNTY WATER DISTRICT, OF RECORD IN DEED BOOK 102, PAGE 216, OF THE COURT CLERK'S OFFICE OF TODD COUNTY, KENTUCKY, IS NOT PROPERLY DEFINED PER INFORMATION PROVIDED, AND IS NOT ABLE TO BE SHOWN UPON THE FACE OF THIS SURVEY.
- ③ RIGHT OF WAY EASEMENT IN FAVOR OF PENNYRILE RURAL ELECTRIC COOPERATIVE CORPORATION OF HOPKINSVILLE, KENTUCKY, A KENTUCKY CORPORATION, OF RECORD IN DEED BOOK 106, PAGE 472, OF THE COURT CLERK'S OFFICE OF TODD COUNTY, KENTUCKY IS BLANKET IN NATURE, AND DOES NOT AFFECT CELLCO PARTNERSHIP'S LESSEE PREMISES, AND EASEMENT AREA INTERESTS.
- ④ RIGHT OF WAY EASEMENT IN FAVOR OF PENNYRILE RURAL ELECTRIC COOPERATIVE CORPORATION OF HOPKINSVILLE, KENTUCKY, A KENTUCKY CORPORATION, OF RECORD IN DEED BOOK 145, PAGE 00104, OF THE COURT CLERK'S OFFICE OF TODD COUNTY, KENTUCKY IS BLANKET IN NATURE, AND DOES NOT AFFECT CELLCO PARTNERSHIP'S LESSEE PREMISES, AND EASEMENT AREA INTERESTS.
- ⑤ RIGHT OF WAY EASEMENT IN FAVOR OF PENNYRILE RURAL ELECTRIC COOPERATIVE CORPORATION OF HOPKINSVILLE, KENTUCKY, A KENTUCKY CORPORATION, OF RECORD IN DEED BOOK 155, PAGE 393, OF THE COURT CLERK'S OFFICE OF TODD COUNTY, KENTUCKY IS BLANKET IN NATURE, AND DOES NOT AFFECT CELLCO PARTNERSHIP'S LESSEE PREMISES, AND EASEMENT AREA INTERESTS.



PLOT DATE: FEBRUARY 16, 2022

PROJECT NUMBER: <b>221.108.20</b>	SHEET NUMBER: <b>2 OF 2</b>	<b>CELLCO PARTNERSHIP SITE SURVEY: KENTUCKY D/B/A/ VERIZON WIRELESS "CK CLIFTY" TOWER SITE</b> LOCATED IN: CLIFTY, TODD COUNTY, KENTUCKY TOWER PREMISES AREA SURVEY CELLCO PARTNERSHIP LOCATION CODE: 706080	SHARONDALE SURVEYING INC. 161 MARTIN ROAD BON AQUA, TN 37025 (615) 513-0032 E-Mail: Sharndal@bellsouth.net	
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**SPECIAL NOTE:**

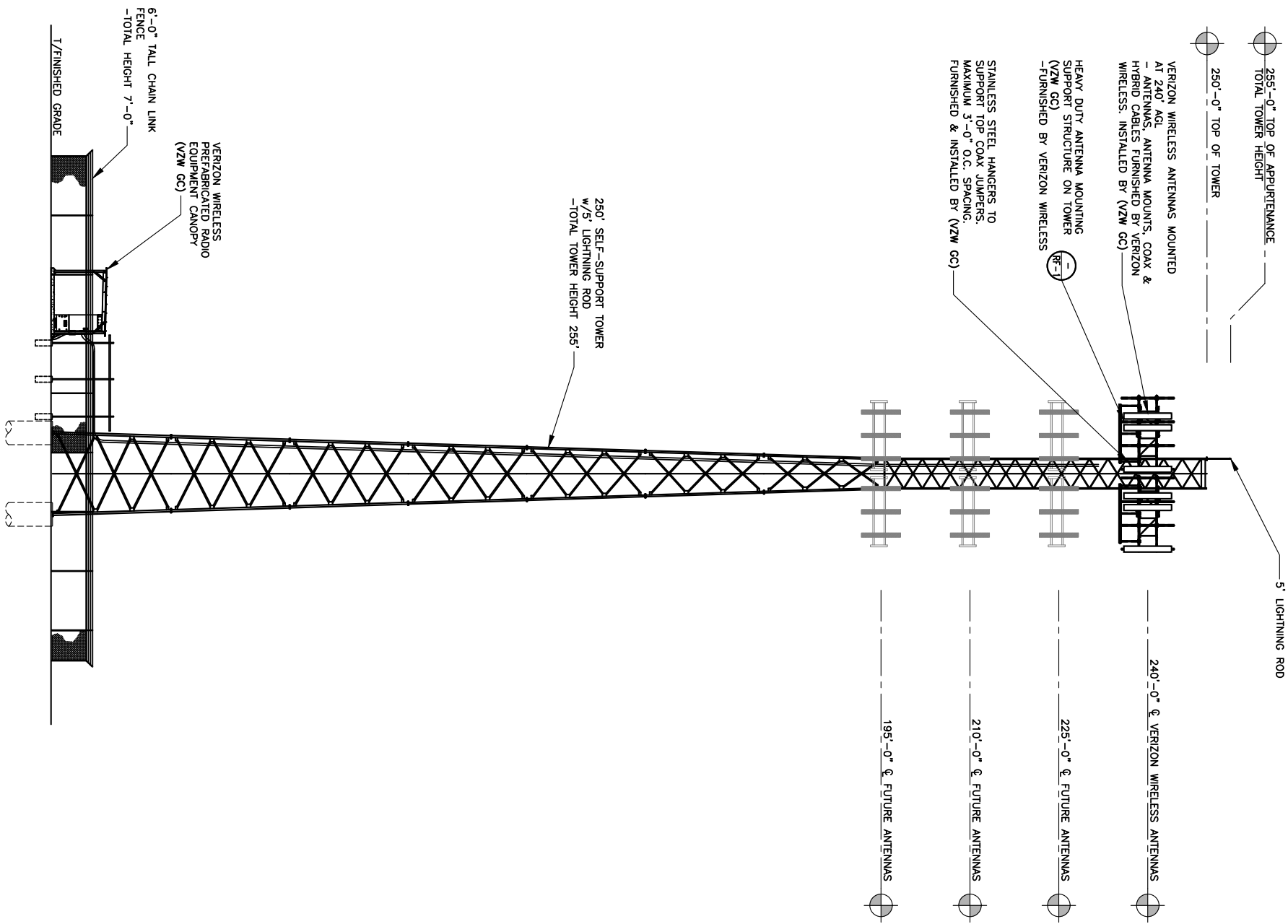
THIS SURVEY PLAN WAS PERFORMED UNDER THE AUTHORITY OF KENTUCKY REVISED STATUTES (201 KAR 18.150), AND IS NOT TO BE CONSIDERED A GENERAL PROPERTY BOUNDARY SURVEY AS DEFINED WITHIN KENTUCKY REVISED STATUTES. DIMENSIONS (IF SHOWN) ALONG THE PERIMETER OF THE LANDOWNER'S PROPERTY ARE PROVIDED UNDER THIS SURVEYOR'S SCOPE OF SERVICES WITH CELCO PARTNERSHIP, AND ARE TO BE CONSIDERED FOR REFERENCE ONLY. THE EXACT LOCATION OF THE LANDOWNER'S PROPERTY MAY DIFFER UPON THE PREPARATION OF A FULL BOUNDARY SURVEY IN ACCORDANCE WITH REQUIREMENTS ESTABLISHED BY THE STATE OF KENTUCKY.

**GENERAL NOTES:**

1. PARCEL NUMBERS SHOWN THUS (00), REFER TO THE PUBLIC TAX MAP, OF THE PROPERTY VALUATION OFFICE OF TODD COUNTY, KENTUCKY.
2. THIS PROPERTY PLAN IS FOR GENERAL INFORMATION PURPOSES ONLY, AND IS NOT TO BE INTENDED TO REPRESENT, NOR TO BE INTERPRETED AS A PROPERTY BOUNDARY SURVEY.
3. THIS PROPERTY PLAN IS NOT INTENDED TO BE USED FOR LAND TRANSFER.

PLOT DATE: JANUARY 23, 2022

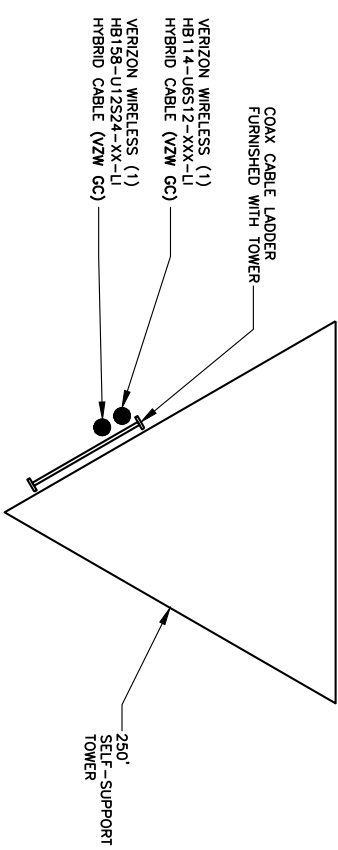
PROJECT NUMBER: <b>221.108.50</b>	SHEET NUMBER: <b>1 OF 1</b>	<b>CELLCO PARTNERSHIP SITE SURVEY: KENTUCKY          D/B/A/ VERIZON WIRELESS          "CK CLIFTY" TOWER SITE          LOCATED IN: CLIFTY, TODD COUNTY, KENTUCKY          500' RADIUS AND ADJOINING LANDOWNER'S MAP          CELLCO PARTNERSHIP LOCATION CODE: 706080</b>	<b>SHARONDALE          SURVEYING          INC.</b> 161 MARTIN ROAD BON AQUA, TN 37025 (615) 513-0032 E-Mail: Sharndal@bellsouth.net	
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**TOWER ELEVATION**

SCALE: N.T.S.

1  
TE-1



**COAX PLAN**

SCALE: N.T.S.



- NOTE:**
1. IT IS THE INSTALLING CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL ANTENNA INFORMATION AGAINST FINAL RADIO ENGINEERING PLAN PROVIDED BY VERIZON LEGAL BUSINESS ENTITY d/b/o VERIZON WIRELESS (VZW GC)
  2. ALL TOWER LIGHTING SHALL BE INSTALLED AS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION AND RECOMMENDED BY THE USER'S INTERIM GUIDELINES (2000) FOR LIGHTING OF TOWERS OVER 200' IN HEIGHT.

REV.	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT
B	01/26/22	ISSUE FOR ZONING
C	02/16/22	ISSUE FOR ZONING

**CELLCO PARTNERSHIP D/B/A**  
  
 2421 HOLLOWAY RD  
 LOUISVILLE, KY 40299  
 PHONE (502) 552-0330  
 FAX (502) 266-7548

**BTM Engineering, Inc.**  
 a Bowman Company  
 CONSULTING ENGINEERS,  
 LANDSCAPE ARCHITECTS,  
 PLANNERS  
 AND SURVEYORS  
  
 2001 TAYLOR SPRINGS DRIVE  
 LOUISVILLE, KY 40220  
 PHONE (502) 498-4402  
 FAX (502) 498-4427

STATE OF KENTUCKY  
 2/16/22  
 JEFFREY LASHBROOK  
 35042  
 LICENSED PROFESSIONAL ENGINEER

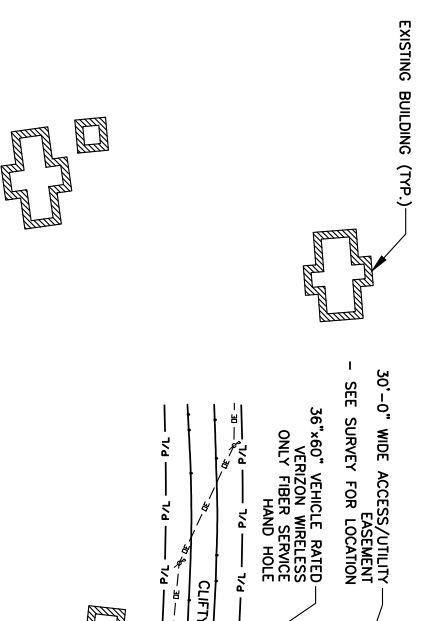
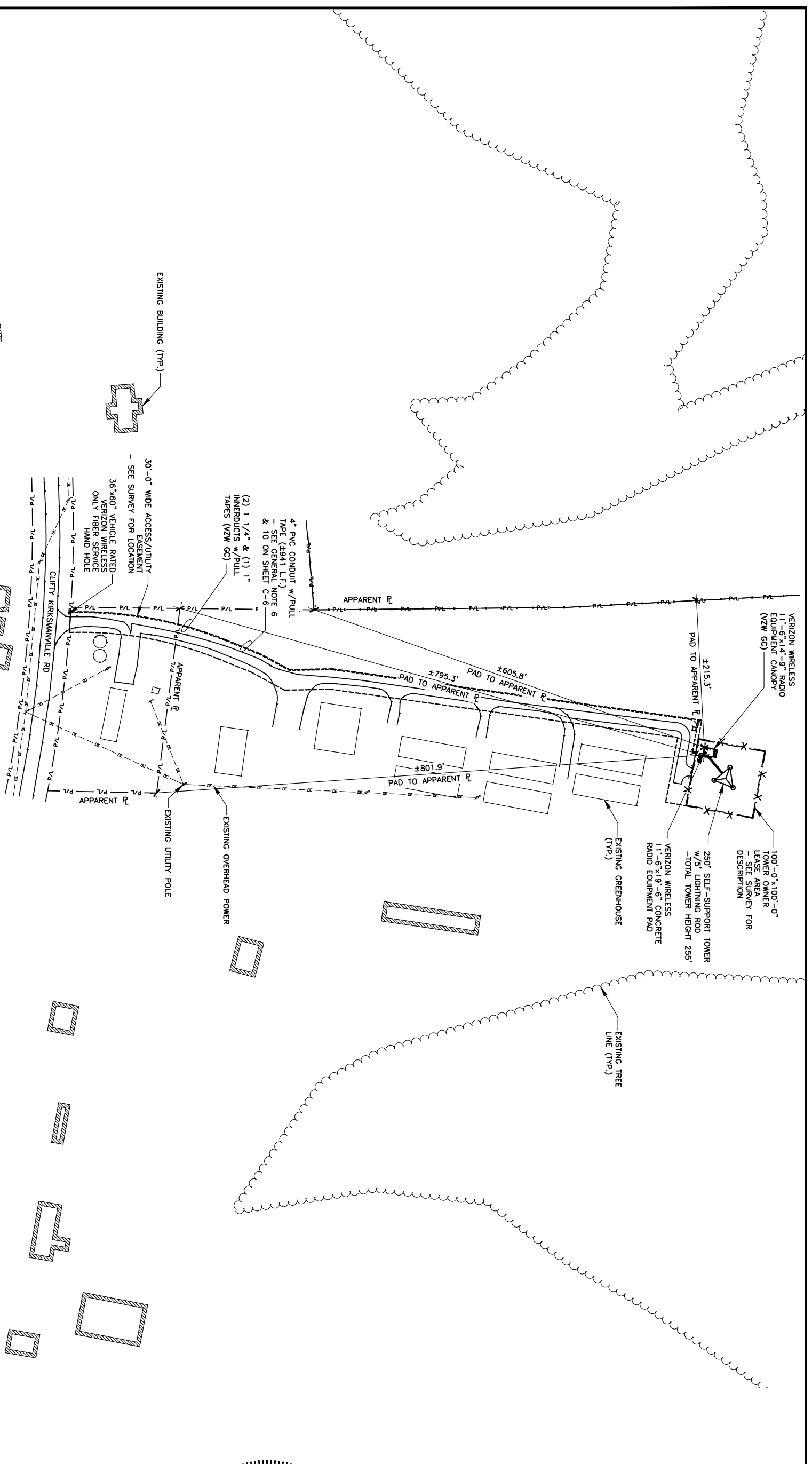
CK CLIFTY  
 462 CLIFTY KIRKSMANVILLE ROAD  
 ELKTON, KY 42220  
**TOWER ELEVATION**

ISSUED FOR:	
REVIEW:	
PERMIT:	
CONSTRUCTION:	
RECORD:	
PROJECT MANAGER:	JTL
DESIGNER:	CWS

JOB NUMBER  
 210350

1  
TE-1  
 INVT. PLO & CANOPY REV 5 08/29/18





OVERALL SITE PLAN w/PAD  
DISTANCE TO PROPERTY LINES

SCALE: 1" = 150'



Kentucky 811  
Call before you dig.  
Call before you dig - 7 am to 6 pm.  
1-800-752-6007  
PER KENTUCKY STATE LAW, IT IS AGAINST THE  
PUBLIC POLICY TO CONDUCT ANY UNDERGROUND  
UTILITY WORK WITHOUT LOCATING THE  
WORKING DMS BEFORE COMMENCING WORK.



Kentucky 811  
Call before you dig.  
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1-800-752-6007  
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REV.	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT
B	01/26/22	ISSUE FOR ZONING
C	02/16/22	ISSUE FOR ZONING

**CELLCO PARTNERSHIP D/B/A**  
**verizon wireless**  
2421 HOLLOWAY RD  
LOUISVILLE, KY 40299  
PHONE (502) 552-0330  
FAX (502) 266-7548

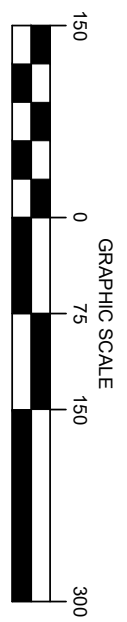
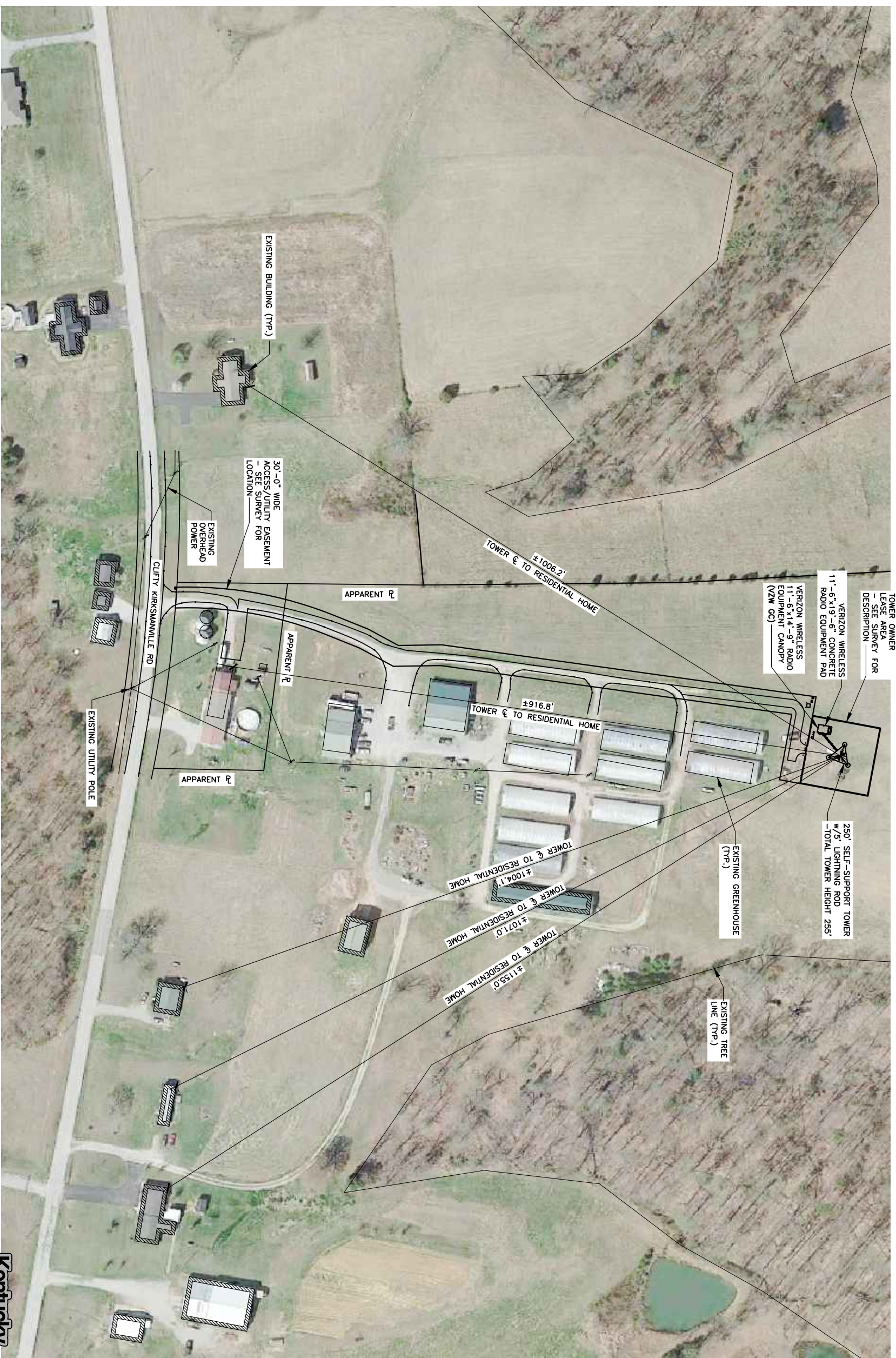
**BTM Engineering, Inc.**  
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LANDSCAPE ARCHITECTS,  
PLANNERS  
AND SURVEYORS  
3001 TAYLOR SPRINGS DRIVE  
LOUISVILLE, KY 40202  
PHONE (502) 498-4402  
FAX (502) 498-4427

STATE OF KENTUCKY  
2/16/22  
JEFFREY LASHBROOK  
35042  
PROFESSIONAL ENGINEER

CK CLIFTY  
462 CLIFTY KIRKSMANVILLE  
ROAD  
ELKTON, KY 42220  
OVERALL SITE PLAN WITH  
PAD DISTANCE TO  
PROPERTY LINES

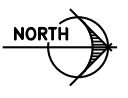
ISSUED FOR:	
REVIEW:	
PERMIT:	
CONSTRUCTION:	
RECORD:	
PROJECT MANAGER:	JTL
DESIGNER:	CWS
JOB NUMBER:	210350

C-1A  
HWY PAD & CMPD REV 5 08/29/18



**TOWER DISTANCE TO RESIDENTIAL STRUCTURES**

SCALE: 1" = 150'



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 NOTIFYING THE WORKING DMS BEFORE COMMENCING WORK.

REV.	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT
B	01/26/22	ISSUE FOR ZONING
C	02/16/22	ISSUE FOR ZONING

**CELLCO PARTNERSHIP D/B/A**  
  
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 LOUISVILLE, KY 40299  
 PHONE (502) 552-0330  
 FAX (502) 266-7548

**BTM Engineering, Inc.**  
 a Bowman Company  
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 LANDSCAPE ARCHITECTS,  
 AND SURVEYORS  
 2001 TAYLOR SPRINGS DRIVE  
 LOUISVILLE, KY 40240  
 PHONE: (502) 486-4422  
 FAX: (502) 486-9427

STATE OF KENTUCKY  
 2/16/22  
 JEFFREY LASHBROOK  
 35042  
 LICENSED PROFESSIONAL ENGINEER

CK CLIFTY  
 462 CLIFTY KIRKSMANVILLE ROAD  
 ELKTON, KY 42220  
 TOWER DISTANCE TO RESIDENTIAL STRUCTURES

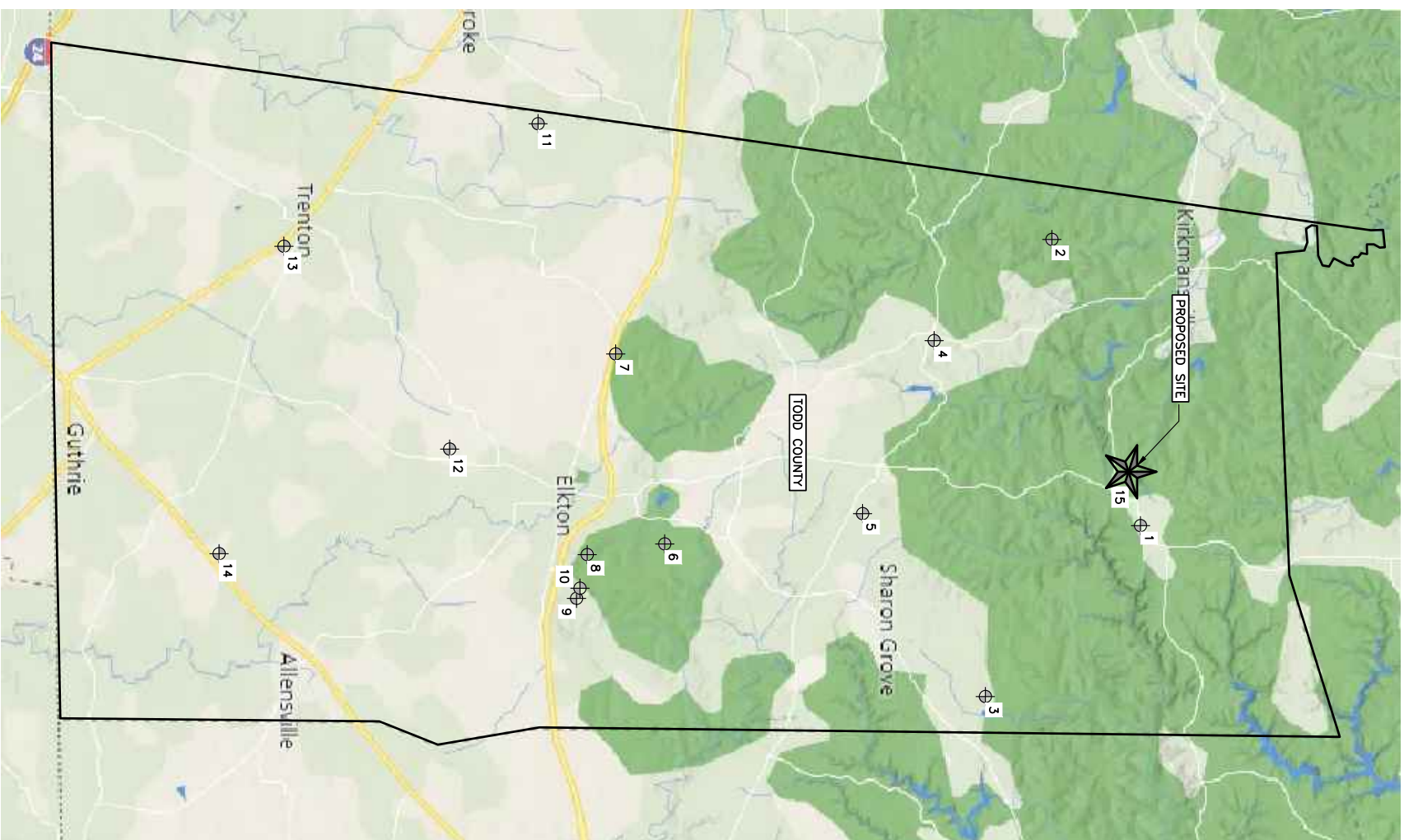
ISSUED FOR:	
REVIEW:	
PERMIT:	
CONSTRUCTION:	
RECORD:	
PROJECT MANAGER:	OWS
DESIGNER:	JTL

JOB NUMBER  
 210350

**C-1B**  
 HWT DWG & CADDY REV 5 08/29/18

**FCC REGISTERED SITES  
(TODD COUNTY)**

TOWER	ASR	LATITUDE	LONGITUDE	TOWER OWNER
1	1052933	36° 59' 46.4" N	87° 08' 24.4" W	GLOBAL TOWER, LLC. THRU AMERICAN TOWER, LLC
2	1044827	36° 58' 03.0" N	87° 15' 24.0" W	KY COMMONWEALTH OF DBA = KEWS
3	1311770	36° 56' 42.5" N	87° 04' 14.4" W	UNITI TOWERS LLC
4	1309970	36° 55' 44.4" N	87° 12' 55.7" W	UNITI TOWERS LLC
5	1306716	36° 54' 23.2" N	87° 08' 42.4" W	TILLMAN INFRASTRUCTURE, LLC
6	1065292	36° 50' 29.0" N	87° 07' 59.0" W	WILSON, PAUL D
7	1319483	36° 49' 34.7" N	87° 12' 36.0" W	TILLMAN INFRASTRUCTURE, LLC
8	1206469	36° 48' 57.2" N	87° 07' 40.0" W	EZELL'S COMMUNICATIONS
9	1043533	36° 48' 48.0" N	87° 06' 42.0" W	PENNYRILE RECC
10	1240659	36° 48' 46.6" N	87° 06' 40.0" W	GLOBAL TOWER, LLC. THRU AMERICAN TOWER, LLC
11	130577	36° 48' 01.3" N	87° 18' 10.1" W	TILLMAN INFRASTRUCTURE, LLC
12	1317471	36° 46' 16.9" N	87° 10' 18.1" W	TILLMAN INFRASTRUCTURE, LLC
13	1290301	36° 43' 04.8" N	87° 15' 12.0" W	AMERICAN TOWERS LLC
14	1274279	36° 41' 48.4" N	87° 07' 44.2" W	CELCO PARTNERSHIP
15		36° 59' 26.0" N	87° 09' 43.9" W	VERIZON WIRELESS



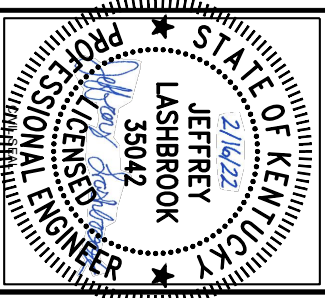
COUNTY TOWER MAP



**BTM Engineering, Inc.**  
a Bowman Company  
CONSULTING ENGINEERS,  
LANDSCAPE ARCHITECTS,  
AND SURVEYORS  
2001 TAYLOR SPRINGS DRIVE  
LOUISVILLE, KY 40299  
PHONE: (502) 498-4402  
FAX: (502) 498-9427

**CELLCO PARTNERSHIP D/B/A**  
**verizon wireless**  
2421 HOLLOWAY RD  
LOUISVILLE, KY 40299  
PHONE (502) 552-0330  
FAX (502) 266-7548

REV.	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT
B	01/26/22	ISSUE FOR ZONING
C	02/16/22	ISSUE FOR ZONING



CK CLIFTY  
462 CLIFTY KIRKSMANVILLE  
ROAD  
ELKTON, KY 42220  
COUNTY TOWER MAP

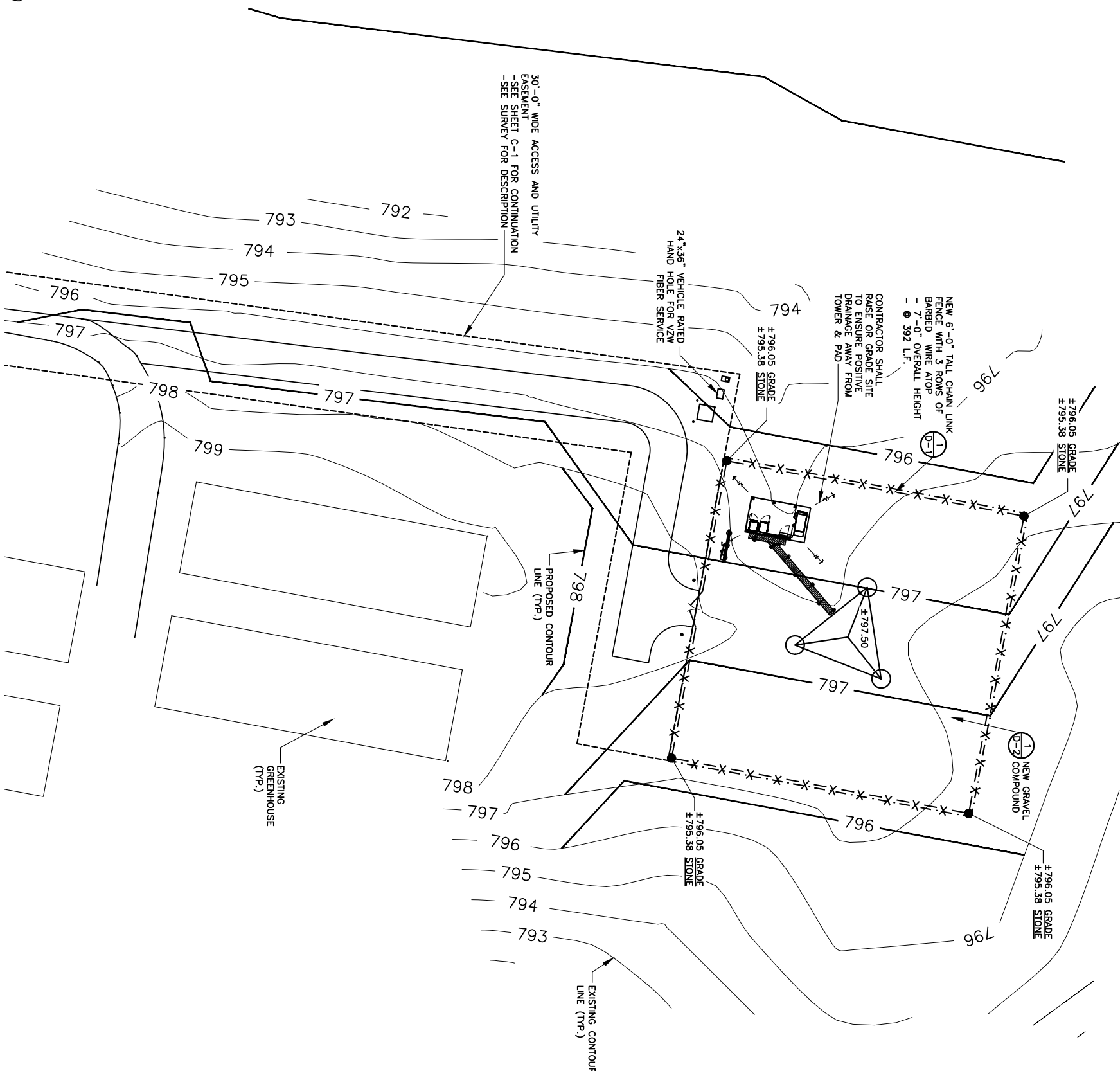
ISSUED FOR:	
REVIEW:	
PERMIT:	
CONSTRUCTION:	
RECORD:	
PROJECT MANAGER:	JTL
DESIGNER:	OWS

JOB NUMBER  
210350

**C-1C**  
MKT PNO & CADRY REV 5 08/29/18

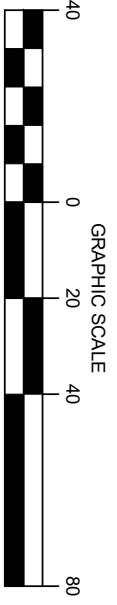


Call Ahead! Your Safety - 7 am to 6 pm.  
 1-800-752-6007  
 PER KENTUCKY STATE LAW, IT IS AGAINST THE  
 UNDERGROUND LOCATION SERVICE TWO (2)  
 WORKING DAYS BEFORE COMMENCING WORK.



**GRADING AND E&S  
 CONTROL PLAN**

SCALE: 1" = 40'



REV.	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT
B	01/26/22	ISSUE FOR ZONING
C	02/16/22	ISSUE FOR ZONING

**CELLCO PARTNERSHIP D/B/A**  
**verizon wireless**  
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 LOUISVILLE, KY 40299  
 PHONE (502) 552-0330  
 FAX (502) 266-7548

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 CONSULTING ENGINEERS,  
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 PLANNERS  
 AND SURVEYORS  
 3001 TYLER SPRINGS DRIVE  
 LOUISVILLE, KY 40240  
 PHONE (502) 498-4402  
 FAX (502) 498-4427

STATE OF KENTUCKY  
 2/16/22  
 JEFFREY LASHBROOK  
 35042  
 LICENSED PROFESSIONAL ENGINEER

CK CLIFTY  
 462 CLIFTY KIRKSMANVILLE  
 ROAD  
 ELKTON, KY 42220  
 GRADING AND EROSION  
 AND SEDIMENTATION  
 CONTROL PLAN

ISSUED FOR:	
REVIEW:	
PERMIT:	
CONSTRUCTION:	
RECORD:	
PROJECT MANAGER:	JTL
DESIGNER:	CWS
JOB NUMBER:	210350

**C-2**  
 INVT. PLO. & CONCEPT 5/08/23/18

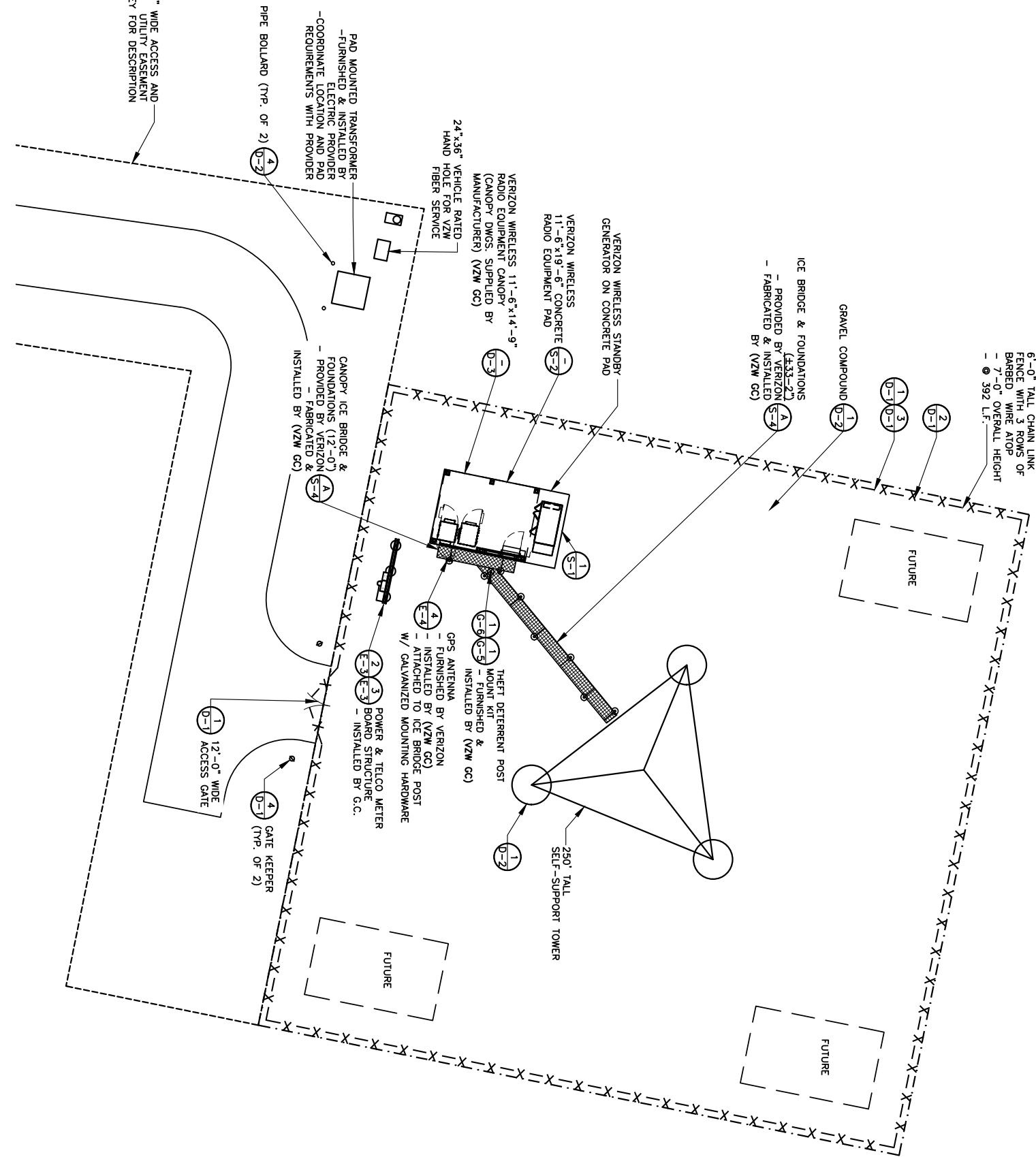




Call before you dig - 7 am to 6 pm  
 1-800-752-6007  
 PER KENTUCKY STATE LAW, IT IS AGAINST THE PUBLIC POLICY OF THIS STATE TO PERMIT ANY WORKING DAYS BEFORE COMMENCING WORK.

### DETAILED SITE PLAN

SCALE: 1" = 20'-0"



LEGEND	
	IRON PIN
	DRAINAGE LINE
	SPOT ELEVATION +XXX.XX
	GRAVEL COMPOUND
	CENTER LINE
	NEW FENCE LINE
	NEW SILT FENCE LINE
	POWER POLE/W/OVERHEAD ELEC./TELE.
	EDGE OF NEW DRIVE
	UNDERGROUND ELECTRICAL CONDUIT
	UNDERGROUND TELEPHONE CONDUIT
	EXISTING CONTOURS
	NEW CONTOURS
	FENCED COMPOUND
	CONCRETE
	ACCESS DRIVE

REV.	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT
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CELLCO PARTNERSHIP D/B/A

2421 HOLLOWAY RD  
 LOUISVILLE, KY 40299  
 PHONE (502) 552-0330  
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 a Bowman Company

CONSULTING ENGINEERS,  
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 PLANNERS  
 AND SURVEYORS

3001 TAYLOR SPRINGS DRIVE  
 LOUISVILLE, KY 40240  
 PHONE (502) 498-4407  
 FAX (502) 498-4427

STATE OF KENTUCKY  
 2/16/22  
 JEFFREY LASHBROOK  
 35042  
 LICENSED PROFESSIONAL ENGINEER

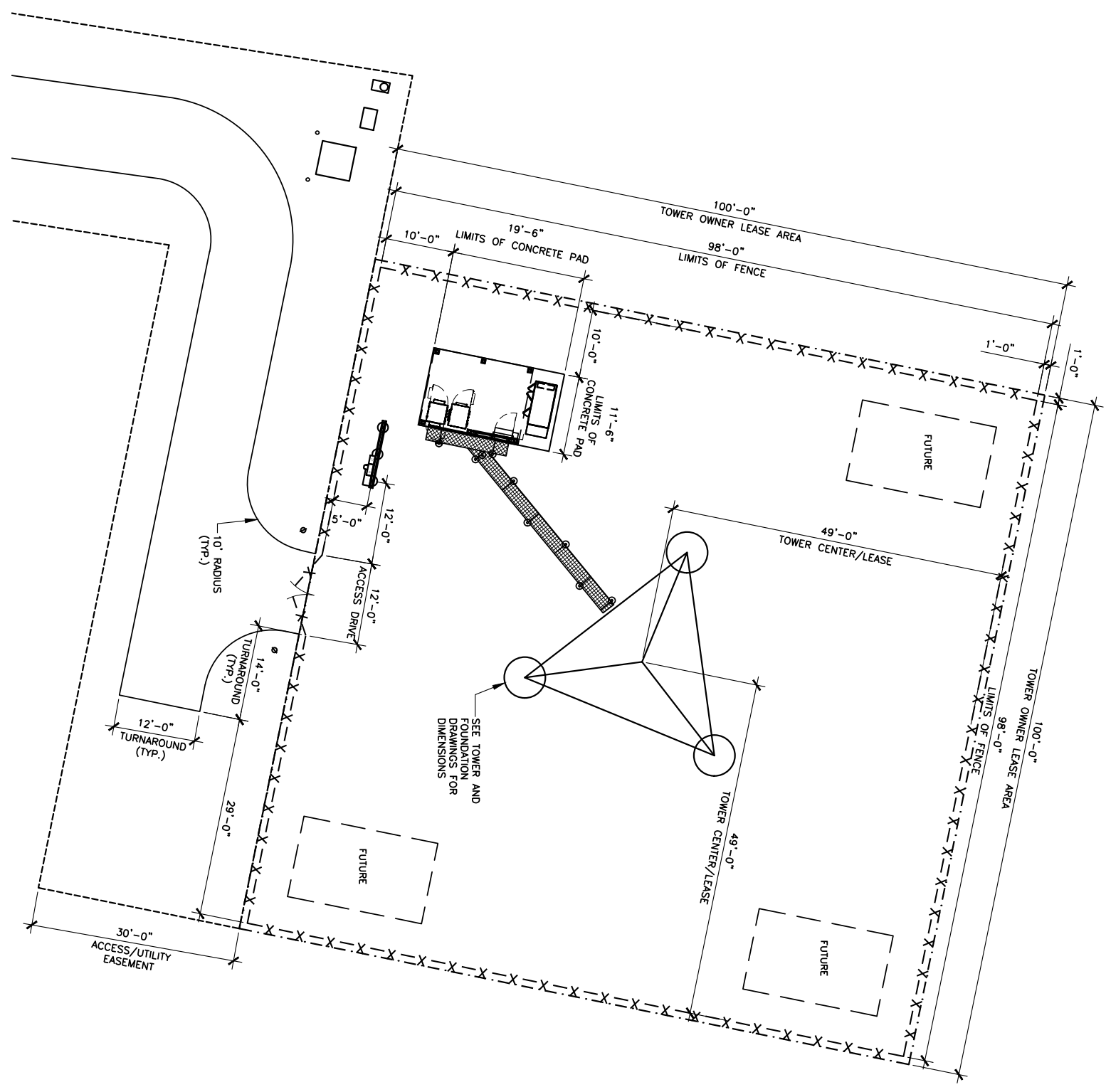
CK CLIFTY  
 462 CLIFTY KIRKSMANVILLE ROAD  
 ELKTON, KY 42220  
 DETAILED SITE PLAN

ISSUED FOR:	
REVIEW:	
PERMIT:	
CONSTRUCTION:	
RECORD:	
PROJECT MANAGER:	JTL
DESIGNER:	CMS
JOB NUMBER:	210350

C-3  
 NEW PAD & CHANGE REV 5 08/29/18



Call before you dig.  
 Call before you dig.  
 1-800-752-6007  
 PER KENTUCKY STATE LAW, IT IS AGAINST THE PUBLIC POLICY AND AGAINST THE INTEREST OF THE STATE TO PERMIT ANY 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

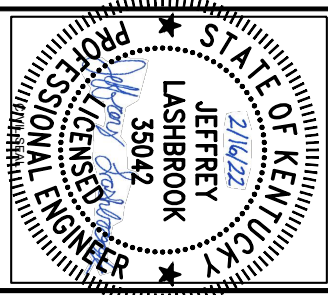
**DIMENSIONED SITE PLAN**  
 SCALE: 1" = 20'-0"  
 NORTH

LEGEND	
	IRON PIN
	DRAINAGE LINE
	SPOT ELEVATION +xxx.xx
	GRAVEL COMPOUND
	CENTER LINE
	NEW FENCE LINE
	NEW SILT FENCE LINE
	POWER POLEW/OVERHEAD ELEC./TELE.
	EDGE OF NEW DRIVE
	UNDERGROUND ELECTRICAL CONDUIT
	UNDERGROUND TELEPHONE CONDUIT
	EXISTING CONTOURS
	NEW CONTOURS
	NEW LEASE AREA AND EASEMENT
	FENCED COMPOUND
	CONCRETE
	ACCESS DRIVE

HWY PAD & CHOP' REV 5 08/29/18  
**C-4**

ISSUED FOR:	
REVIEW:	
PERMIT:	
CONSTRUCTION:	
RECORD:	
PROJECT MANAGER:	JTL
DESIGNER:	CWS
JOB NUMBER:	210350

CK CLIFTY  
 462 CLIFTY KIRKSMANVILLE ROAD  
 ELKTON, KY 42220  
 DIMENSIONED SITE PLAN



REV.	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT
B	01/26/22	ISSUE FOR ZONING
C	02/16/22	ISSUE FOR ZONING

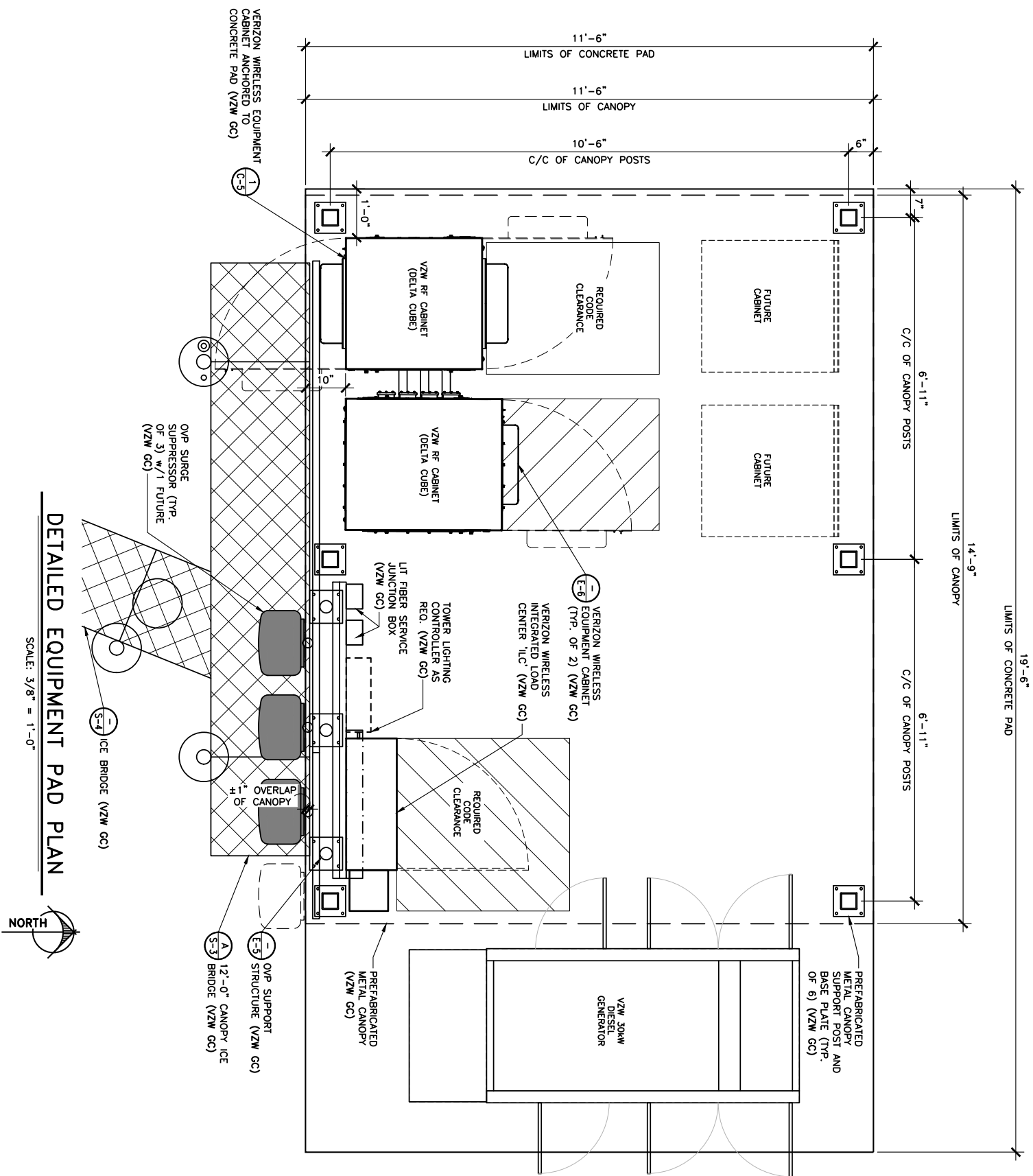
**CELLCO PARTNERSHIP D/B/A**  
**verizon wireless**  
 2421 HOLLOWAY RD  
 LOUISVILLE, KY 40299  
 PHONE (502) 552-0330  
 FAX (502) 266-7548

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 AND SURVEYORS  
 3001 TAYLOR SPRINGS DRIVE  
 LOUISVILLE, KY 40240  
 PHONE (502) 459-4402  
 FAX (502) 459-4427

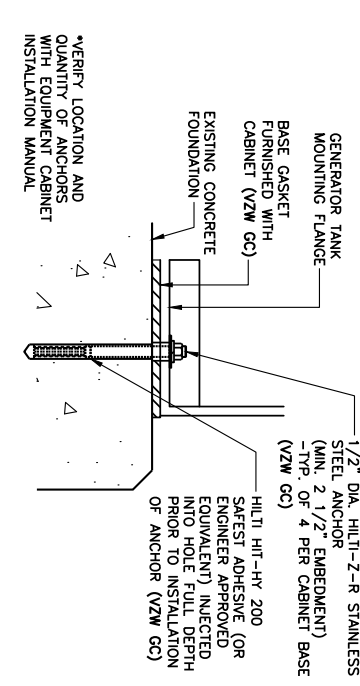


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 1-800-752-6007  
 PER KENTUCKY STATE LAW, IT IS AGAINST THE PUBLIC POLICY AND INTERESTS OF THE STATE TO CONDUCT ANY UNDERGROUND UTILITY LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

NOTE:  
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DETAILED EQUIPMENT PAD PLAN  
 SCALE: 3/8" = 1'-0"



EQUIPMENT CABINET MOUNTING DETAIL  
 SCALE: N. T. S.

1  
 C-5

REV.	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT
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CELLCO PARTNERSHIP D/B/A  
**verizon wireless**  
 2421 HOLLOWAY RD  
 LOUISVILLE, KY 40299  
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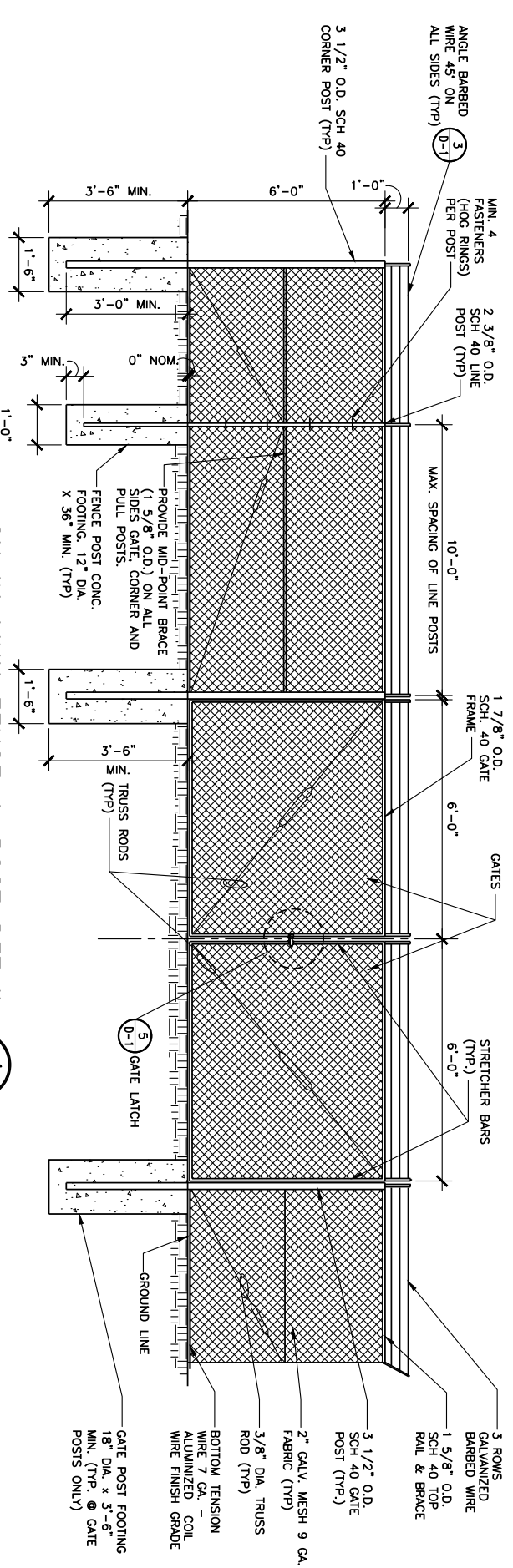
BTM Engineering, Inc.  
 a Bowman Company  
 CONSULTING ENGINEERS, LANDSCAPE ARCHITECTS, PLANNERS AND SURVEYORS  
 3001 TAYLOR SPRINGS DRIVE  
 LOUISVILLE, KY 40240  
 PHONE (502) 456-4402  
 FAX (502) 456-4427

STATE OF KENTUCKY  
 2/16/22  
 JEFFREY LASHBROOK  
 35042  
 LICENSED PROFESSIONAL ENGINEER

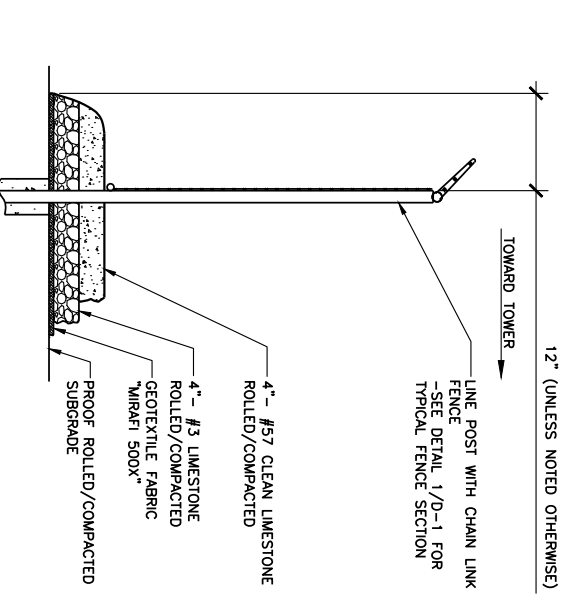
CK CLIFTY  
 462 CLIFTY KIRKSMANVILLE ROAD  
 ELKTON, KY 42220  
 DETAILED EQUIPMENT PAD PLAN

ISSUED FOR:	
REVIEW:	
PERMIT:	
CONSTRUCTION:	
RECORD:	
PROJECT MANAGER:	JTL
DESIGNER:	CWS
JOB NUMBER:	210350

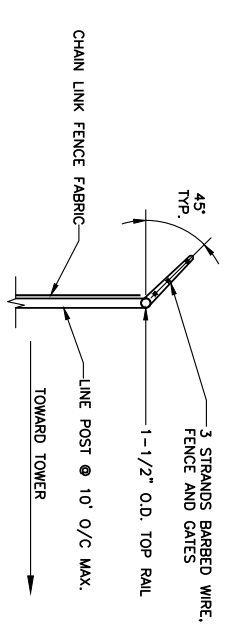
C-5  
 HWY PAD & CANOPY REV 5 08/29/18



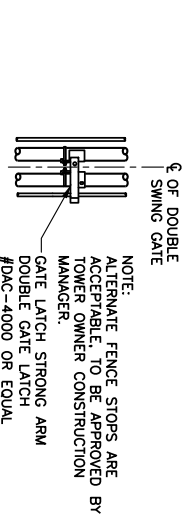
**CHAIN LINK FENCE & POST DETAIL**  
1  
D-1  
SCALE: N.T.S.



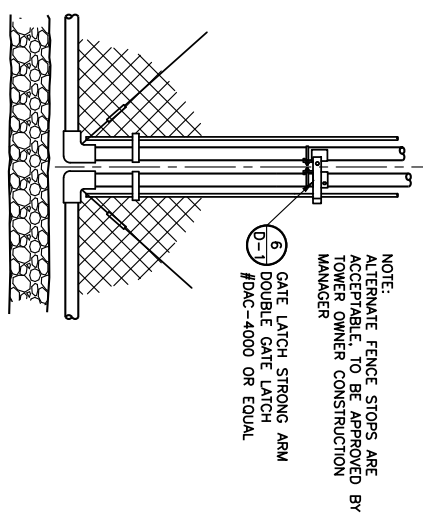
**SITE AREA SURFACING**  
2  
D-1  
SCALE: N.T.S.



**TYPICAL BARBED WIRE DETAIL**  
3  
D-1  
SCALE: N.T.S.



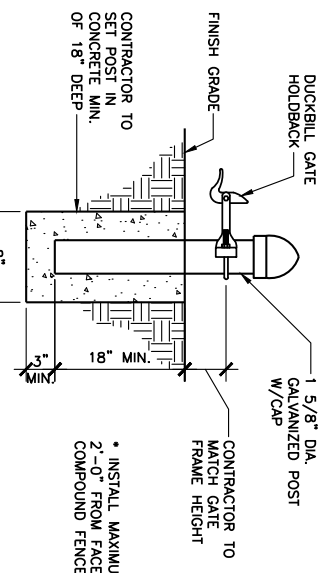
**GATE LATCH DETAIL**  
6  
D-1  
SCALE: N.T.S.



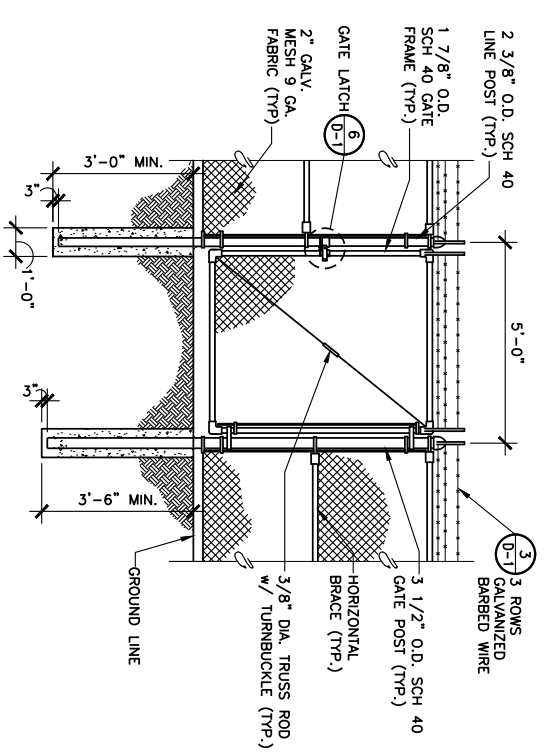
**GATE LATCH DETAIL**  
5  
D-1  
SCALE: N.T.S.

**CHAIN LINK FENCING NOTES**

1. ALL FENCE AND FABRIC SHALL BE HOT DIPPED GALVANIZED WITH A MINIMUM OF 2 OZ. PER SQUARE FOOT. 9 GAUGE WIRE (MIN. BREAKING STRENGTH OF 1,290 LBS) WITH 2\"/>
- 2. SITE FENCE SHALL BE 6'-0\"/>
- 3. BARRIED WIRE SHALL MEET ASTM A 121, CLASS 3 GALV. OR ASTM A 585, TYPE 1, CLASS 2 COATING (NOT LESS THAN 0.8 OZ. PER SQ. FT.) AND SHALL BE THREE STRAND 12.5 GAGE W/4 POINT BARS AT 5\"/>
- 4. BOTTOM OF CONCRETE BASE SHALL BE SET BELOW FROSTLINE (SEE LOCAL CODE). WHERE SOIL BEARING CAPACITY IS LESS THAN 2000 PSF, INCREASE CONCRETE SURROUNDING FENCE POST FOUNDATION DIAMETERS BY 8\"/>
- 5. PROVIDE CONCRETE WITH A 28 DAY STRENGTH OF 3000 PSI (MIN.)
- 6. PROVIDE A DIAGONAL BRACE ROD AND TURN BUCKLE ON BOTH GATE LEAF'S.
- 7. ALL RAILS AND BRACES SHALL BE SCHEDULE 40 STEEL PIPE AND ALL FENCE POSTS SHALL BE SCHEDULE 40 STEEL PIPE AND BE 2 OZ. GALVANIZED COATED.
- 8. CONTRACTOR SHALL ENSURE ALL POSTS ARE PLUMB.
- 9. ALL FENCE SHALL BE FABRICATED AND INSTALLED PER ASTM F2611-15, ASTM F567-14g AND CHAIN LINK FENCE MANUFACTURERS INSTITUTE CLFM-PM 2445.
- 10. CONTRACTOR SHALL FURNISH AND INSTALL ONE (1) MASTER LOCK LONG SHANK #175LH COMBINATION PADLOCK. COMBINATION TO BE SET AT 7011.



**GATE KEEPER DETAIL**  
4  
D-1  
SCALE: N.T.S.



**MAN GATE DETAIL**  
7  
D-1  
SCALE: N.T.S.

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LANDSCAPE ARCHITECTS  
PLANNERS  
AND SURVEYORS  
**BTM**  
2001 TYLER SPRINGS DRIVE  
LOUISVILLE, KY 40290  
PHONE (502) 498-4400  
FAX (502) 498-4427

CELLCO PARTNERSHIP D/B/A  
**verizon wireless**  
2421 HOLLOWAY RD  
LOUISVILLE, KY 40299  
PHONE (502) 552-0330  
FAX (502) 266-7548

REV.	DATE	DESCRIPTION
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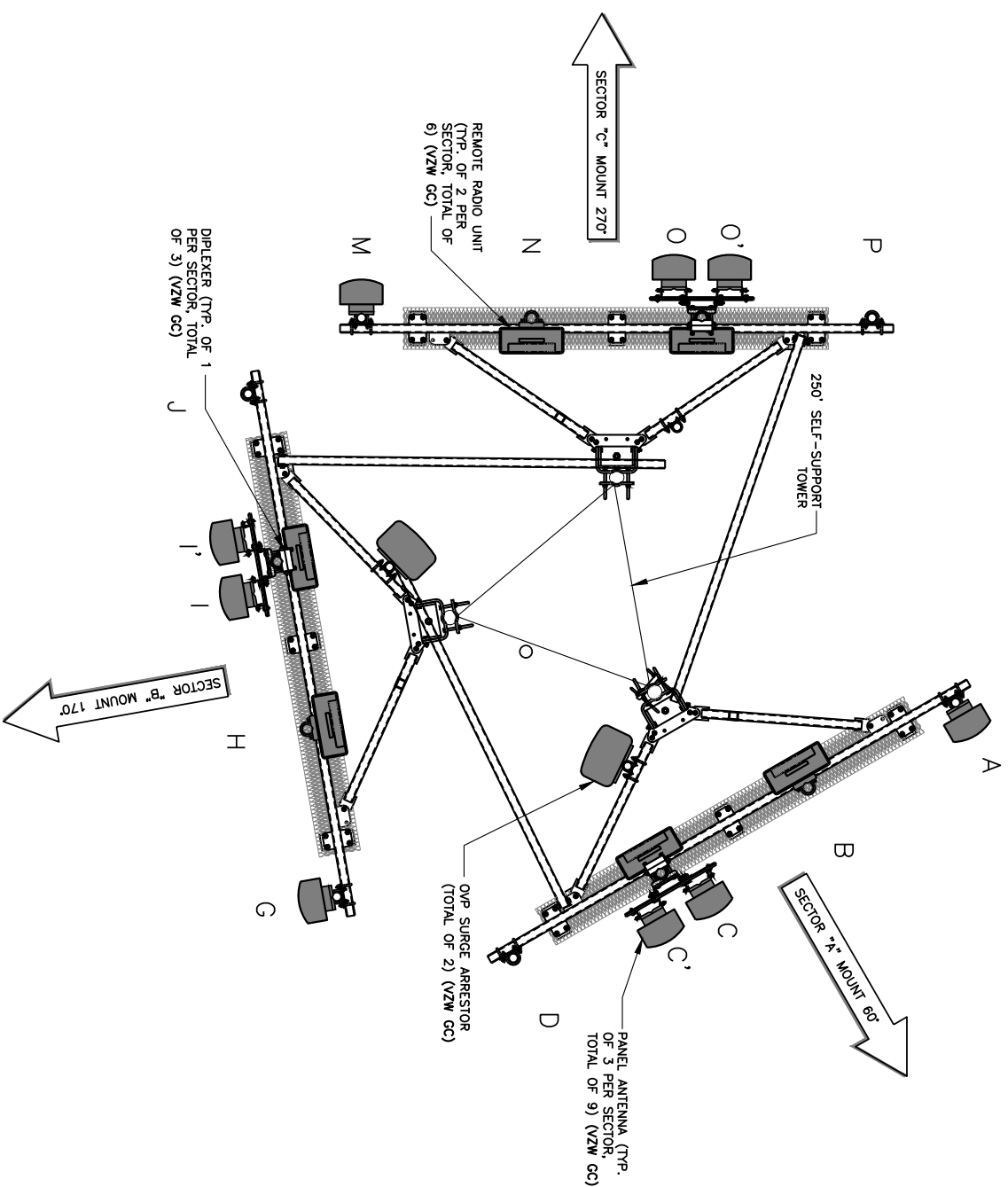
STATE OF KENTUCKY  
2/16/22  
JEFFREY LASHBROOK  
35042  
PROFESSIONAL ENGINEER

CK CLIFTY  
462 CLIFTY KIRKSMANVILLE ROAD  
ELKTON, KY 42220  
FENCE DETAILS AND NOTES

ISSUED FOR REVIEW	
PERMIT	
CONSTRUCTION	
RECORD	
PROJECT MANAGER	JTL
DESIGNER	CWS

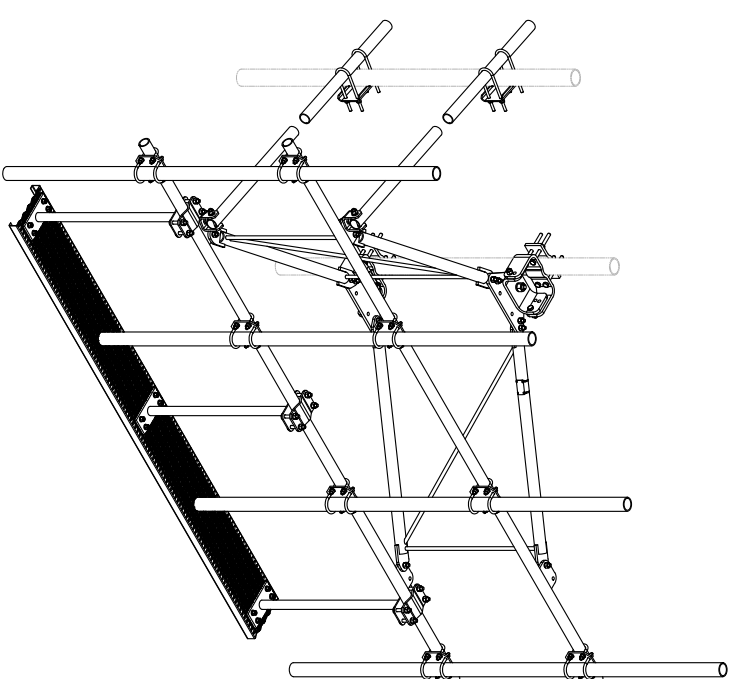
JOB NUMBER  
210350

D-1  
HWY PAD & CURB REV 5 08/29/18



ANTENNA PLAN  
SCALE: N.T.S.  
(BY VZW GC)

1  
RF-1



MANUFACTURER: SABRE  
MODEL: C10857007C-4108-278W (TYP. OF 3)  
WEIGHT: 929 LBS EACH (TOTAL 2787 LBS)

ANTENNA MOUNTING STRUCTURE DETAIL  
SCALE: N.T.S.  
(BY VZW GC)

2  
RF-1

ANTENNA PLAN LEGEND					
SECTOR	ANTENNA POSITION	MODEL	TECHNOLOGY	AZIMUTH	ANTENNA RAD. CENTER
ALPHA	A	AIR6449	L-SUB 6	60°	240°
ALPHA	B	-	-	-	-
ALPHA	C	JAHH-65C-R3B-V2	LTE 700/850/PCS	60°	240°
ALPHA	C'	JAHH-65C-R3B-V2	LTE 700/850/AWS	60°	240°
ALPHA	D	-	-	-	-
BETA	G	AIR6449	L-SUB 6	170°	240°
BETA	H	-	-	-	-
BETA	I	JAHH-65C-R3B-V2	LTE 700/850/PCS	170°	240°
BETA	I'	JAHH-65C-R3B-V2	LTE 700/850/AWS	170°	240°
BETA	J	-	-	-	-
GAMMA	M	AIR6449	L-SUB 6	270°	240°
GAMMA	N	-	-	-	-
GAMMA	O	JAHH-65C-R3B-V2	LTE 700/850/PCS	270°	240°
GAMMA	O'	JAHH-65C-R3B-V2	LTE 700/850/AWS	270°	240°
GAMMA	P	-	-	-	-

NOTE: ANTENNA INSTALLER SHALL UTILIZE VERIZON WIRELESS RFDS FOR FINAL CONFIGURATION. SEE VERIZON WIRELESS CONSTRUCTION MANAGER.

REV.	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT
B	01/26/22	ISSUE FOR ZONING
C	02/16/22	ISSUE FOR ZONING

CELLCO PARTNERSHIP D/B/A  
**verizon wireless**  
2421 HOLLOWAY RD  
LOUISVILLE, KY 40299  
PHONE (502) 552-0330  
FAX (502) 266-7548

BTM Engineering, Inc.  
a Bowman Company  
CONSULTING ENGINEERS,  
LANDSCAPE ARCHITECTS,  
PLANNERS  
AND SURVEYORS  
3001 IVYLE SPRINGS DRIVE  
LOUISVILLE, KY 40240  
PHONE: (502) 456-4402  
FAX: (502) 456-4427

REFERENCE ONLY

CIVIL SEAL

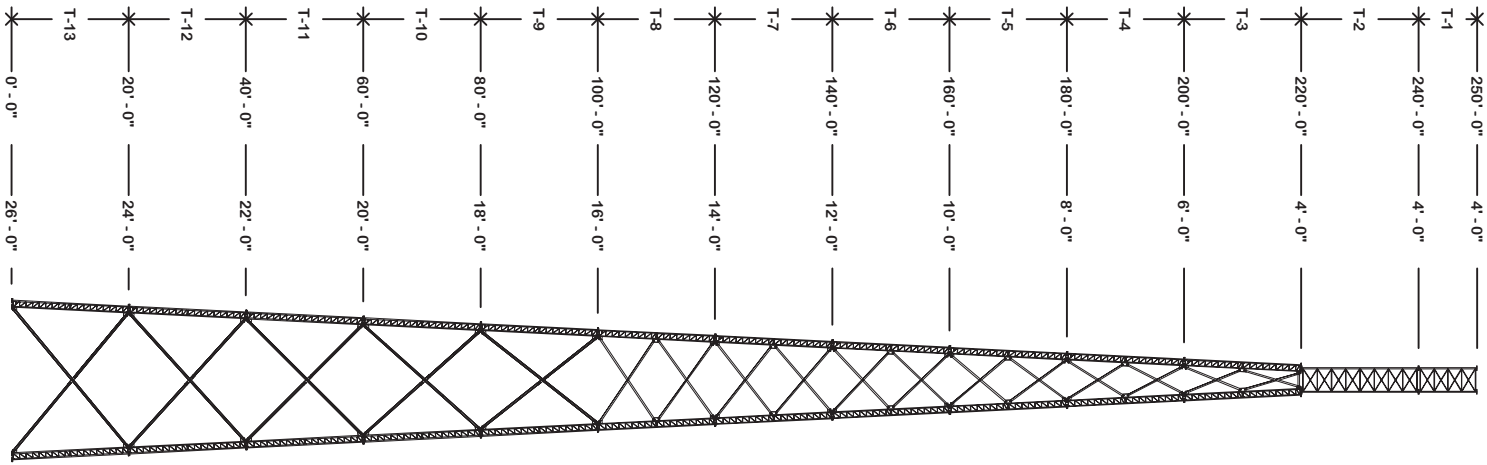
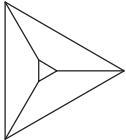
CK CLIFTY  
462 CLIFTY KIRKSMANVILLE  
ROAD  
ELKTON, KY 42220  
ANTENNA PLAN AND  
DETAILS (REFERENCE ONLY)

ISSUED FOR:	
REVIEW:	
PERMIT:	
CONSTRUCTION:	
RECORD:	
PROJECT MANAGER:	DESIGNER
JTL	CWS

JOB NUMBER  
210350

RF-1  
HWY PLO & CHNG' REV 5 08/29/18

SEE PAGE 2 FOR  
APURTENANCES



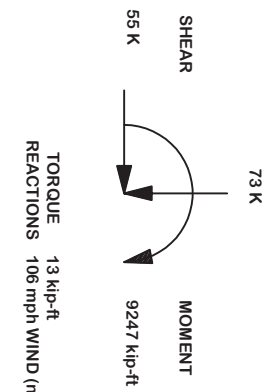
**TOWER DESIGN CRITERIA**  
 TIA-222-H\*  
 Design Standard: 106 mph (3-second gust) basic wind speed  
 Service Wind Speed: 30 mph (1.50" Ice)  
 Risk Category: II  
 Exposure Category: C  
 Topographic Category: 1  
 Crest Height: 0 ft.  
 Site Elevation: 797.49 (NAVD 88)

**MATERIAL STRENGTHS**  
 Solid Rod: A56 (rod dia. <3/4")  
 A572 Gr. 50 (3/4" thru 1" dia.)  
 A572 Gr. 58 (>1" dia.)  
 A500 Gr. B (antenna pipes)  
 A500 Gr. B/C (tower legs min. Fy 50 ksi)  
 Angle: A572 Gr. 50  
 Plate: A572 Gr. 50  
 Bolts: A-325/A-449 (leg & angle)  
 Anchor Bolt: F1554 Grade 105 or A887

Finish: Tower & Hardware are hot dip galvanized

- ALL STRUCTURAL HARDWARE IS GALVANIZED IN ACCORDANCE WITH ASTM A-153 (HDG). TOWER SECTIONS & ASSOCIATED STRUCTURAL COMPONENTS ARE GALVANIZED IN ACCORDANCE WITH ASTM A-123 (HDG).
- ALL BOLTS & NUTS MUST BE IN PLACE BEFORE ADJOINING SECTION(S) ARE INSTALLED.
- ALL STRUCTURAL BOLTS ARE TO BE TIGHTENED TO A SNUG TIGHT CONDITION AS DEFINED BY AISC & RISC SPECIFICATION FOR STRUCTURAL JOINTS UNLESS NOTED OTHERWISE.
- ALL WELDING TO CONFORM TO AWS D1.1 SPECIFICATION. 5/16" MINIMUM WELD SIZE UNLESS NOTED OTHERWISE.
- MATERIAL LABELED AS ASTM A-572 GR. 58 OR 58 KSI YIELD STRENGTH ALSO CONFORMS TO ASTM A-572 GR. 50.
- ANALYSIS PERFORMED USING STEEL GRADES LISTED UNDER MATERIALS STRENGTHS SHOWN ON THIS PAGE.
- THIS DRAWING DOES NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, SEQUENCES AND PROCEDURES.
- (VIBRATION DISCLAIMER) ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES, BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES. VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

**Maximum Base Reactions**



**MAX. LEG REACTIONS:**  
 DOWN: 435 K  
 UPLIFT: -383 K  
 SHEAR: 38 K

\*Factored Reactions provided per ANSI/TIA-222 Design Criteria & Load Combinations

SECTION	ELEVATION	FACE WIDTH	PANELS	LEG SIZE	LEG STYLE	LEG BOLT QTY & DIA	DIAGONAL BRACING SIZE	HORIZONTAL BRACING SIZE	BRACING BOLT QTY & DIA	SECTION WEIGHT
T1	240'-250'	4.0'	4	1.25"	SHPAB	2 x 1"	3/4" ROUND	7/8" ROUND		458.17
T2	220'-240'	4.0'	8	1.75"	SHPAB	2 x 1 1/4"	7/8" ROUND	1" ROUND		1500.49
T3	200'-220'	6.0'	2	1.25"	12BDFH	6 x 1"	1/4" x 2-1/2" x 2-1/2"	3/16" x 3" x 3"	1 x 1"	2231.04
T4	180'-200'	8.0'	2	1.50"	12BDFH	6 x 1"	3/16" x 2-1/2" x 2-1/2"		1 x 1"	2306.97
T5	160'-180'	10.0'	2	1.50"	12BDFH	6 x 1"	3/16" x 2-1/2" x 2-1/2"		1 x 1"	2350.71
T6	140'-160'	12.0'	2	1.75"	12BDFH	6 x 1 1/4"	3/16" x 2-1/2" x 2-1/2"		1 x 1"	2841.27
T7	120'-140'	14.0'	2	1.75"	12BDFH	6 x 1 1/4"	1/4" x 2-1/2" x 2-1/2"		1 x 1"	3100.89
T8	100'-120'	16.0'	2	1.75"	12BDFH	6 x 1 1/4"	1/4" x 2-1/2" x 2-1/2"		1 x 1"	3183.09
T9	80'-100'	18.0'	1	2.00"	12BDH2	12 x 1"	3/16" x 2-1/2" x 2-1/2"		1 x 7/8"	3821.52
T10	60'-80'	20.0'	1	2.00"	12BDH2	12 x 1"	3/16" x 3" x 3"		1 x 7/8"	4137.86
T11	40'-60'	22.0'	1	2.00"	12BDH2	12 x 1"	3/16" x 3" x 3"		1 x 7/8"	4205.07
T12	20'-40'	24.0'	1	2.25"	12BDH2	12 x 1"	3/16" x 3" x 3"		1 x 7/8"	4793.87
T13	0'-20'	26.0'	1	2.25"	12BDH2	4 x 1 1/2"	3/16" x 3" x 3"		1 x 7/8"	5085.42



Digitally signed by  
 Joseph P Jacobs  
 Date: 2022-06-20  
 09:35-04:00

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
REVISION HISTORY				
SITE <b>KY-1049 CK CLIFTY          APC TOWERS          U 26 X 250'</b>				
DESCRIPTION Tower View Page 1				
STRUCTURE APPROVAL <b>SAN</b> 6/20/2022		FOUNDATION APPROVAL		
DWG. NO. <b>293342T</b>		ENG. FILE NO. <b>553842</b>		
1 OF 15 PAGE				

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1-877-467-4763 Plymouth, IN  
 1-800-547-2151 Salem, OR

**Valmont**  
 STRUCTURES

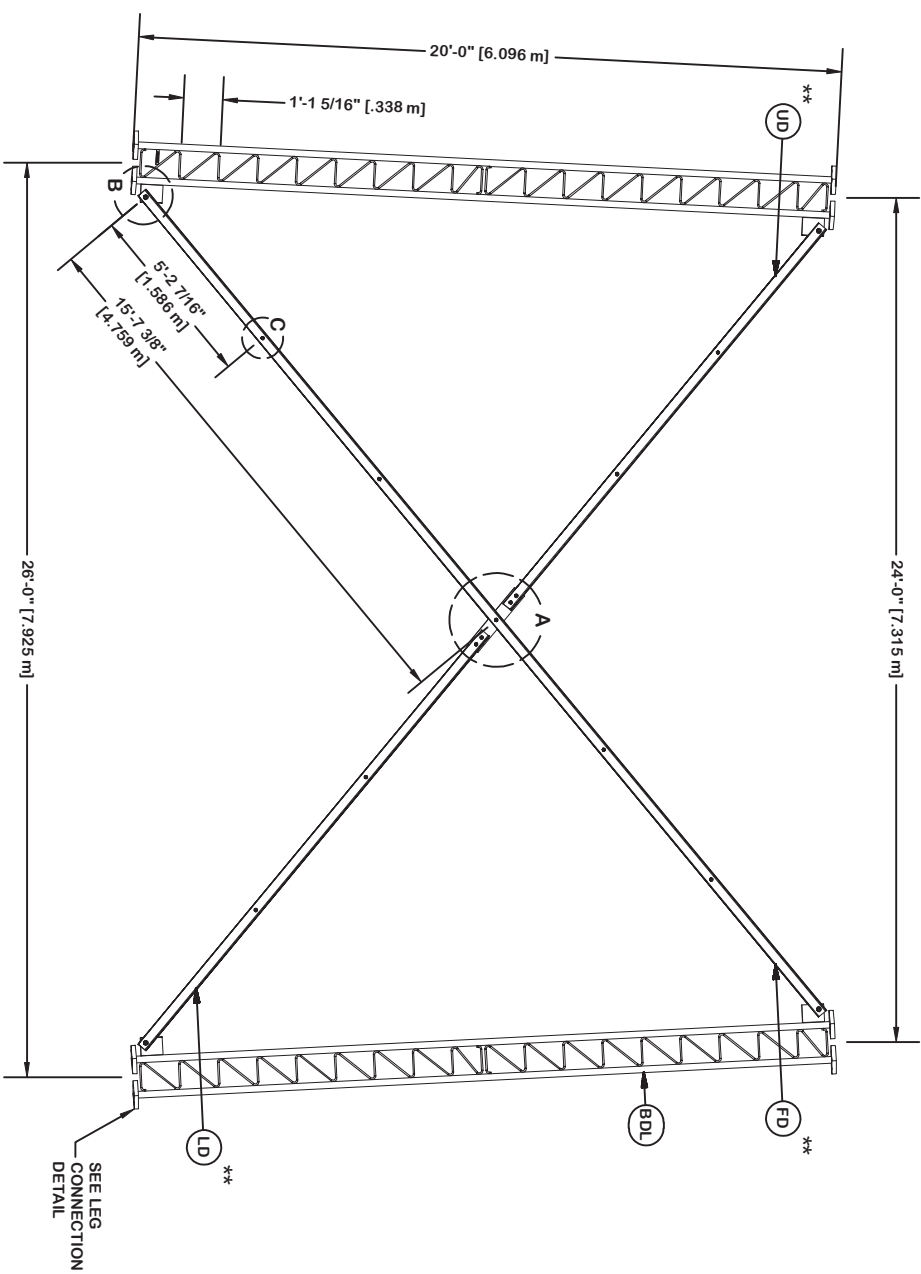
DESIGNED APPURTENANCE LOADING	
TYPE	ELEVATION
(1) 5/8" X 7-6" LIGHTNING ROD	250.0000'
(1) ADJUSTABLE 7' BEACON EXTENDER	250.0000'
(1) BEACON	250.0000'
(12) 2" X 108" SCH. 40	240.0000'
(1) EPA 225.51 SQ. FT	240.0000'
(3) SP1 VFA12-HD	240.0000'
(12) 2" X 108" SCH. 40	225.0000'
(1) EPA 225.51 SQ. FT	225.0000'
(3) SP1 VFA12-HD	225.0000'
(12) 2" X 108" SCH. 40	215.0000'
(1) EPA 225.51 SQ. FT	215.0000'
(3) SP1 VFA12-HD	215.0000'
(3) OB LIGHT	125.0000'

SITE KY-1049 CK CLIFTY APC TOWERS U 26 X 250' COPYRIGHT 2013		DESCRIPTION Tower View Page 2		DWG. NO. 293342T	
PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.		STRUCTURE APPROVAL SAN 6/20/2022		FOUNDATION APPROVAL	
valmont STRUCTURES		ENG. FILE NO. 553842		2 OF 15 PAGE	
REV DESCRIPTION OF REVISIONS CPD BY DATE		REVISION HISTORY		293342T	

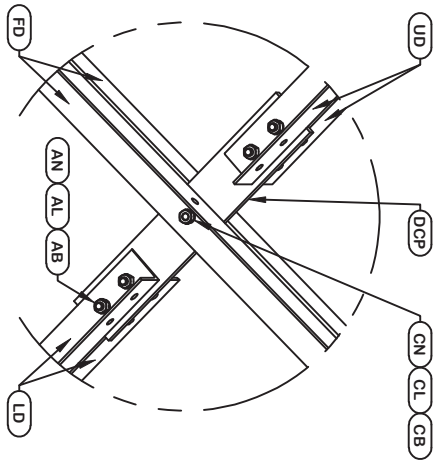
ORIENT LEGS WITH PIN STAMP  
TOWARD BOTTOM OF SECTION

ORIENT ANGLES WITH STAMPED END TOWARD TOP OF SECTION  
\*\* DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP.

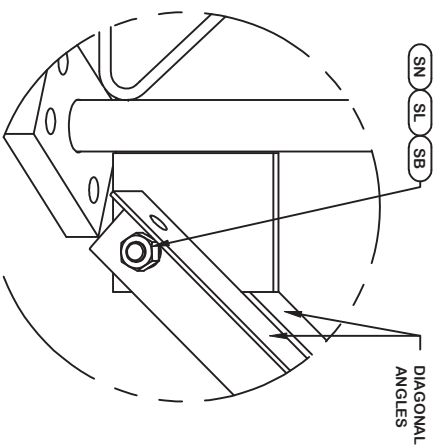
\* STITCH BOLT SPACING SHOWN  
IS MAX. FOR ALL ANGLES



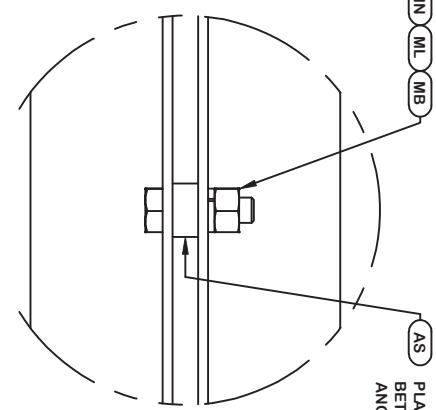
NOTE: THE VIEWS SHOWN BELOW ARE FOR PART IDENTIFICATION ONLY. THE ACTUAL PART STYLE MAY VARY FROM WHAT IS DEPICTED BELOW.  
PLEASE SEE ASSEMBLY INFORMATION IN THE UPPER LEFT CORNER FOR FURTHER INSTALLATION INSTRUCTIONS.



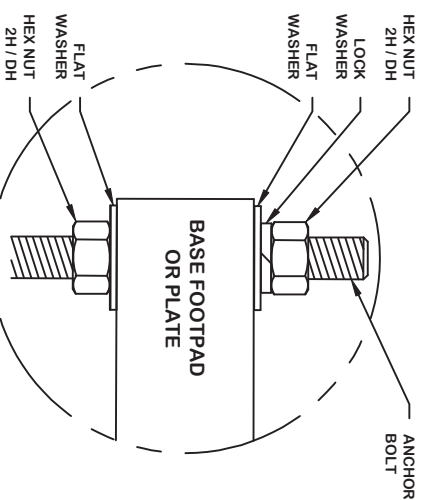
DETAIL A  
ANGLE INTERSECTION CONNECTION



DETAIL B  
END SIDE PLATE ANGLE CONNECTION



DETAIL C  
STITCH BOLT CONNECTION



ANCHOR BOLT ASSY. (TYP)  
SEE FOUNDATION DRAWING FOR DETAILS

ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	281172	#12 BASE SECTION - 2 1/4" LEG - 1/2" BRACE W/ (1)	1199.210	3597.630
UD	6	265769	U-26 UPPER ANGLE - SINGLE BOLT FOR 20'-0" LONG TA	54.450	326.700
LD	6	265768	U-26 LOWER ANGLE - SINGLE BOLT FOR 20'-0" LONG TA	59.300	355.800
FD	6	265767	U-26 LONG ANGLE - SINGLE BOLT FOR 20'-0" LONG TAP	117.800	706.800
ML	24	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.480
MN	24	312501	5/8" -11 HOT DIPPED GALVANIZED NUT	0.120	2.880
AS	24	237658	RING FILL SPACER 5/8" THICK 1.049" HOLE	0.090	2.160
MB	24	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	6.240
AB/CB	15	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	3.900
AL / CL	15	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.300
AN / CN	15	312501	5/8" -11 HOT DIPPED GALVANIZED NUT	0.120	1.800
DCP	3	214833	MID BRACE CONNECTION PLATE FOR #12 BID LEG ANGLES	20.990	61.770
SL	12	312193	7/8" GALVANIZED LOCKWASHER	0.050	0.600
SN	12	312215	7/8"-9 HOT DIPPED GALVANIZED NUT	0.300	3.600
SB	12	172275	7/8"-9 X 2-1/2" A-325 BOLT WITH 1-1/2" THREAD	1.230	14.760
Total Wt.				5085.42 lb [2308.83 kg]	

PARTS LIST

SITE

KY-1049 CK CLIFTY  
APC TOWERS  
U 26 X 250'

DESCRIPTION

SECTION U-26: 0 (0' - 20' ELEVATION)

ENG. FILE NO.

553842

**Valmont**  
STRUCTURES

1-877-467-4763 Plymouth, IN  
1-800-547-2151 Salem, OR

3 OF 15

REV DESCRIPTION OF REVISIONS CPD BY DATE

REVISION HISTORY

PROPRIETARY NOTE:  
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STRUCTURE APPROVAL  
SAN 6/20/2022

FOUNDATION APPROVAL

DWG. NO.

293342T

PAGE

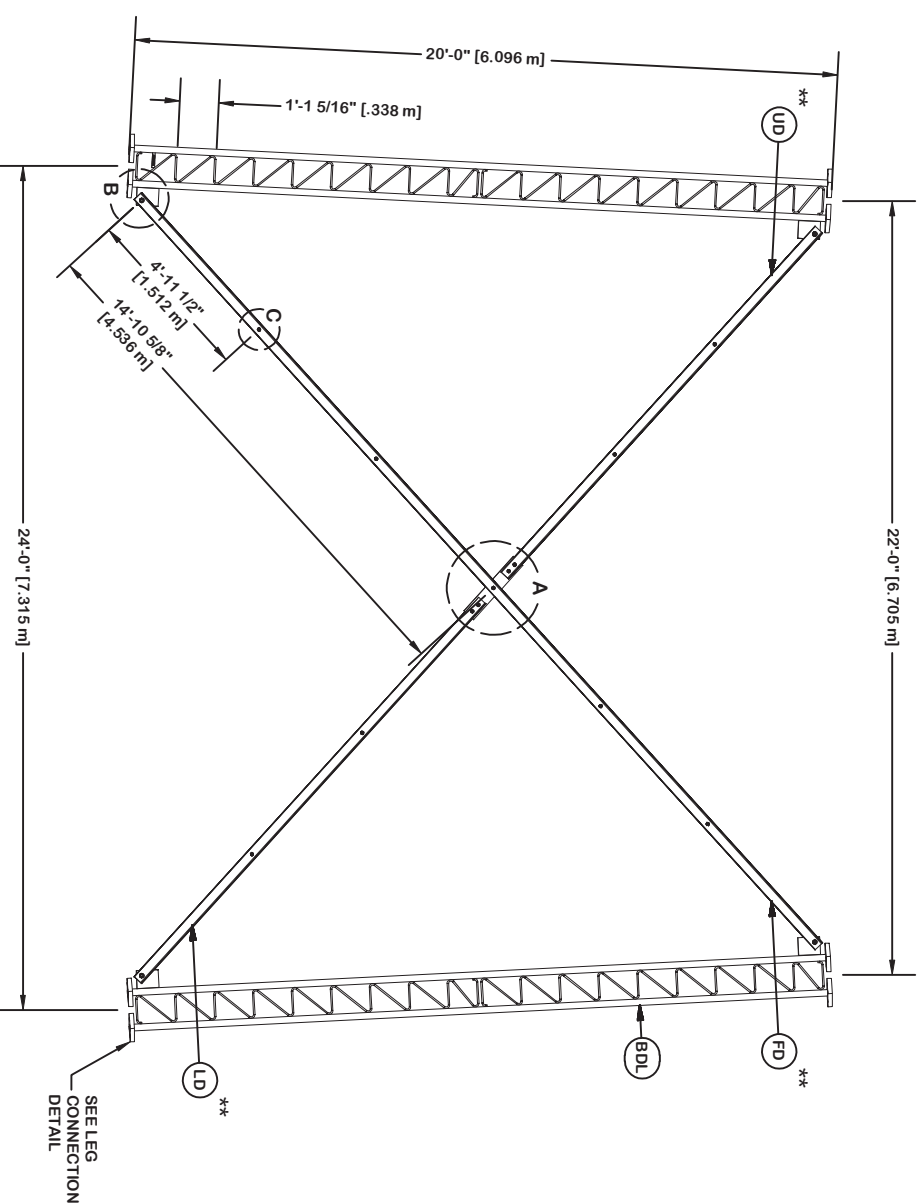


ORIENT LEGS WITH PIN STAMP  
TOWARD BOTTOM OF SECTION

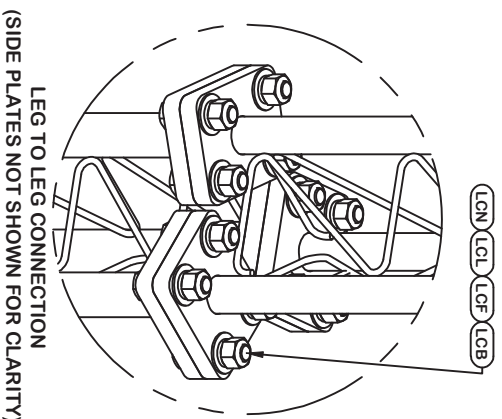
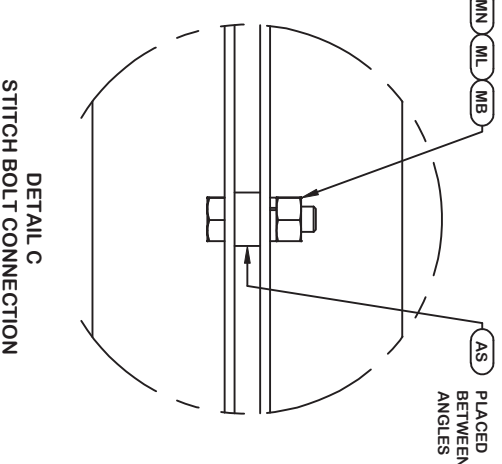
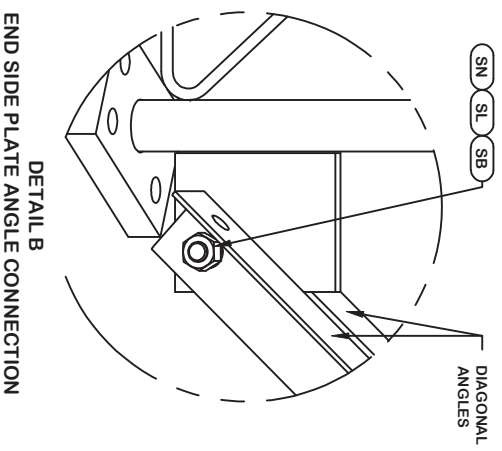
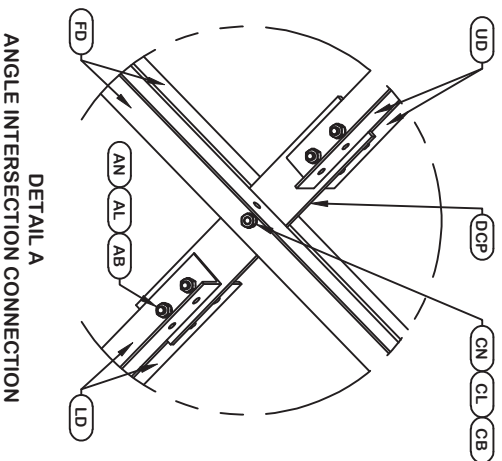
ORIENT ANGLES WITH STAMPED END TOWARD TOP OF SECTION

\*\* DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP, 

\* STITCH BOLT SPACING SHOWN  
IS MAX. FOR ALL ANGLES



NOTE: THE VIEWS SHOWN BELOW ARE FOR PART IDENTIFICATION ONLY. THE ACTUAL PART STYLE MAY VARY FROM WHAT IS DEPICTED BELOW.  
PLEASE SEE ASSEMBLY INFORMATION IN THE UPPER LEFT CORNER FOR FURTHER INSTALLATION INSTRUCTIONS.



ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	195960	#12 LEG SECTION - 2-1/4" LEG - 1/2" BRACE - 7/8" B	1100.520	3301.560
UD	6	265745	U-24 UPPER ANGLE - SINGLE BOLT FOR 20'-0" LONG 1A	51.730	310.380
LD	6	265744	U-24 LOWER ANGLE - SINGLE BOLT FOR 20'-0" LONG 1A	56.450	338.700
FD	6	265743	U-24 LONG ANGLE - SINGLE BOLT FOR 20'-0" LONG TAP	111.910	671.460
ML	24	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.480
MN	24	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	2.880
AS	24	237658	RING FILL SPACER 5/8" THICK 1.049" HOLE	0.090	2.160
MB	24	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	6.240
AB/CB	15	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	3.900
AL / CL	15	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.300
AN / CN	15	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	1.800
DCP	3	214833	MID BRACE CONNECTION PLATE FOR #12 BID LEG ANGLES	20.590	61.770
SL	12	312193	7/8" GALVANIZED LOCKWASHER	0.050	0.600
SN	12	312215	7/8"-9 HOT DIPPED GALVANIZED NUT	0.300	3.600
SB	12	172275	7/8"-9 X 2-1/2" A-325 BOLT WITH 1-1/2" THREAD	1.230	14.760
LCB	36	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	49.680
LCF	36	312222	1" GALVANIZED FLAT WASHER (F-436)	0.140	5.040
LCL	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
LCN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
Total Wt				4793.67 lb [2176.37 kg]	

PARTS LIST

SITE

KY-1049 CK CLIFTY  
APC TOWERS  
U 26 X 250'

DESCRIPTION

SECTION U-24.0 (20' - 40' ELEVATION)

STRUCTURE APPROVAL

6/20/2022

FOUNDATION APPROVAL

ENG. FILE NO.

553842

DWG. NO.

293342T



REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			

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STRUCTURE APPROVAL

FOUNDATION APPROVAL

DWG. NO.

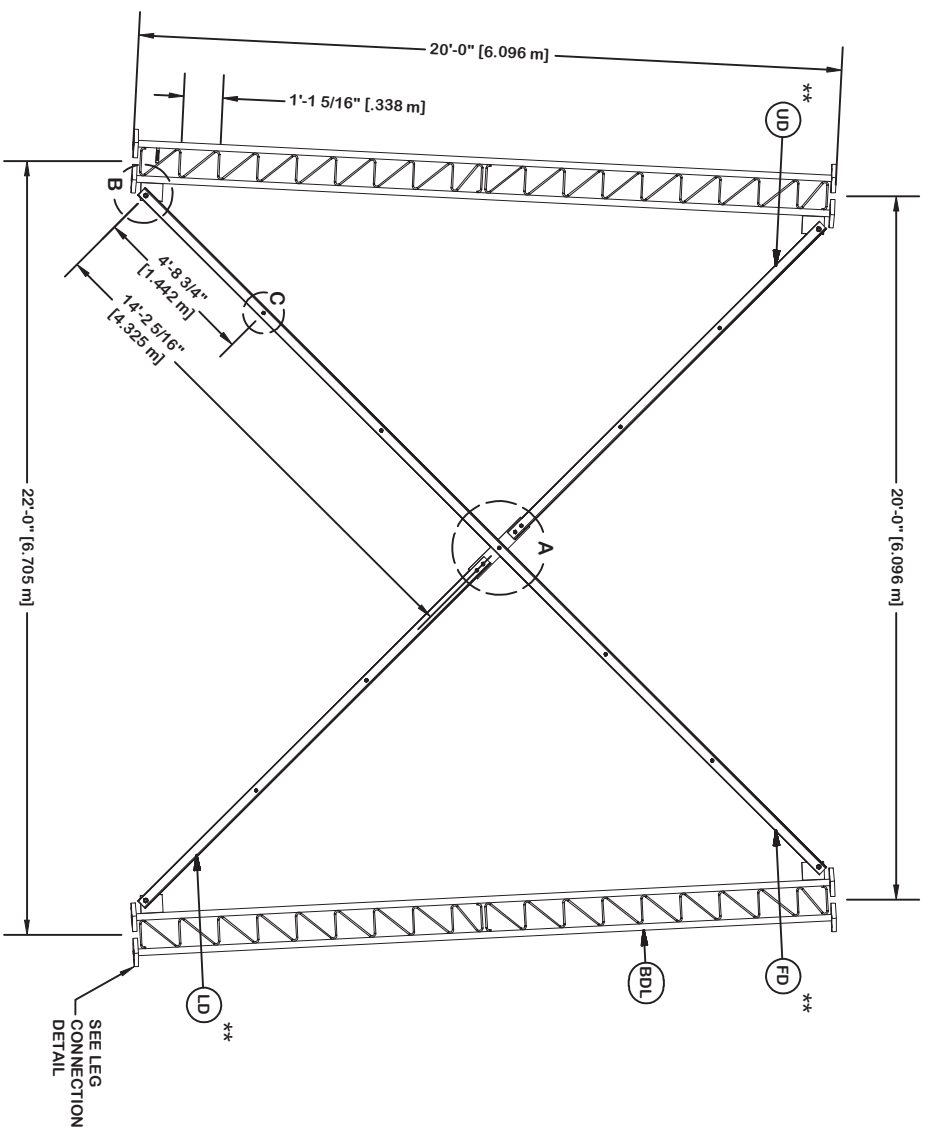
293342T

ORIENT LEGS WITH PIN STAMP  
TOWARD BOTTOM OF SECTION

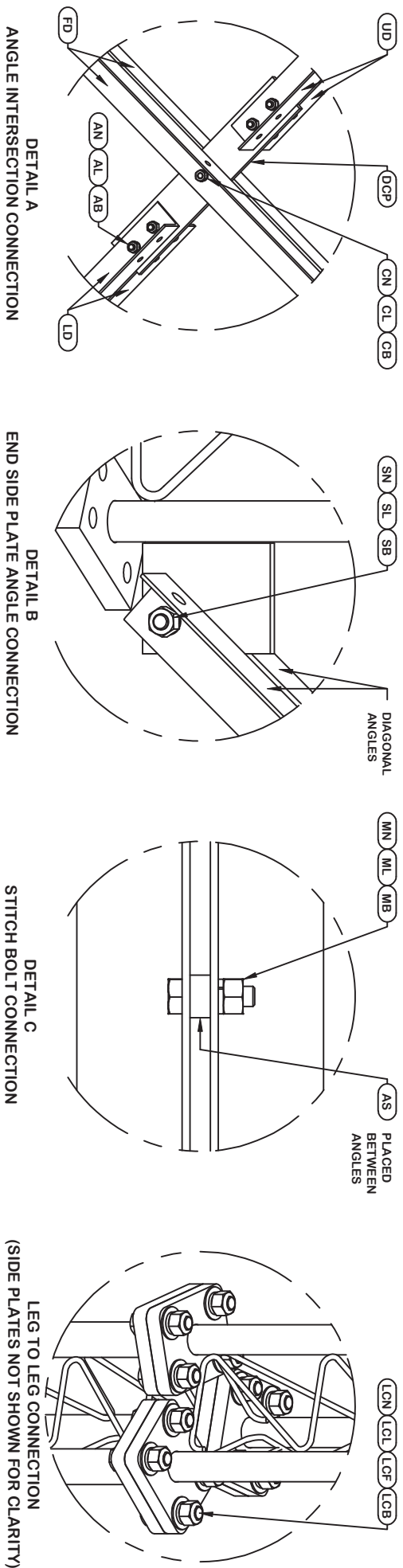
ORIENT ANGLES WITH STAMPED END TOWARD TOP OF SECTION

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\* STITCH BOLT SPACING SHOWN IS MAX. FOR ALL ANGLES



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PARTS LIST		ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	195639	#12 LEG SECTION - 2" LEG - 1/2" BRACE - 7/8" BOLT	926.920	2780.760		
UD	6	265721	U-22 UPPER ANGLE - SINGLE BOLT FOR 20'-0" LONG TA	48.760	292.560		
LD	6	265720	U-22 LOWER ANGLE - SINGLE BOLT FOR 20'-0" LONG TA	53.750	322.500		
FD	6	265719	U-22 LONG ANGLE - SINGLE BOLT FOR 20'-0" LONG TAP	106.280	637.680		
ML	24	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.480		
MN	24	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	2.880		
AS	24	237658	RING FILL SPACER 5/8" THICK 1.049" HOLE	0.090	2.160		
MB	24	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.280	6.240		
AB/CL	15	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.280	3.900		
AL / CL	15	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.300		
AN / CN	15	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	1.800		
DCP	3	214833	MID BRACE CONNECTION PLATE FOR #12 BID LEG ANGLES	20.590	61.770		
SL	12	312193	7/8" GALVANIZED LOCKWASHER	0.050	0.600		
SN	12	312215	7/8"-9 HOT DIPPED GALVANIZED NUT	0.300	3.600		
SB	12	172275	7/8"-9 X 2-1/2" A-325 BOLT WITH 1-1/2" THREAD	1.230	14.760		
LCB	36	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	49.680		
LCF	36	312222	1" GALVANIZED FLAT WASHER (F-436)	0.140	5.040		
LCL	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880		
LCN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480		
Total Wt						4205.07 lb [1909.14 kg]	

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			

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SITE  
KY-1049 CK CLIFTY  
APC TOWERS  
U 26 X 250'

DESCRIPTION  
SECTION U-22.0 (40' - 60' ELEVATION)

STRUCTURE APPROVAL  
SAN 6/20/2022

FOUNDATION APPROVAL

ENG. FILE NO. 553842

DWG. NO. 293342T

1-877-467-4763 Plymouth, IN  
1-800-547-2151 Salem, OR

**Valmont** STRUCTURES

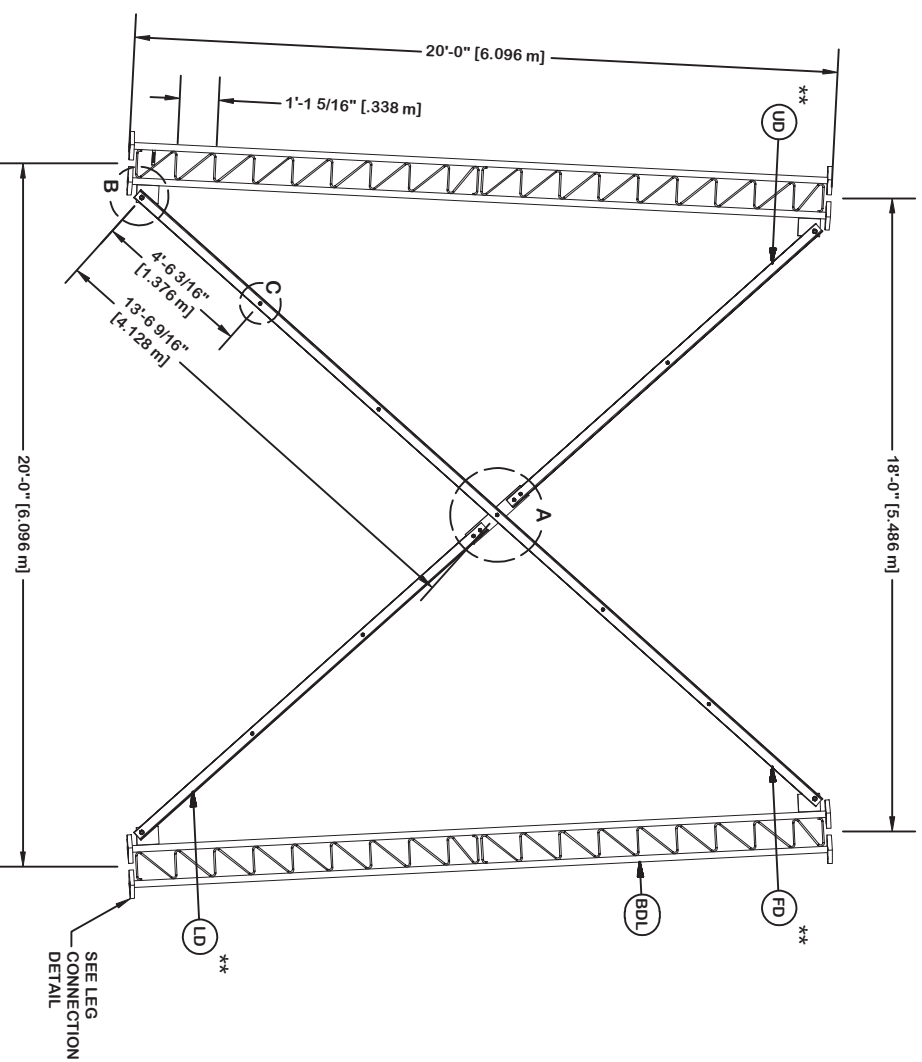
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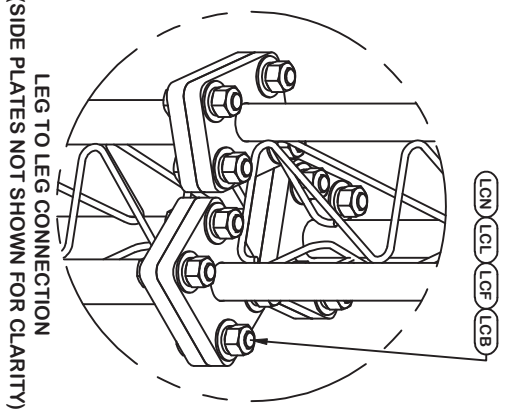
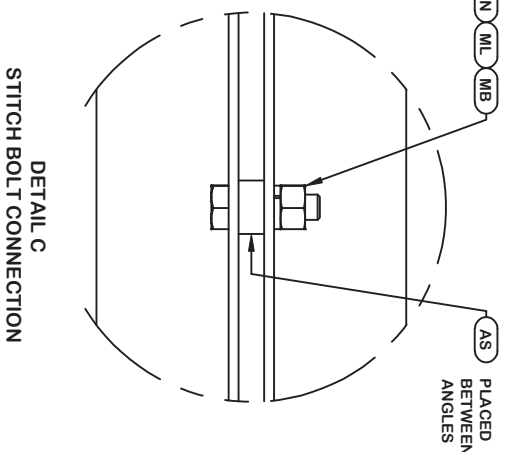
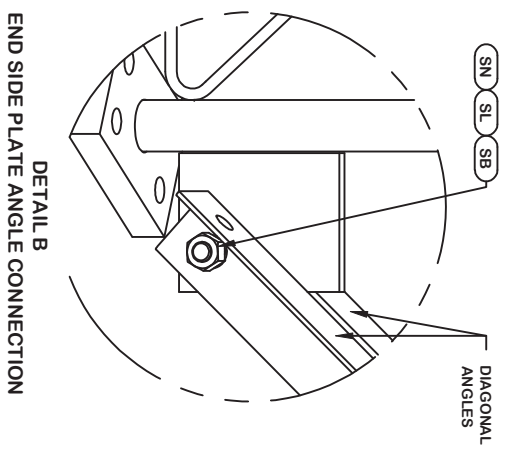
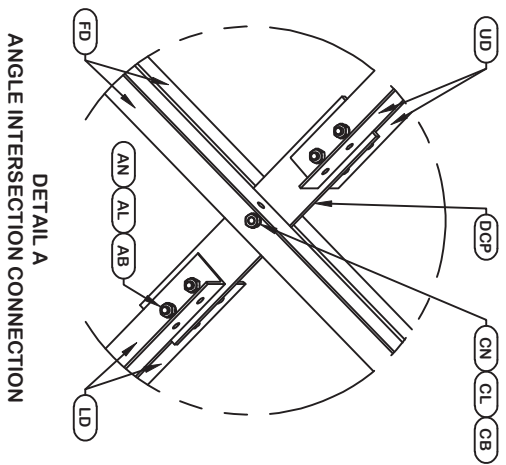
ORIENT LEGS WITH PIN STAMP  
TOWARD BOTTOM OF SECTION

ORIENT ANGLES WITH STAMPED END TOWARD TOP OF SECTION  
\*\* DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP.

\* STITCH BOLT SPACING SHOWN  
IS MAX. FOR ALL ANGLES



NOTE: THE VIEWS SHOWN BELOW ARE FOR PART IDENTIFICATION ONLY. THE ACTUAL PART STYLE MAY VARY FROM WHAT IS DEPICTED BELOW.  
PLEASE SEE ASSEMBLY INFORMATION IN THE UPPER LEFT CORNER FOR FURTHER INSTALLATION INSTRUCTIONS.



ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	195639	#12 LEG SECTION - 2" LEG - 1/2" BRACE - 7/8" BOLT	926.920	2780.760
UD	6	265697	U-20 UPPER ANGLE - SINGLE BOLT FOR 20'-0" LONG TA	45.630	273.780
LD	6	265698	U-20 LOWER ANGLE - SINGLE BOLT FOR 20'-0" LONG TA	51.240	307.440
FD	6	265695	U-20 LONG ANGLE - SINGLE BOLT FOR 20'-0" LONG TAP	100.930	605.580
ML	21	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.420
MN	21	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	2.520
AS	21	237658	RING FILL SPACER 5/8" THICK 1.049" HOLE	0.090	1.890
MB	21	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	5.460
AB/CB	15	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	3.900
AL / CL	15	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.300
AN / CN	15	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	1.800
DCP	3	214833	MID BRACE CONNECTION PLATE FOR #12 BID LEG ANGLES	20.990	61.770
SL	12	312193	7/8" GALVANIZED LOCKWASHER	0.050	0.600
SN	12	312215	7/8"-9 HOT DIPPED GALVANIZED NUT	0.300	3.600
SB	12	172275	7/8"-9 X 2-1/2" A-325 BOLT WITH 1-1/2" THREAD	1.230	14.760
LCB	36	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	49.680
LCF	36	312222	1" GALVANIZED FLAT WASHER (F-436)	0.140	5.040
LCL	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
LCN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
Total Wt				4137.66 lb [1878.53 kg]	

PARTS LIST

SITE

KY-1049 CK CLIFTY  
APC TOWERS  
U 26 X 250'

DESCRIPTION

SECTION U-20.0 (60' - 80' ELEVATION)

STRUCTURE APPROVAL

FOUNDATION APPROVAL

ENG. FILE NO.

553842

DWG. NO.

293342T

1-877-467-4763 Plymouth, IN  
1-800-547-2151 Salem, OR

**Valmont**  
STRUCTURES

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			

PROPRIETARY NOTE:  
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STRUCTURE APPROVAL  
SAN 6/20/2022

FOUNDATION APPROVAL

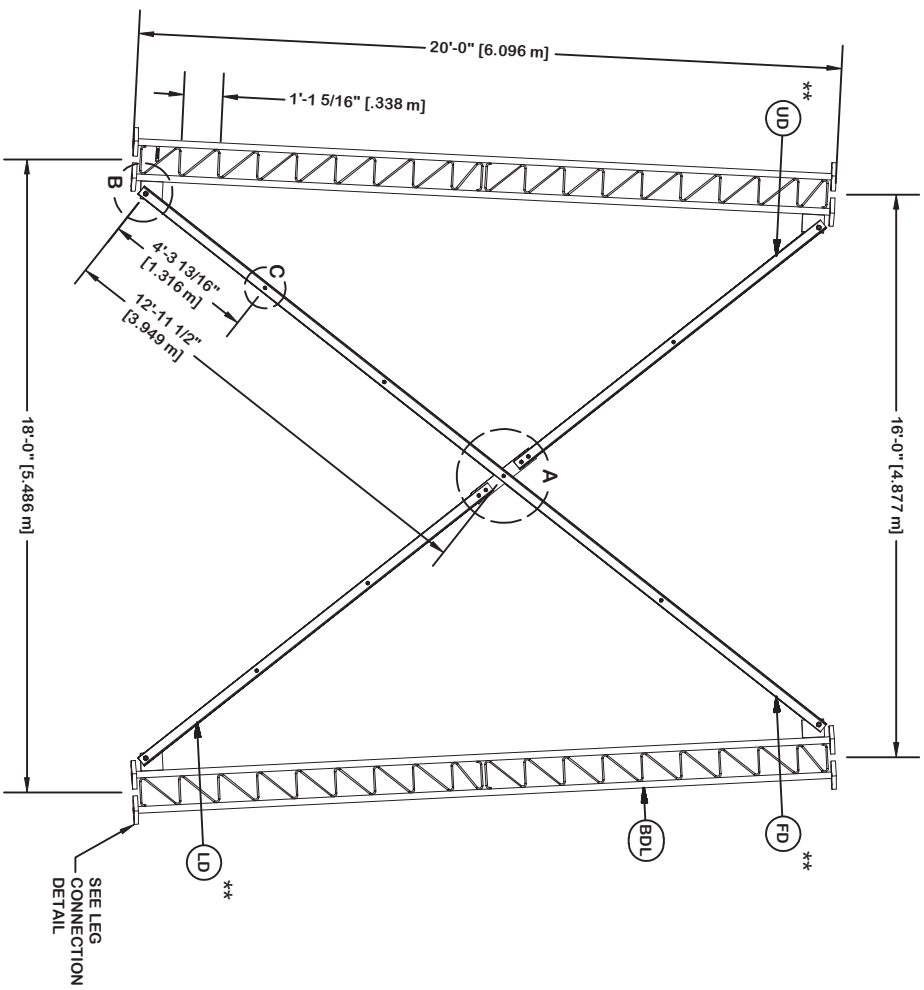
DWG. NO.

293342T

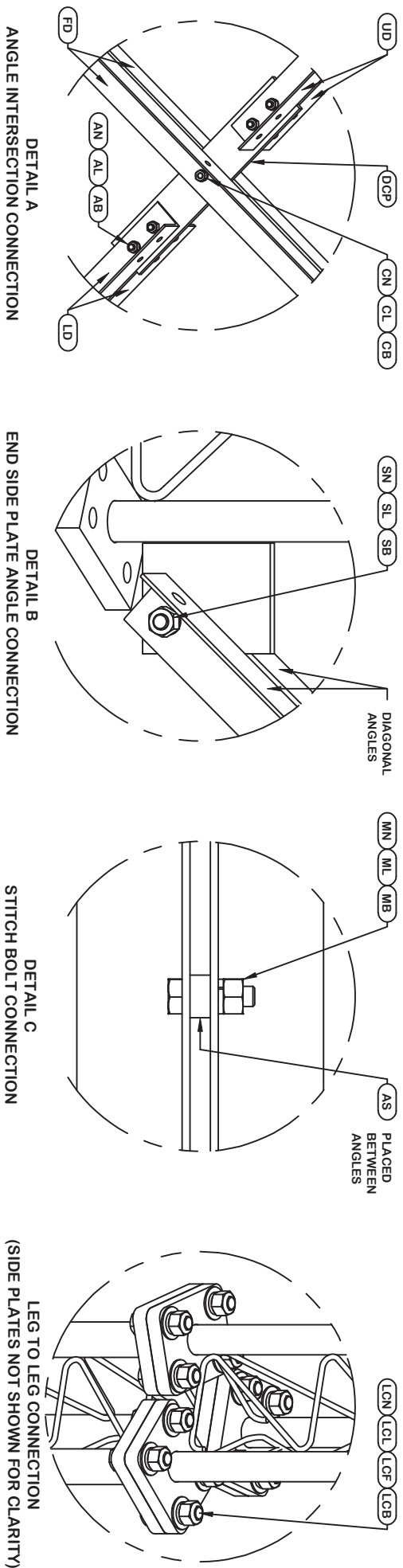
ORIENT LEGS WITH PIN STAMP  
TOWARD BOTTOM OF SECTION

ORIENT ANGLES WITH STAMPED END TOWARD TOP OF SECTION  
\*\* DIAGONAL ANGLES MUST BE INSTALLED WITH THE NON-BOLTED FACE UP.

\* STITCH BOLT SPACING SHOWN  
IS MAX. FOR ALL ANGLES



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PLEASE SEE ASSEMBLY INFORMATION IN THE UPPER LEFT CORNER FOR FURTHER INSTALLATION INSTRUCTIONS.



ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	195637	#12 LEG SECT - 2" TO 1-3/4" TRANS LEG - 1/2" BRACE	906.870	2720.610
UD	6	265673	U-18 UPPER ANGLE - SINGLE BOLT FOR 20'-0" LONG TA	35.510	213.060
LD	6	265672	U-18 LOWER ANGLE - SINGLE BOLT FOR 20'-0" LONG TA	40.500	243.000
FD	6	265671	U-18 LONG ANGLE - SINGLE BOLT FOR 20'-0" LONG TAP	79.370	476.220
ML	18	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.360
MN	18	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	2.160
AS	18	237658	RING FILL SPACER 5/8" THICK 1.049" HOLE	0.090	1.620
MB	18	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	4.680
AB/CB	15	161895	5/8"-11 X 2 1/4" A-325 BOLT 1 1/4" THREAD	0.260	3.900
AL / CL	15	312123	5/8" GALVANIZED LOCKWASHER (53-22230)	0.020	0.300
AN / CN	15	312501	5/8"-11 HOT DIPPED GALVANIZED NUT	0.120	1.800
DCP	3	214833	MID BRACE CONNECTION PLATE FOR #12 BID LEG ANGLES	20.990	61.770
SL	12	312193	7/8" GALVANIZED LOCKWASHER	0.050	0.600
SN	12	312215	7/8"-9 HOT DIPPED GALVANIZED NUT	0.300	3.600
SB	12	172275	7/8"-9 X 2-1/2" A-325 BOLT WITH 1-1/2" THREAD	1.230	14.760
LCB	36	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	49.680
LCF	36	312222	1" GALVANIZED FLAT WASHER (F-436)	0.140	5.040
LCL	36	312223	1" GALVANIZED LOCKWASHER	0.080	2.880
LCN	36	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	15.480
Total Wt.				3821.52 lb [1735.00 kg]	

PARTS LIST

SITE  
KY-1049 CK CLIFTY  
APC TOWERS  
U 26 X 250'

DESCRIPTION  
SECTION U-18.0 (80' - 100' ELEVATION)

**Valmont**  
STRUCTURES  
1-877-467-4763 Plymouth, IN  
1-800-547-2151 Salem, OR

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			

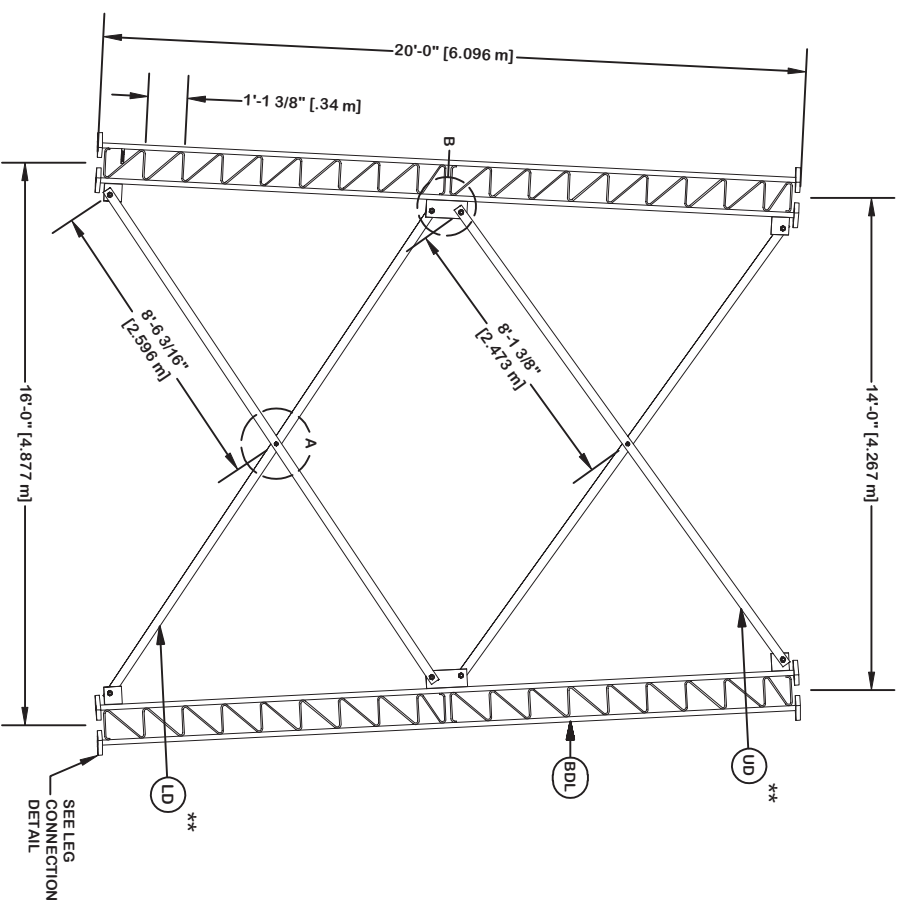
PROPRIETARY NOTE:  
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STRUCTURE APPROVAL	FOUNDATION APPROVAL
SAN 6/20/2022	

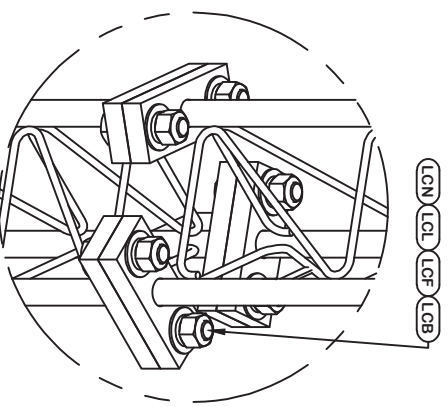
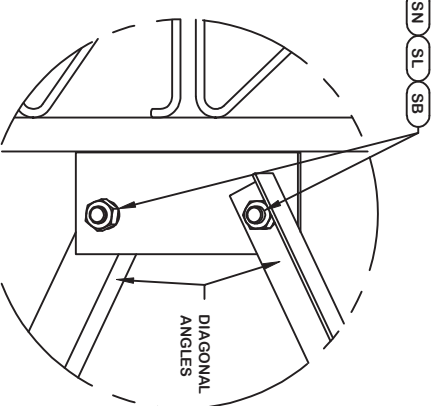
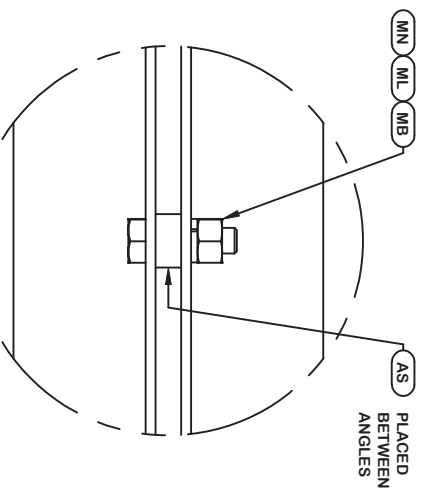
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DWG. NO. 293342T  
7 OF 15 PAGE

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ORIENT LEGS WITH PIN STAMP  
TOWARD BOTTOM OF SECTION  
ORIENT ANGLES WITH STAMPED  
END TOWARD TOP OF SECTION  
\*\* DIAGONAL ANGLES MUST BE INSTALLED  
WITH THE NON-BOLTED FACE UP.  
THIS MAY BE ON THE OPPOSITE SIDE OF THE  
SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL..



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PLEASE SEE ASSEMBLY INFORMATION IN THE UPPER LEFT CORNER FOR FURTHER INSTALLATION INSTRUCTIONS.



PARTS LIST				UNIT WT.	NET WT.
ITEM	QTY	PART NO.	PART DESCRIPTION		
BDL	3	195217	#12 LEG SECTION - 1-3/4" LEG - 1/2" BRACE - 1" BOL	746.710	2240.130
LD	6	279251	U-16 LOWER DIAGONAL - 2 1/2" x 2 1/2" x 1/4" ANGLE	71.950	431.700
AS	6	104291	RING FILL SPACER 1/2" THICK 1.049" HOLE	0.070	0.420
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-9 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172266	1"-9 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.940	20.160
UD	6	279250	U-16 UPPER DIAGONAL - 2 1/2" x 2 1/2" x 1/4" ANGLE	68.430	410.590
LCB	18	222022	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	45.540
LCF	18	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	2.340
LCL	18	312283	1-1/4" GALVANIZED LOCKWASHER	0.150	2.700
LCN	18	312507	1-1/4"-7 HOT DIPPED GALVANIZED NUT	0.730	13.140
Total Wt.				3183.09 lb [1445.15 kg]	

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			
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COPYRIGHT 2013 KY-1049 CK CLIFTY APC TOWERS U 26 X 250'				

SITE KY-1049 CK CLIFTY APC TOWERS U 26 X 250'	DESCRIPTION SECTION U-16.0 (100' - 120' ELEVATION)
STRUCTURE APPROVAL SAN 6/20/2022	FOUNDATION APPROVAL

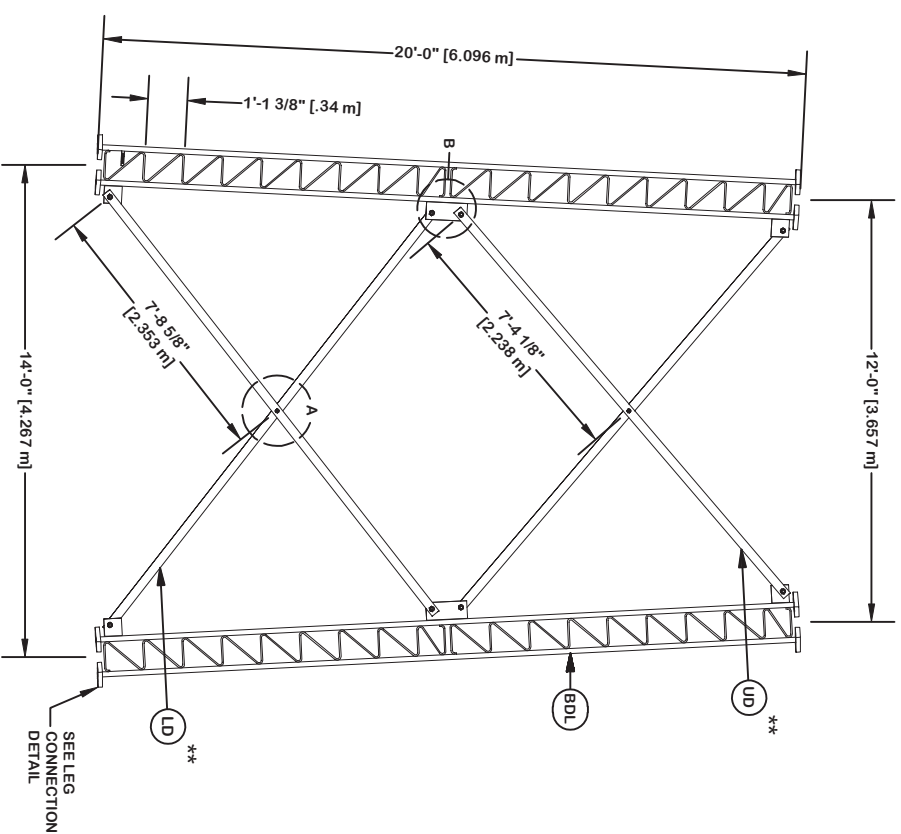
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**Valmont**  
 STRUCTURES

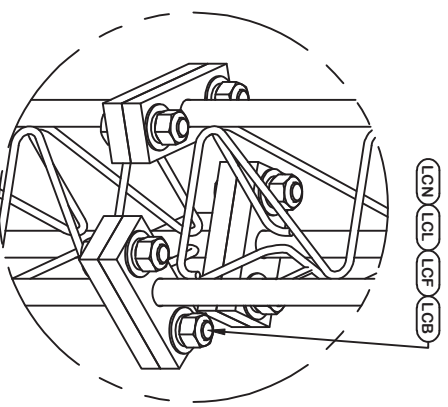
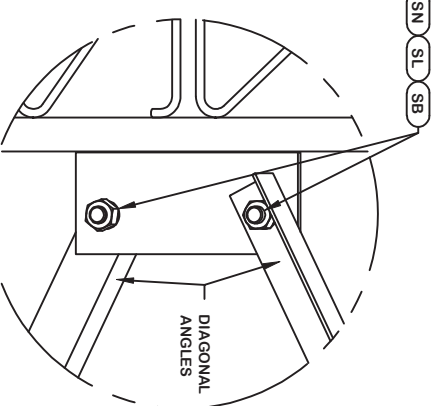
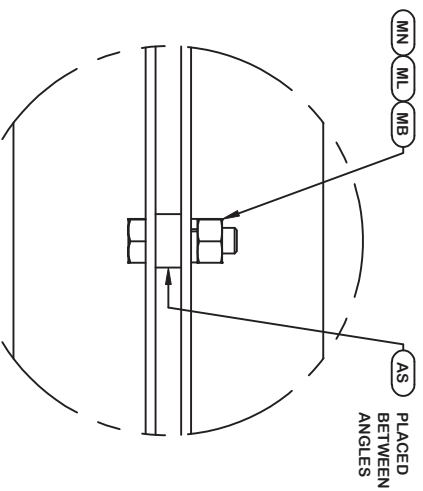
1-877-467-4763 Plymouth, IN  
 1-800-547-2151 Salem, OR

8 OF 15 PAGE

ORIENT LEGS WITH PIN STAMP  
TOWARD BOTTOM OF SECTION  
ORIENT ANGLES WITH STAMPED  
END TOWARD TOP OF SECTION  
\*\* DIAGONAL ANGLES MUST BE INSTALLED  
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SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL..



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PLEASE SEE ASSEMBLY INFORMATION IN THE UPPER LEFT CORNER FOR FURTHER INSTALLATION INSTRUCTIONS.



PARTS LIST				UNIT WT.	NET WT.
ITEM	QTY	PART NO.	PART DESCRIPTION		
BDL	3	195217	#12 LEG SECTION - 1-3/4" LEG - 1/2" BRACE - 1" BOL	746.710	2240.130
LD	6	279227	U-14 LOWER DIAGONAL - 2 1/2" x 2 1/2" x 1/4" ANGLE	65.000	390.000
AS	6	104291	RING FILL SPACER 1/2" THICK 1.049" HOLE	0.070	0.420
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312804	1"-9 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172266	1"-9 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.940	20.160
UD	6	279226	U-14 UPPER DIAGONAL - 2 1/2" x 2 1/2" x 1/4" ANGLE	61.880	370.080
LCB	18	222022	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	45.540
LCF	18	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	2.340
LCL	18	312283	1-1/4" GALVANIZED LOCKWASHER	0.150	2.700
LCN	18	312507	1-1/4"-7 HOT DIPPED GALVANIZED NUT	0.730	13.140
Total Wt.				3100.89 lb [1407.83 kg]	

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			

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 KY-1049 CK CLIFTY  
 APC TOWERS  
 U 26 X 250'

STRUCTURE APPROVAL	FOUNDATION APPROVAL
SAN	6/20/2022

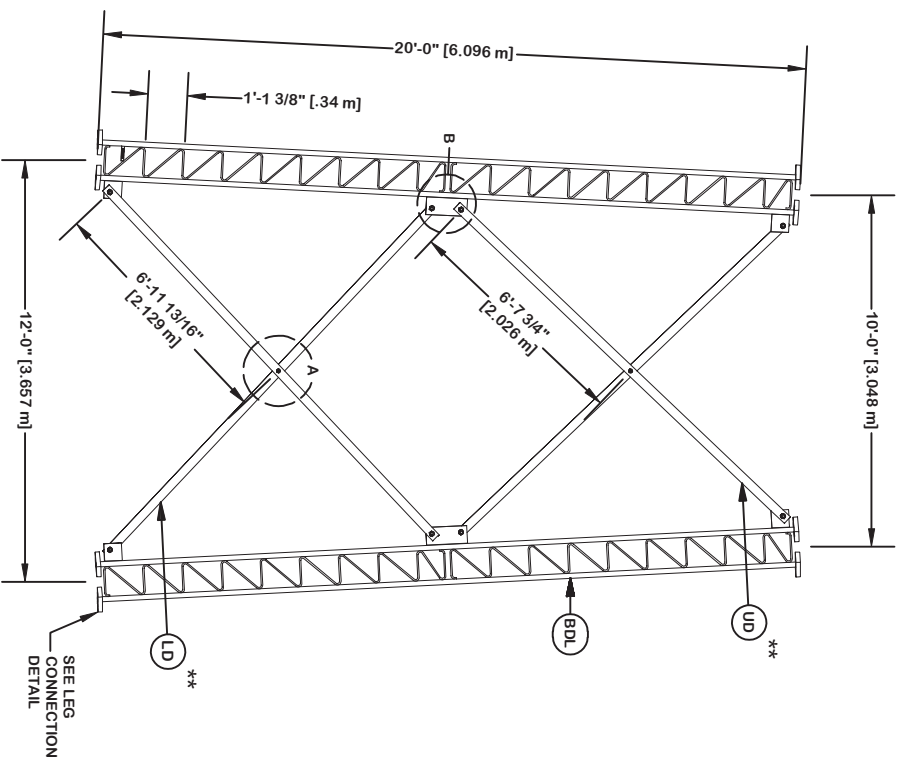
DESCRIPTION  
SECTION U-14.0 (120' - 140' ELEVATION)

valmont STRUCTURES  
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 1-800-547-2151 Salem, OR

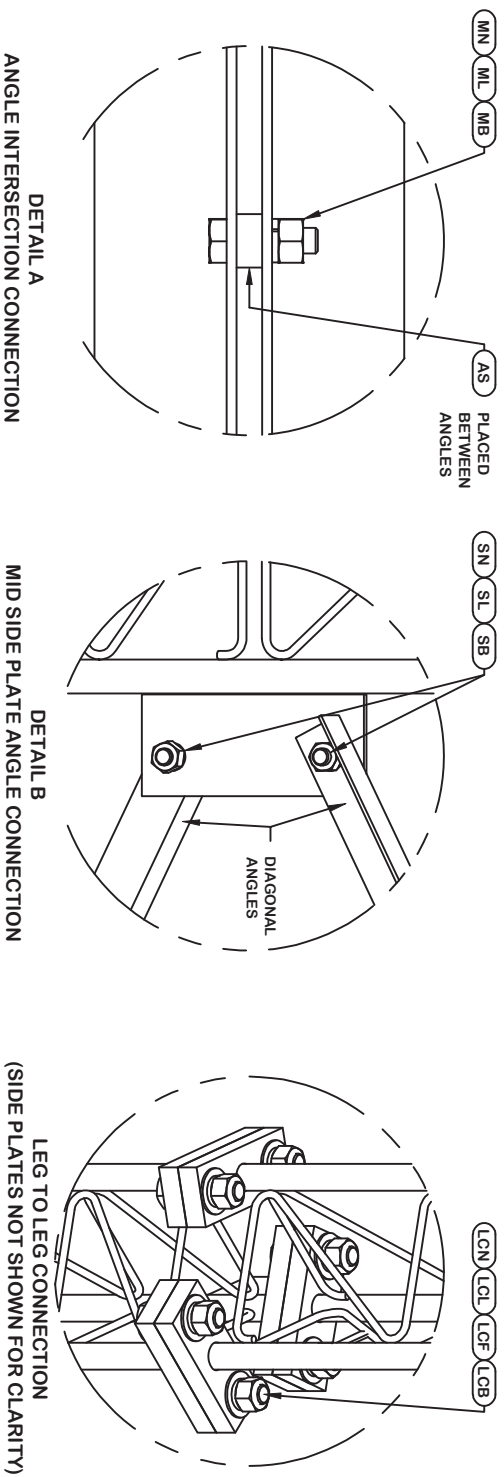
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 DWG. NO. 293342T

9 OF 15 PAGE

ORIENT LEGS WITH PIN STAMP  
TOWARD BOTTOM OF SECTION  
ORIENT ANGLES WITH STAMPED  
END TOWARD TOP OF SECTION  
\*\* DIAGONAL ANGLES MUST BE INSTALLED  
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SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL..



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PLEASE SEE ASSEMBLY INFORMATION IN THE UPPER LEFT CORNER FOR FURTHER INSTALLATION INSTRUCTIONS.



PARTS LIST				UNIT WT.	NET WT.
ITEM	QTY	PART NO.	PART DESCRIPTION		
BDL	3	195213	#12 LEG SECT - 1-3/4" TO 1-1/2" TRANS LEG - 1/2" B	739.890	2219.670
LD	6	126805	U-12 LOWER DIAGONAL - 2 1/2" x 2 1/2" x 3/16" ANGL	44.570	267.420
AS	6	104291	RING FILL SPACER 1/2" THICK 1.049" HOLE	0.070	0.420
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172265	1"-8 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.840	20.160
UD	6	126801	U-12 UPPER DIAGONAL - 2 1/2" x 2 1/2" x 3/16" ANGL	42.250	253.500
LCB	18	222022	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	45.540
LCF	18	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	2.340
LCL	18	312283	1-1/4" GALVANIZED LOCKWASHER	0.150	2.700
LCN	18	312507	1-1/4"-7 HOT DIPPED GALVANIZED NUT	0.730	13.140
Total Wt.				2841.27 lb [1289.96 kg]	

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			

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 KY-1049 CK CLIFTY  
 APC TOWERS  
 U 26 X 250'

STRUCTURE APPROVAL	FOUNDATION APPROVAL
SAN	6/20/2022

DESCRIPTION  
SECTION U-12.0 (140' - 160' ELEVATION)

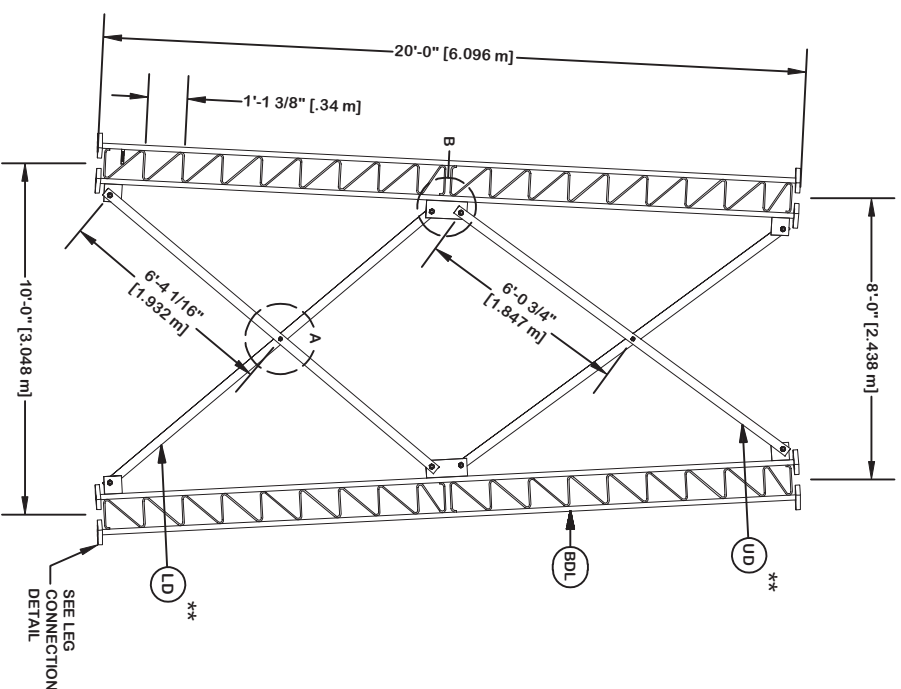
1-877-467-4763 Plymouth, IN  
 1-800-547-2151 Salem, OR

**Valmont**  
STRUCTURES

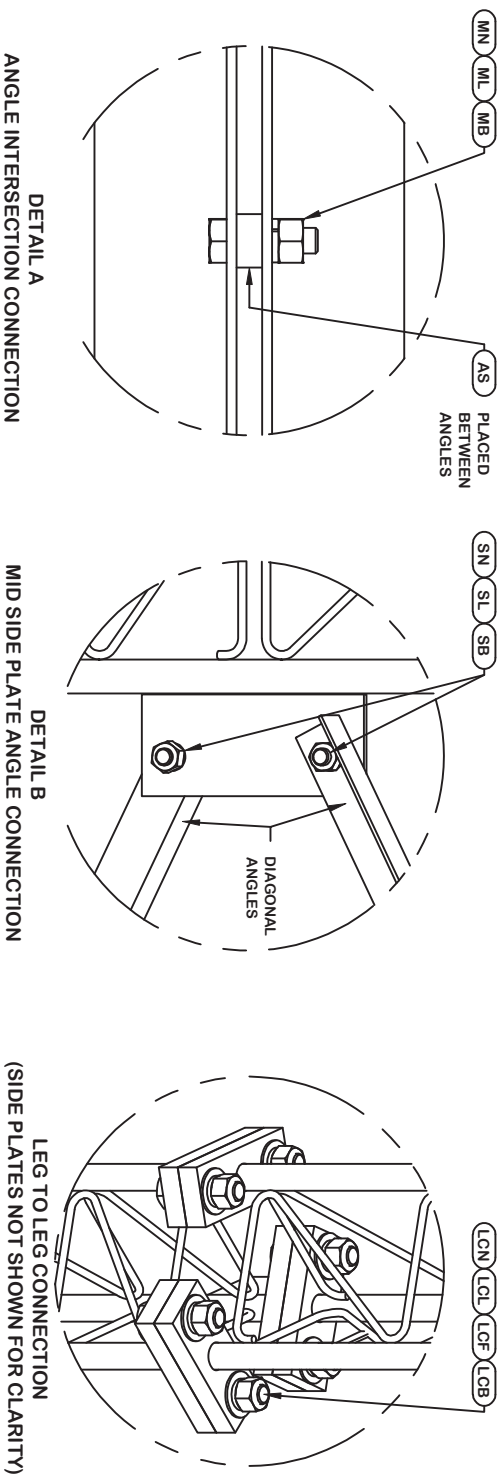
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 DWG. NO. 293342T

10 OF 15 PAGE

ORIENT LEGS WITH PIN STAMP  
TOWARD BOTTOM OF SECTION  
ORIENT ANGLES WITH STAMPED  
END TOWARD TOP OF SECTION  
\*\* DIAGONAL ANGLES MUST BE INSTALLED  
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THIS MAY BE ON THE OPPOSITE SIDE OF THE  
SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL..




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PLEASE SEE ASSEMBLY INFORMATION IN THE UPPER LEFT CORNER FOR FURTHER INSTALLATION INSTRUCTIONS.



PARTS LIST				UNIT WT.	NET WT.
ITEM	QTY	PART NO.	PART DESCRIPTION		
BDL	3	194651	#12 LEG SECTION - 1-1/2" LEG - 1/2" BRACE - 1" BOL	602.830	1808.490
LD	6	126797	U-10 LOWER DIAGONAL - 2 1/2" x 2 1/2" x 3/16" ANGL	40.070	240.420
AS	6	104291	RING FILL SPACER 1/2" THICK 1.049" HOLE	0.070	0.420
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-9 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172266	1"-9 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.940	20.160
UD	6	126793	U-10 UPPER DIAGONAL - 2 1/2" x 2 1/2" x 3/16" ANGL	38.050	228.300
LCB	18	222016	1"-9 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	24.840
LCF	18	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	2.520
LCL	18	312223	1" GALVANIZED LOCKWASHER	0.080	1.440
LCN	18	312504	1"-9 HOT DIPPED GALVANIZED NUT	0.430	7.740
Total Wt.				2350.71 lb [1067.24 kg]	

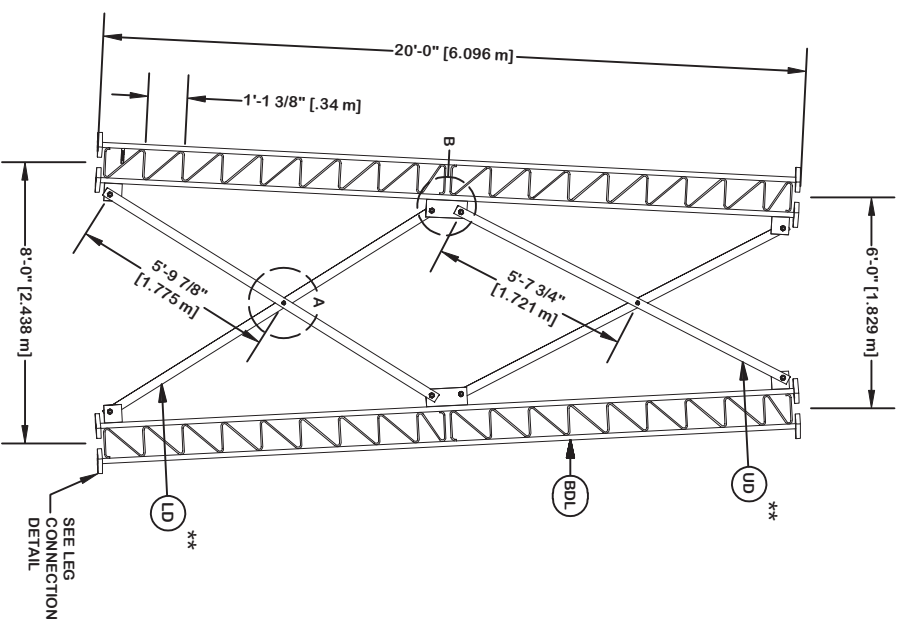
REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			
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STRUCTURE APPROVAL	FOUNDATION APPROVAL
SAN	6/20/2022
DESCRIPTION SECTION U-10.0 (160' - 180' ELEVATION)	

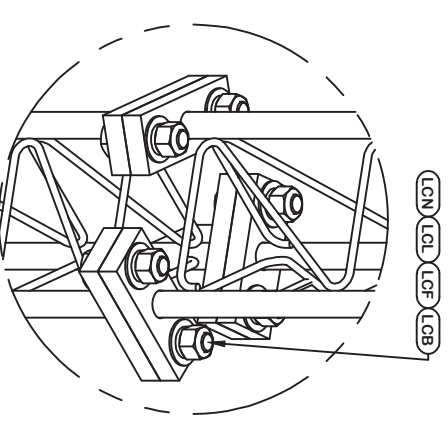
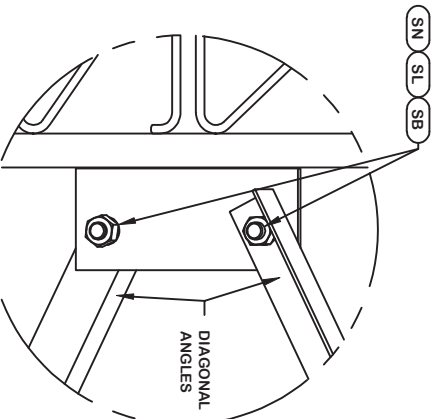
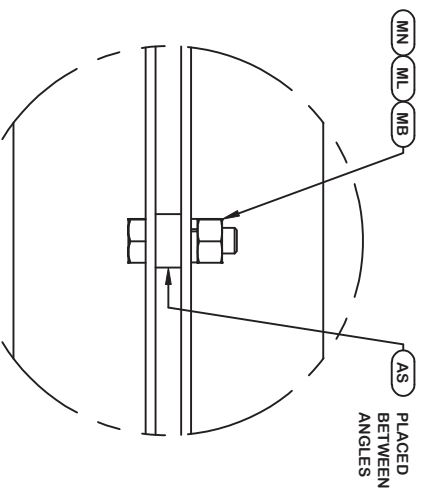
ENG. FILE NO. 553842  
 DWG. NO. 293342T  
  
 1-877-467-4763 Plymouth, IN  
 1-800-547-2151 Salem, OR  
 11 OF 15 PAGE



ORIENT LEGS WITH PIN STAMP  
TOWARD BOTTOM OF SECTION  
ORIENT ANGLES WITH STAMPED  
END TOWARD TOP OF SECTION  
\*\* DIAGONAL ANGLES MUST BE INSTALLED  
WITH THE NON-BOLTED FACE UP.  
THIS MAY BE ON THE OPPOSITE SIDE OF THE  
SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL.



NOTE: THE VIEWS SHOWN BELOW ARE FOR PART IDENTIFICATION ONLY. THE ACTUAL PART STYLE MAY VARY FROM WHAT IS DEPICTED BELOW.  
PLEASE SEE ASSEMBLY INFORMATION IN THE UPPER LEFT CORNER FOR FURTHER INSTALLATION INSTRUCTIONS.



ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	194651	#12 LEG SECTION - 1-1/2" LEG - 1/2" BRACE - 1" BOL	602.830	1808.490
LD	6	126789	U-8 LOWER DIAGONAL - 2 1/2" x 2 1/2" x 3/4" ANGLE	36.220	217.320
AS	6	104291	RING FILL SPACER 1/2" THICK 1.049" HOLE	0.070	0.420
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	24	172266	1"-8 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.940	20.160
UD	6	126785	U-8 UPPER DIAGONAL - 2 1/2" x 2 1/2" x 3/16" ANGLE	34.610	207.660
LCB	18	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	24.840
LCF	18	312222	1" GALVANIZED FLAT WASHER (F-436)	0.140	2.520
LCL	18	312223	1" GALVANIZED LOCKWASHER	0.080	1.440
LCN	18	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	7.740
Total Wt.				2306.97 lb [1047.38 kg]	

PARTS LIST

DETAIL A  
ANGLE INTERSECTION CONNECTION

DETAIL B  
MID SIDE PLATE ANGLE CONNECTION

LEG TO LEG CONNECTION  
(SIDE PLATES NOT SHOWN FOR CLARITY)

SITE

KY-1049 CK CLIFTY  
APC TOWERS  
U 26 X 250'

DESCRIPTION

SECTION U-8.0 (180° - 200° ELEVATION)

ENG. FILE NO.

553842

**Valmont**  
STRUCTURES

1-877-467-4763 Plymouth, IN  
1-800-547-2151 Salem, OR

12 OF 15

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			

PROPRIETARY NOTE:  
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STRUCTURE APPROVAL  
SAN 6/20/2022

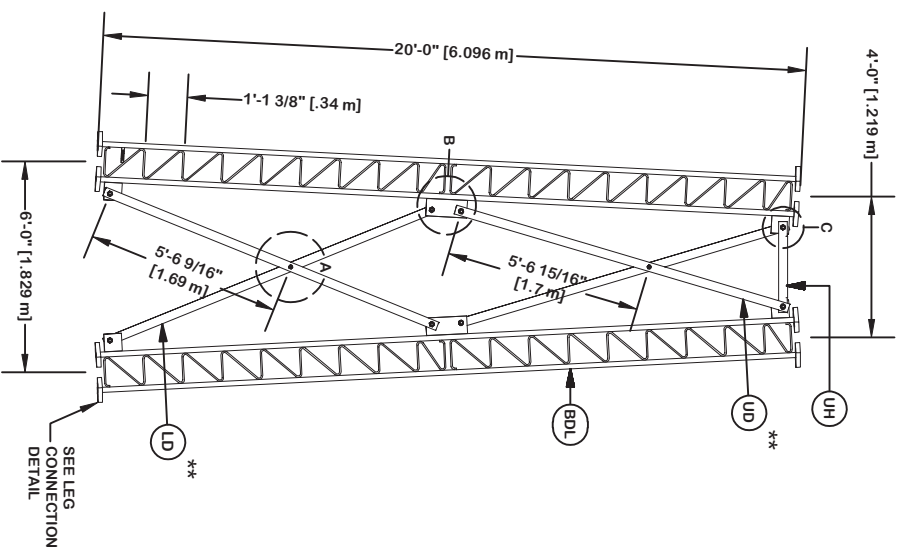
FOUNDATION APPROVAL

DWG. NO.

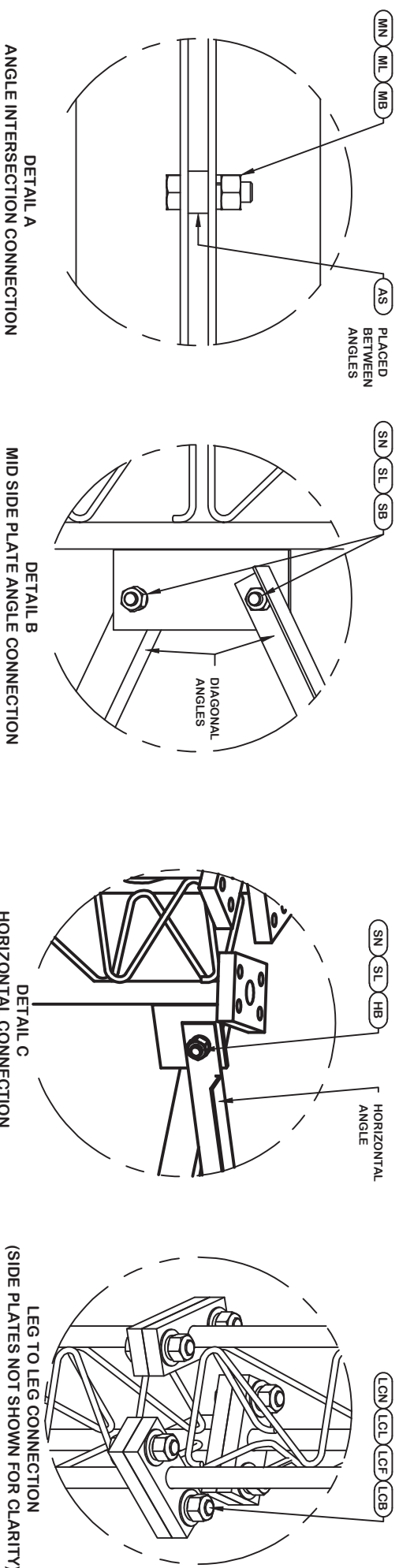
293342T

PAGE

ORIENT LEGS WITH PIN STAMP  
TOWARD BOTTOM OF SECTION  
ORIENT ANGLES WITH STAMPED  
END TOWARD TOP OF SECTION  
\*\* DIAGONAL ANGLES MUST BE INSTALLED  
WITH THE NON-BOLTED FACE UP.  
THIS MAY BE ON THE OPPOSITE SIDE OF THE  
SIDE PLATE THAN WHAT IS SHOWN IN THE DETAIL.

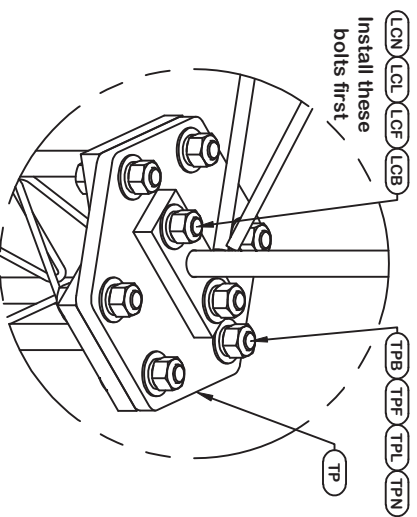
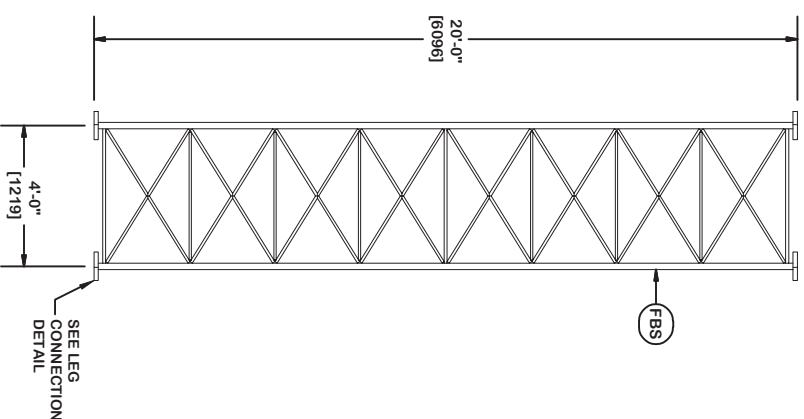


ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
BDL	3	194435	#12 LEG SECTION - 1-1/4" LEG - 5/8" BRACE - 1" BOL	538.750	1616.250
LD	6	278572	U-6 LOWER DIAGONAL - 2 1/2" x 2 1/2" x 1/4" ANGLE	43.620	261.720
AS	6	104291	RING FILL SPACER 1/2" THICK 1.049" HOLE	0.070	0.420
MN	6	312502	3/4"-10 HOT DIPPED GALVANIZED NUT	0.190	1.140
ML	6	312153	3/4" GALVANIZED LOCKWASHER	0.030	0.180
MB	6	160427	3/4"-10 X 3" A-325T BOLT WITH FULL THREAD	0.470	2.820
SL	24	312223	1" GALVANIZED LOCKWASHER	0.080	1.920
SN	24	312504	1"-9 HOT DIPPED GALVANIZED NUT	0.430	10.320
SB	18	172265	1"-8 X 2-1/4" A-325 BOLT WITH 1-3/4" THREAD	0.840	15.120
UD	6	278571	U-6 UPPER DIAGONAL - 2 1/2" x 2 1/2" x 1/4" ANGLE	42.200	253.200
UH	3	268778	U-6 TAPERED UPPER HORIZONTAL ANGLE (TYPE 1) - 3" x	8.290	24.870
HB	6	225017	1"-8 X 3-1/2" A-325T BOLT WITH FULL THREAD	1.090	6.540
LCB	18	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	24.840
LCF	18	312222	1" GALVANIZED FLAT WASHER (F-436)	0.140	2.520
LCL	18	312223	1" GALVANIZED LOCKWASHER	0.080	1.440
LCN	18	312504	1"-9 HOT DIPPED GALVANIZED NUT	0.430	7.740
Total Wt				2231.04 lb	[1012.91 kg]



<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">REV</th> <th style="width: 50%;">DESCRIPTION OF REVISIONS</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <th colspan="2">REVISION HISTORY</th> </tr> <tr> <th>CPD</th> <th>BY</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	REV	DESCRIPTION OF REVISIONS			REVISION HISTORY		CPD	BY	DATE				<p style="text-align: center;">SITE</p> <p style="text-align: center;"><b>KY-1049 CK CLIFTY APC TOWERS U 26 X 250'</b></p> <p style="text-align: center;">COPYRIGHT 2013</p>	<p style="text-align: center;">DESCRIPTION</p> <p style="text-align: center;"><b>SECTION U-6.0 (200' - 220' ELEVATION)</b></p>
REV	DESCRIPTION OF REVISIONS													
REVISION HISTORY														
CPD	BY	DATE												
<p style="font-size: small;">PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.</p>	<p style="text-align: center;">STRUCTURE APPROVAL</p> <p style="text-align: center;"><b>SAN</b></p> <p style="text-align: center;">6/20/2022</p>	<p style="text-align: center;">FOUNDATION APPROVAL</p> <p style="text-align: center;"> </p>												
<p style="text-align: center;">DWG. NO.</p> <p style="text-align: center;"><b>293342T</b></p>	<p style="text-align: center;">ENG. FILE NO.</p> <p style="text-align: center;"><b>553842</b></p>	<div style="text-align: center;"> <p style="font-weight: bold; font-size: 1.2em;">Valmont</p> <p style="font-weight: bold; font-size: 1.2em;">STRUCTURES</p> </div> <p style="font-size: small; text-align: center;">1-877-467-4763 Plymouth, IN 1-800-547-2151 Salem, OR</p>												
<p style="font-size: small;">13 OF 15 PAGE</p>														

ORIENT SECTION WITH PIN STAMP  
TOWARD BOTTOM OF TOWER



**LEG TO LEG CONNECTION**  
The Transition Plate **MUST** be attached to the upper section before installing onto lower section

**PARTS LIST**

ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
FBS	1	246847	#48 SECT W/ FOOTPADS 1 3/4" - 1 1/2" LEG 7/8" BRAC	1190.590	1190.590
TP	3	209461	TRANSITION PLATE (6) 1" BOLTS TO (2) 1 1/4" BOLTS	83.780	251.340
TPB	18	222016	1"-3 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	24.840
TPF	18	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	2.520
TPL	18	312223	1" GALVANIZED LOCKWASHER	0.080	1.440
TPN	18	312504	1"-3 HOT DIPPED GALVANIZED NUT	0.430	7.740
LCB	6	222022	1-1/4"-7 X 5-1/2" A-325 BOLT WITH 2" THREAD	2.530	15.180
LCF	12	312282	1-1/4" GALVANIZED FLAT WASHER (F436)	0.130	1.560
LCL	6	312283	1-1/4" GALVANIZED LOCKWASHER	0.150	0.900
LCN	6	312507	1-1/4"-7 HOT DIPPED GALVANIZED NUT	0.730	4.380
Total Wt				1500.49 lb [681.24 kg]	

SITE

KY-1049 CK CLIFTY  
APC TOWERS  
U 26 X 250'

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PROPRIETARY NOTE:  
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DESCRIPTION

SECTION V-4.0 (220' - 240' ELEVATION)

STRUCTURE APPROVAL  
SAN 6/20/2022

FOUNDATION APPROVAL

ENG. FILE NO.

553842

DWG. NO.

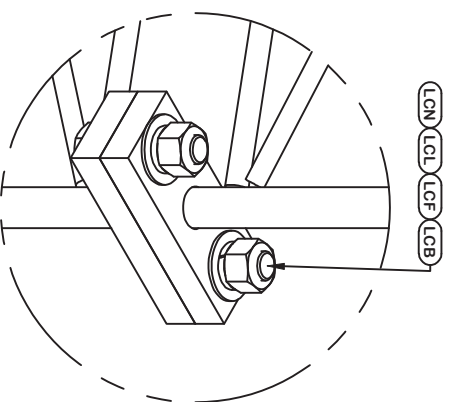
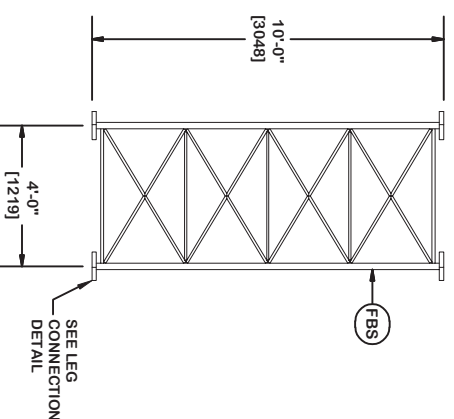
293342T

**Valmont**  
STRUCTURES

1-877-467-4763 Plymouth, IN  
1-800-547-2151 Salem, OR

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE

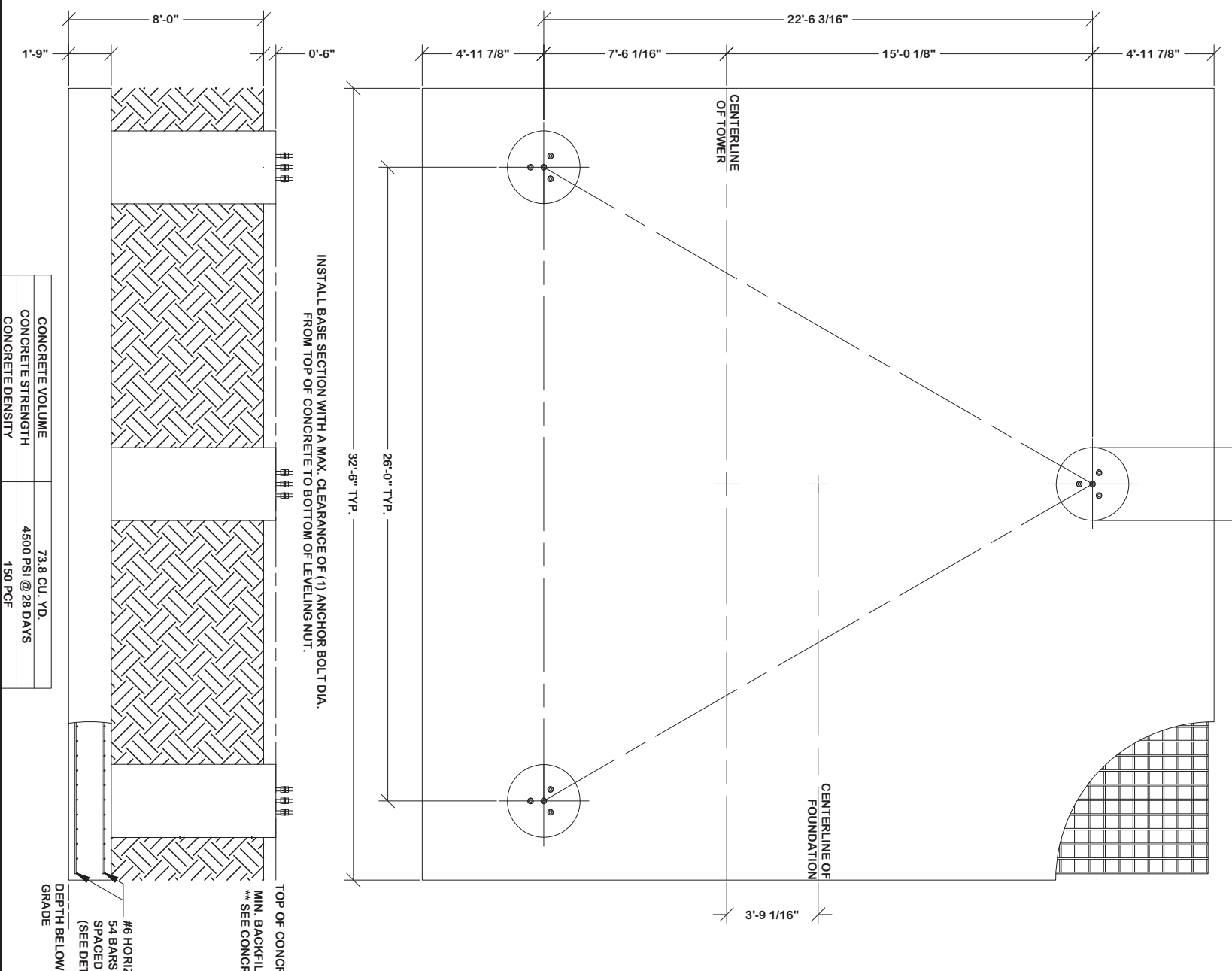
PARTS LIST					
ITEM	QTY	PART NO.	PART DESCRIPTION	UNIT WT.	NET WT.
FBS	1	233466	#48 SECT W/ FOOTPADS 1-1/4" LEG 3/4" BRACE 10'-0"	445.990	445.990
LCB	6	222016	1"-8 X 4-3/4" A-325 BOLT WITH 1-3/4" THREAD	1.380	8.280
LCF	6	312222	1" GALVANIZED FLAT WASHER (F436)	0.140	0.840
LCL	6	312223	1" GALVANIZED LOCKWASHER	0.080	0.480
LCN	6	312504	1"-8 HOT DIPPED GALVANIZED NUT	0.430	2.580
Total Wt				458.17 lb [208.01 kg]	



LEG TO LEG CONNECTION

<p>REV</p>	<p>DESCRIPTION OF REVISIONS</p>	<p>CPD</p>	<p>BY</p>	<p>DATE</p>
<p>REVISION HISTORY</p>				
<p>PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.</p>				
<p>COPYRIGHT 2013</p>				
<p>SITE</p> <p><b>KY-1049 CK CLIFTY</b> <b>APC TOWERS</b> <b>U 26 X 250'</b></p>				
<p>DESCRIPTION</p> <p><b>SECTION V-4.0 (240' - 250' ELEVATION)</b></p>				
<p>STRUCTURE APPROVAL</p> <p><b>SAN</b></p> <p>6/20/2022</p>		<p>FOUNDATION APPROVAL</p>		
<p>ENG. FILE NO. <b>553842</b></p> <p>DWG. NO. <b>293342T</b></p>				
<p><b>Valmont</b> STRUCTURES</p> <p>1-877-467-4763 Plymouth, IN 1-800-547-2151 Salem, OR</p>				
<p>15 OF 15 PAGE</p>				

3'-0" DIA. ROUND OR SQUARE PIER



CONCRETE VOLUME	73.8 CU. YD.
CONCRETE STRENGTH	4500 PSI @ 28 DAYS
CONCRETE DENSITY	150 PCF

**ATTENTION CONTRACTOR INSTALLING ANCHOR BOLTS!**  
USE 1 1/2" DIA. ANCHOR BOLTS SUPPLIED BY VALMONT. INSTALL ALL ANCHOR BOLTS WITH LONGER THREADED ENDS EXPOSED. VERIFY THE PART NUMBER AND SIZE FOR ALL COMPONENTS ON THIS PAGE. IF THERE ARE ANY DISCREPANCIES, PLEASE NOTIFY VALMONT/PIROD, INC. FROM INSTALLATION!

PARTS LIST

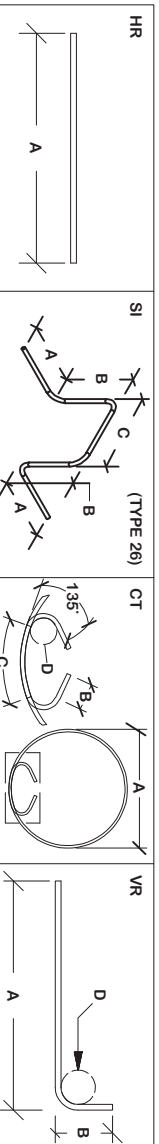
ITEM	QTY	PART DESCRIPTION	UNIT WT.	NET WT.
1	12	1 1/2" DIA. x 80" LONG ANCHOR BOLT - 113823	46.66	559.96
2	3	EMBEDMENT PLATE - 281280	19.88	59.63

- TEMPLATE INSTALLATION NOTES:**
1. THE PROVIDED TEMPLATE ASSEMBLY MUST BE USED TO ENSURE ACCURATE ANCHOR BOLT LOCATION & INSTALLATION ANGLE (BASE LEG REFERENCE ANGLE 0.00°)
  2. USING THE TEMPLATE ASSEMBLY, THE CENTER OF EACH ANCHOR BOLT GROUP MUST BE LOCATED WITHIN (+/- .3") OF THE CENTER OF THE REBAR CAGE SHOWN ON THIS PLAN. FAILURE TO USE THE FULLY ASSEMBLED ANCHOR BOLT TEMPLATE WILL CAUSE MISALIGNMENT OF THE ANCHOR BOLT GROUPS. INCORRECTLY LOCATED ANCHOR BOLT GROUPS WILL CAUSE DIFFICULTY OR ALIGNMENT ISSUES DURING TOWER CONSTRUCTION. IN MORE SEVERE CASES, THIS CAN MAKE IT IMPOSSIBLE TO ERECT THE TOWER.
  3. THE ENTIRE TEMPLATE ASSEMBLY MUST BE LEVEL +/- .1".
  4. INSTALLED TEMPLATE CLEARANCE 2" MIN - 4" MAX T.O.C. TO BOTTOM OF LEVELING NUT.
  5. MUST USE TEMPLATE ASSEMBLY# 281407
- \*\*CONCRETE NOTES**
1. BACKFILL MAY NOT BE SLOPED
  2. BACKFILL MUST NOT EXCEED THE TOP OF THE CONCRETE
  3. CONTRACTOR MUST VERIFY THAT THE MINIMUM FILL HEIGHT CAN BE ACHIEVED PRIOR TO INSTALLING REBAR OR CONCRETE.
  4. IF MINIMUM FILL HEIGHT CANNOT BE ACHIEVED THE CONTRACTOR MUST CONTACT VALMONT PRIOR TO REBAR OR CONCRETE PLACEMENT.

- FOUNDATION NOTES:**
1. SOIL AS PER REPORT BY SOIL REPORT BY COLLIER ENGINEERING CO., INC. DATED 06/20/2022
  2. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR NOT PERMITTED.
  3. A COLD JOINT IS PERMISSIBLE UPON CONSULTATION WITH VALMONT. ALL COLD JOINTS SHALL BE COATED WITH BONDING AGENTS PRIOR TO SECOND POUR.
  4. ALL FILL SHOULD BE PLACED IN LOOSE LEVEL LIFTS OF NO MORE THAN 9" THICK. FILL MATERIALS SHOULD BE CLEAN AND FREE OF ORGANIC AND FROZEN MATERIALS OR ANY OTHER DELETERIOUS MATERIALS. COMPACT FILL TO 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698. MIN. BACKFILL DENSITY = 110 PCF.
  5. BENDING, STRAIGHTENING OR REALIGNING (HOT OR COLD) OF THE ANCHOR BOLTS BY ANY METHOD IS PROHIBITED.
  6. GROWN TOP OF FOUNDATION FOR PROPER DRAINAGE.
  7. THE ON-SITE GEOTECHNICAL ENGINEER SHALL CONFIRM THAT THE INSITU SOIL STRENGTHS MEET OR EXCEED THOSE PARAMETERS GIVEN IN THE SOIL REPORT.
  8. GRADE THE SITE TO DRAIN AWAY FROM FOUNDATION.
  9. PROVISIONS SHALL BE MADE TO PROTECT THE SUBGRADE FROM EXCESS MOISTURE.
  10. SEE GEOTECHNICAL REPORT FOR ADDITIONAL CONSTRUCTION RECOMMENDATIONS, BACKFILL COMPACTION DETAIL, SUBGRADE PREPARATION, ETC.

REBAR DETAIL

BAR	QTY	SIZE	UNBENT LENGTH	A	B	C	D	DIAMETER	UNIT WT. (LBS)	NET WT. (LBS)
HR	216	#6	32"	32"				48.17	10405.32	
SI	100	#4	5'-4 3/4"	1'-3 1/4"	1'	1'-5 1/4"		3.61	360.60	
CT	39	#4	9'-6 1/4"	2'-6"	3"	7 1/4"	3"	6.36	247.98	
VR	39	#8	8'-11 3/4"	7'-10 1/2"	1'-4"		6"	23.97	935.00	

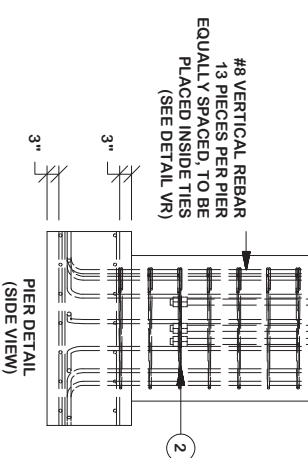


REBAR NOTES: ALL REINFORCING BARS MUST CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. STANDARDS TO BE EQUALLY SPACED BETWEEN GRIDS - 3'-4 3/4" (TYP)

Rebar Class B Splice Length

Bar Size (in)	Bar Size (in)	Bar Size (in)
3	19	8
4	25	9
5	31	10
6	37	11
7	53	86

**CIRCULAR TIE NOTES:**  
PLACE CIRCULAR TIES SO HOOKS ON ADJACENT TIES ARE APPROX. 180° APART. PLACE ONE TIE AT TOP OF REBAR GRID AND ONE TIE AT TOP OF PIER. EQUALLY SPACE TIES ALONG THE PIER, WITH ONE BAR PLACED 4" DOWN FROM THE TOP TIE. 13 TIES PER PIER (SEE DETAIL CT)



06-20-2022

SITE

KY-1049 CK CLIFTY  
APC TOWERS  
U 26 X 250'

DESCRIPTION

SHALLOW MAT WITH RAISED PIERS  
TOWER FOUNDATION #1

**Valmont**  
STRUCTURES

ENG. FILE NO.

553842

DWG. NO.

293342F

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			

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STRUCTURE APPROVAL

J S 6/20/2022

FOUNDATION APPROVAL

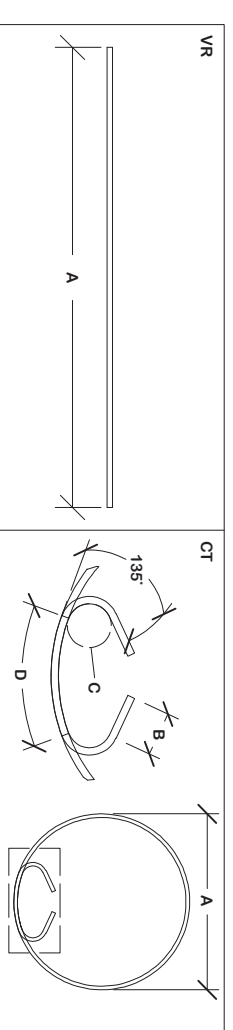
REBARANCHOR STEEL TABLE

ITEM	QTY	PART DESCRIPTION	UNIT WT.	NET WT.
1	12	1 1/2" DIA. x 80" LONG ANCHOR BOLT - 113823	46.66	559.96
2	3	EMBEDMENT PLATE - 281260	19.88	59.63

- FOUNDATION NOTES:
- SOIL AS PER REPORT BY SOIL REPORT BY COLLIER ENGINEERING CO., INC. DATED 06/20/2022
  - REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR NOT PERMITTED.
  - A COLD JOINT IS PERMISSIBLE UPON CONSULTATION WITH VALMONT. ALL COLD JOINTS SHALL BE COATED WITH BONDING AGENTS PRIOR TO SECOND POUR.
  - ALL REINFORCING STEEL TO BE FORMED INTO A CAGE PRIOR TO SETTING INTO POSITION IN THE EXCAVATED PIER.
  - PERMANENT STEEL CASING SHALL NOT BE USED WITHOUT CONSENT FROM FOUNDATION DESIGNERS.
  - BENDING, STRAIGHTENING OR REALIGNING (HOT OR COLD) OF THE ANCHOR BOLTS BY ANY METHOD IS PROHIBITED.
  - GROWN TOP OF FOUNDATION FOR PROPER DRAINAGE.
  - THE ON-SITE GEOTECHNICAL ENGINEER SHALL CONFIRM THAT THE INSITU SOIL STRENGTHS MEET OR EXCEED THOSE PARAMETERS GIVEN IN THE SOIL REPORT.
  - SEE GEOTECHNICAL REPORT FOR ADDITIONAL CONSTRUCTION RECOMMENDATIONS, BACKFILL COMPACTION DETAIL, SUBGRADE PREPARATION, ETC.
  - A TEMPORARY, FULL LENGTH STEEL CASING MAY BE REQUIRED DURING INSTALLATION.
  - THE PIER LENGTH SHOULD BE ADJUSTED IF SOIL AND BEDROCK CONDITIONS ARE ENCOUNTERED THAT VARY SIGNIFICANTLY FROM THOSE ENCOUNTERED AT THE BORING LOCATIONS

REBAR DETAIL

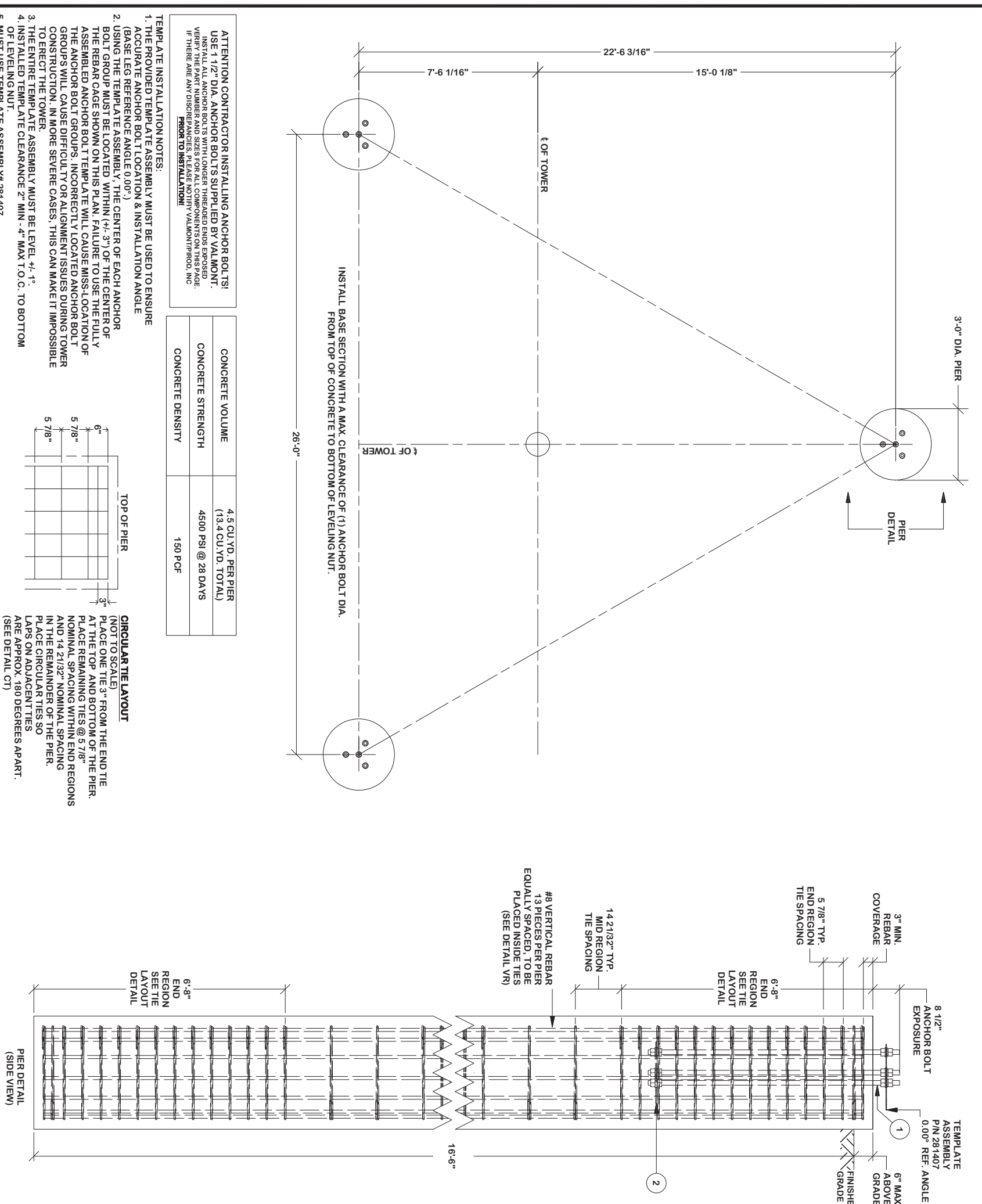
BAR	QTY	SIZE	UNBENT LENGTH	A	B	C	D	DIAMETER	UNIT WT.	NET WT.
CT	96	#4	9'-6 1/4"	2'-6"	3"	3"	7 1/4"	3"	6.36	610.41
VR	39	#8	16'-6"	16'-6"					44.16	1722.18



REBAR NOTES: ALL REINFORCING BARS MUST CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS

Rebar Class B Splice Length

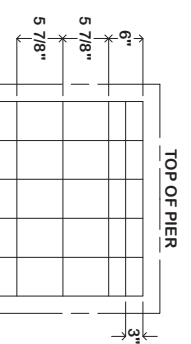
Bar Size	(in)	Bar Size	(in)
3	16	8	47
4	19	9	53
5	24	10	60
6	28	11	66
7	41		



ATTENTION CONTRACTOR INSTALLING ANCHOR BOLTS! USE 1 1/2" DIA. ANCHOR BOLTS SUPPLIED BY VALMONT. VERIFY THE PART NUMBER AND SIZES FOR ALL COMPONENTS ON THIS PAGE. IF THERE ARE ANY DISCREPANCIES, PLEASE NOTIFY VALMONT/PHROD, INC. PRIOR TO INSTALLATION!

CONCRETE VOLUME	4.5 CU. YD. PER PIER (13.4 CU. YD. TOTAL)
CONCRETE STRENGTH	4500 PSI @ 28 DAYS
CONCRETE DENSITY	150 PCF

- TEMPLATE INSTALLATION NOTES:
- THE PROVIDED TEMPLATE ASSEMBLY MUST BE USED TO ENSURE ACCURATE ANCHOR BOLT LOCATION & INSTALLATION ANGLE (BASE LEG REFERENCE ANGLE 0.00°)
  - USING THE TEMPLATE ASSEMBLY, THE CENTER OF EACH ANCHOR BOLT GROUP MUST BE LOCATED WITHIN (+/- .3") OF THE CENTER OF THE REBAR CAGE SHOWN ON THIS PLAN. FAILURE TO USE THE FULLY ASSEMBLED ANCHOR BOLT TEMPLATE WILL CAUSE MISS-LOCATION OF THE ANCHOR BOLT GROUPS. INCORRECTLY LOCATED ANCHOR BOLT GROUPS WILL CAUSE DIFFICULTY OR ALIGNMENT ISSUES DURING TOWER CONSTRUCTION. IN MORE SEVERE CASES, THIS CAN MAKE IT IMPOSSIBLE TO ERECT THE TOWER.
  - THE ENTIRE TEMPLATE ASSEMBLY MUST BE LEVEL +/- .1" OF LEVELING NUT.
  - INSTALLED TEMPLATE CLEARANCE 2" MIN - 4" MAX T.O.C. TO BOTTOM OF LEVELING NUT.
  - MUST USE TEMPLATE ASSEMBLY# 281407



(NOT TO SCALE) PLACE ONE THE 3" FROM THE END TIE AT THE TOP AND BOTTOM OF THE PIER. PLACE REMAINING TIES @ 5 7/8" NOMINAL SPACING WITHIN END REGIONS AND 14 21/32" NOMINAL SPACING IN THE REMAINDER OF THE PIER. PLACE CIRCULAR TIES SO LAPS ON ADJACENT TIES ARE APPROX. 180 DEGREES APART. (SEE DETAIL CT)

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			

SITE

KY-1049 CK CLIFTY APC TOWERS U 26 X 250'

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PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION

DRILLED PIERS TOWER FOUNDATION #2

STRUCTURE APPROVAL

FOUNDATION APPROVAL

J S 6/20/2022

ENG. FILE NO. 553842

DWG. NO. 293342F

1-877-467-4763 Plymouth, IN  
1-800-547-2151 Salem, OR

**valmont** STRUCTURES

06-20-2022

2 OF 2 PAGE

**UNIT BASE FOUNDATION SUMMARY**

**APC Towers  
KY-1049 CK Clifty**

**U- 26.0 250  
A- 553842**

V 4.7

Foundation Dimensions	
Pad width, <b>W:</b>	<b>32.50</b> ft
Depth, <b>D:</b>	<b>8.00</b> ft
Ext. above grade, <b>E:</b>	<b>0.50</b> ft
Pier diameter, <b>d<sub>i</sub>:</b>	<b>3.00</b> ft
Pad thickness, <b>T:</b>	<b>1.75</b> ft
Depth neglected, <b>N:</b>	<b>8.00</b> ft
Volume, <b>V<sub>o</sub>:</b>	<b>73.76</b> cy

Soil Information Per:
Soil Report by Collier Engineering Co., Inc. dated 05/20/2022

Material Properties	
Steel tensile str, <b>F<sub>y</sub>:</b>	<b>60000</b> psi
Conc. Comp. str, <b>F'<sub>c</sub>:</b>	<b>4500</b> psi
Conc. Density, <b>δ:</b>	<b>150</b> pcf
Clear cover, <b>cc:</b>	<b>3.00</b> in

Soil Parameters	
Soil unit weight, <b>γ:</b>	<b>110</b> pcf
Ultimate Bearing, <b>B<sub>c</sub>:</b>	<b>10.000</b> ksf
Cohesion, <b>C<sub>o</sub>:</b>	<b>0.000</b> ksf
Friction angle, <b>φ:</b>	<b>0.0</b> degrees
Ult. Passive P., <b>P<sub>p</sub>:</b>	<b>0.110</b> pcf
Base sliding, <b>μ:</b>	<b>0.20</b>
Seismic Design Cat.:	<b>D</b>
Water at:	<b>none</b> ft

Backfill Compaction	
Lift thickness:	<b>9</b> in
Compaction:	<b>95</b> %
Standard Proctor:	<b>ASTM D698</b>

Reinforcement Design	
pad rebar qty., <b>m<sub>p</sub>:</b>	<b>54</b> bars *
size, <b>s<sub>p</sub>:</b>	<b>6</b>
pier vertical qty, <b>m<sub>v</sub>:</b>	<b>13</b> verticals/pier
size, <b>s<sub>v</sub>:</b>	<b>8</b> 2.5' cage
Horizontal Rebar in top 6in of pier for temp. & shrinkage?:	<b>no</b> per TIA-222-H 9.6
pier tie qty., <b>m<sub>t</sub>:</b>	<b>13</b> ties/pier
size, <b>s<sub>t</sub>:</b>	<b>4</b> default hook

Anchor Steel Selection	
Part Number, P/N:	<b>113823</b> Dia = 1.6 Length = 80"

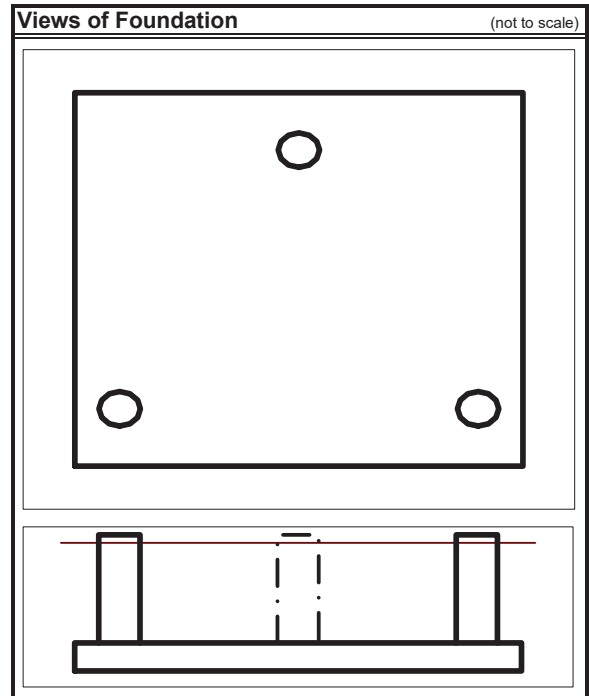
**Tower design conforms to the following:**

- \* International Building Code (IBC)
- \* ANSI TIA-222-H
- \* Building Code Requirements for Reinforced Concrete (ACI 318-14)

**Note:** The centroid of the tower is offset from the centroid of the foundation

\* Rebar to be equally spaced, both ways, top & bottom, for a total of 216 bars  
\* Use standees to support top rebar above bottom rebar in mat

Foundation Loading			
	stress ratio: 98.9%	mark up: 1.1%	
Shear (Per Leg), <b>S<sub>i</sub>:</b>	38.00 kips	x 1.01 =	38.42 kips
Shear (total), <b>S:</b>	55.00 kips	x 1.01 =	55.61 kips
Moment, <b>M:</b>	9247.00 ft-kips	x 1.01 =	9348.72 ft-kips
Compression/Leg, <b>C:</b>	435.00 kips	x 1.01 =	439.79 kips
Uplift/Leg, <b>U:</b>	383.00 kips	x 1.01 =	387.21 kips
Tower Weight, <b>W<sub>t</sub>:</b>	73.00 kips	=	73.00 kips



Digitally signed by Joseph P  
Jacobs  
Date: 2022-06-20  
09:36-04:00

**Additional Notes:**

- \* No foundation modifications listed.
- \* See attached "Foundation Notes" for further information.

## FOUNDATION NOTES

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- 1 THE ON-SITE GEOTECHNICAL ENGINEER SHALL CONFIRM THAT THE INSITU SOIL STRENGTHS MEET OR EXCEED THOSE PARAMETERS GIVEN IN THE SOIL REPORT.
- 2 GRADE THE SITE TO DRAIN AWAY FROM FOUNDATION.
- 3 PROVISIONS SHALL BE MADE TO PROTECT THE SUBGRADE FROM EXCESS MOISTURE.
- 4 SEE GEOTECHNICAL REPORT FOR ADDITIONAL CONSTRUCTION RECOMMENDATIONS, BACKFILL COMPACTION DETAIL, SUBGRADE PREPARATION, ETC.



**UNIT BASE FOUNDATION (DL - 1.2)**

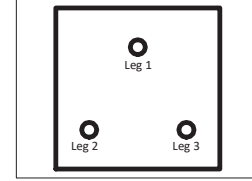
**APC Towers**  
**KY-1049 CK Clifty**

**U- 26.0 250**  
**A- 553842**

V 4.7

Reactions	stress ratio	98.9%	mark up:	1.1%
Shear (Per Leg), <b>S<sub>i</sub></b> :	38.00 kips	x 1.01 =	38.42 kips	
Shear (total), <b>S</b> :	55.00 kips	x 1.01 =	55.61 kips	
Moment, <b>M</b> :	9247.00 ft-kips	x 1.01 =	9348.72 ft-kips	
Compression / leg, <b>C</b> :	435.00 kips	x 1.01 =	439.79 kips	
Uplift / leg, <b>U</b> :	383.00 kips	x 1.01 =	387.21 kips	
Tower weight, <b>W<sub>t</sub></b> :	73.00 kips	=	73.00 kips	

Soil per: Soil Report by Collier Engineering Co., Inc. dated 05/20/2022



**Physical Parameters:**

Concrete volume:	$V = T * W^2 + 3 * (d^2 / 4 * \pi) * (D + E - T)$	V =	73.8	cy
Concrete weight:	$W_c = V * \delta$	$W_c =$	298.7	kips
Soil weight:	$W_s = (D - T) * (W^2 - 3 * (d^2 / 4 * \pi)) * \gamma$	$W_s =$	711.6	kips
Total weight:	$P = W_c + W_s + W_t$	P =	1083.33	kips

**Passive Pressure:**

<i>P<sub>p</sub></i> coefficient:	$K_p = \text{TAN}(45 + \phi / 2)^2$	$K_p =$	1.000	
	$P_{pn} = K_p * \gamma * N + 2 * C_o * \sqrt{(K_p)}$	$P_{pn} =$	0.880	ksf
	$P_{pt} = K_p * \gamma * (D - T) + 2 * C_o * \sqrt{(K_p)}$	$P_{pt} =$	0.688	ksf
	$P_{pb} = K_p * \gamma * D + 2 * C_o * \sqrt{(K_p)}$	$P_{pb} =$	0.880	ksf
	$P_{ptop} = \text{IF}(N < (D - T), P_{pt}, P_{pn})$	$P_{ptop} =$	0.9	ksf
	$P_p' = (P_{ptop} + P_{pb}) / 2$	$P_p' =$	0.880	ksf
Shear area:	$T_{pp} = 0$	$T_{pp} =$	0.0	ft
	$A_{pp} = T_{pp} * W$	$A_{pp} =$	0.00	ft <sup>2</sup>
Shear Capacity: <i>φ</i> = 0.75	$S_{actual} = (P_p' * A_{pp} + \mu * P) * \phi_r$	$S_{actual} =$	162.499	kips
<b>Check</b> $S_{actual} = 162.50$ kips $\geq$ S = 55.61 kips <b>OK</b>				

**Overturning Moment Resistance at Toe:**

Wt of soil wedge:	$W_{sw} = D * (D * \text{TAN}(\phi)) / 2 * W * \gamma$	$W_{sw} =$	0.0	kips
Dist. from leg to edge:	$O = (W - 0.866 * w) / 2$	O =	4.992	ft
Additional offset of Wt:	$O_a = W / 2 - (1 / 3 * 0.866 * w + O)$	$O_a =$	3.753	ft
Resisting moments:	$M_{wt} = P * 0.9 * W / 2 - W_t * 1.2 * O_a$	$M_{wt} =$	15514.96	ft-kips
	$M_{rp} = P_p' * A_{pp} * (D - N) / 3 * \phi_r$	$M_{rp} =$	0.00	ft-kips
	$M_{rsw} = W_{sw} * (W + D * \text{TAN}(\phi) / 3) * \phi_r$	$M_{rsw} =$	0.00	ft-kips
Total resisting: <i>φ</i> = 0.75	$M_{rt} = (M_{wt} + M_{rp} + M_{rsw})$	$M_{rt} =$	15514.96	ft-kips
Total overturning:	$M_o = M + S * (D + E)$	$M_o =$	9821.36	ft-kips
<b>Check</b> $M_{rt} = 15514.96$ ft-kips $\geq$ $M_o = 9821.36$ ft-kips <b>OK</b>				

**Bearing Resistance due to Pressure Distribution**

Area of mat:	$\text{area} = W^2$	area =	1056.3	ft <sup>2</sup>
Section modulus:	$SM = W^3 / 6$	SM =	5721.4	ft <sup>3</sup>
Factored total weight:	$P' = (W_t / 1.2 + W_c + W_s) * 1.2$	P' =	1285.4	kip
Pressure exerted:	$P_{pos} = P' / \text{area} + M_o / SM$	$P_{max} =$	2.934	ksf
	$P_{neg} = P' / \text{area} - M_o / SM$	$P_{min} =$	-0.500	ksf

**Note: The stress resultant is NOT within the kern. Bearing area has been adjusted below.**

Load eccentricity:	$e_c = M_o / P'$	$e_c =$	7.64	ft
In Parallel Direction	$P_{adj} = 2 * P' / (3 * W * (W / 2 - e_c))$	$P_{adj} =$	3.1	ksf
In Diagonal Direction	$P_{adj\_diag}$ see Diagonal Bearing Sheet (attached)	$P_{adj\_diag} =$	3.1	ksf
Adj. applied pressure:	$q_a = \text{IF}(P_{neg} \geq 0, P_{pos}, P_{adj})$	$q_a =$	3.063	ksf
Overburden Pressure: (factored) <i>φ</i> = 0.75	$q_{obp} = D * \gamma$	$q_{obp} =$	0.880	ksf
<b>Check</b> $q_a - q_{obp} = 2.183$ ksf $\leq$ $B_c * \phi_r = 7.500$ ksf <b>OK</b>				

**Concrete Shear Strength:**

One way beam action at *d<sub>v</sub>* from tower

Effective depth:	$d_c = T - cc - db_p / 2$	$d_c =$	17.625	in
Distance from edge of pad to pier face:	$d' = O - d_i / 2$	$d' =$	3.492	ft
Distance from edge of pad to dc	$d'' = d' - dc$	$d'' =$	2.023	ft
Bearing Pressure Slop	$q_s = q_a / W_{eff}$	$q_s =$	0.119	kcf
Required shear:	$V_{n1} = [(q_a - d'' * q_s) + (d'' * q_s / 2)] * d'' * W - [1.2 * (D - T) * \gamma * d'' * W]$	$V_{n1} =$	139.25	kips
Available shear: [ACI 22.5.5.1] <i>φ</i> = 0.75 [ACI 21.2.1]	$V_{c1} = \phi_s * 2 * \lambda * \sqrt{f'c} * W * dc$	$V_{c1} =$	691.66	kips
<b>Check</b> $V_{c1} = 691.66$ kips $\geq$ $V_{n1} = 139.25$ kips <b>OK</b>				

Two way beam action at  $d_1 / 2$  from tower (ACI 22.6.5)- Compression

Eq. Square Column (ACI 8.10.1.3 & 22.6.4.1.2)	$d_{eq} = d_i / 2 * \sqrt{\pi}$	deq = 31.90 in
Mat effective width in bearing	$W_{eff} = \text{Min}(W, 3 * (W / 2 - ec))$	$W_{eff} = 25.83$ ft
Ratio of long side to short side of Pier	$\beta = 1$ (for square or round piers)	$\beta = 1.00$
Length:	$b_1 = dc / 2 + deq / 2 + (W - w) / 2$	$b_1 = 63.76$ in
Width:	$b_2 = (dc + deq + W - \text{SIN}(60) * w) / 2$	$b_2 = 84.66$ in
Perimeter:	$b_o = b_1 + b_2$	$b_o = 148.43$ in
Centroid:	$c = (b_1 * dc * b_1 / 2) / (b_1 * dc + b_2 * dc)$	$c = 13.697$ ft
Eccentricity:	$e_c = (deq + dc) / 2 - c$	$e_c = 11.0680813$ in
Polar MOI	$J_c = [(dc * b_1^3 / 12) + (b_1 * dc^3 / 12) + (b_1 * dc * (b_1 / 2 - c)^2)] + (b_1$	$J_c = 1.061E+06$ in <sup>4</sup>
flexure:	$\gamma_f = 1 / (1 + 2 / 3 * \sqrt{(b_1 / b_2)})$	$\gamma_f = 0.63$
eccentricity of shear:	$\gamma_v = 1 - \gamma_f$	$\gamma_v = 0.37$
Bearing Pressure Slope:	$q_s = qa / W_{eff}$	$q_s = 0.119$ kcf
Average Bearing Pressure:	$q_{a,pl} = ((W_{eff} - b_1) * q_s + qa) / 2$	$q_{a,pl} = 2.748$ ksf
Shear Force at Section:	$V_{n, pier} = 0$	$V_{n, pier} = 336.777$ kips
Slab Moment:	$M_{sc} = Sl * (D - T + E) + V_{n, pier} * e$	$M_{sc} = 569.94$ ft-kips
Required shear: $\phi_s = 0.75$ [ACI 21.2.1] = $(V_{n, pier} / b_0 * dc) + (\gamma_v * M_{sc} * c / J_c)$		161.08 psi
Available shear: [ACI 22.6.5.2] = $\phi_s * \text{MIN}(4 * \lambda * \sqrt{F_c}, (2 + (4/\beta)) * \lambda * \sqrt{F_c}, (2 + (as * dc / bo)) * \lambda * \sqrt{F_c})$		201.246 psi
	<b>Check</b> $V_{c2} = 201.25$ psi $\geq$	$V_{n2} = 161.08$ psi <b>OK</b>
Moment transferred: (Pier 1)	$M_{n1} = \gamma_f * M_{sc}$	$M_{n1} = 258.552$ ft-kips
Effective Beam Width:	$w_{eff1} = deq + 1.5 * T + \text{MIN}(1.5 * T, (W - w) * \text{SIN}(60) - deq) / 2$	$w_{eff1} = 7.909$ ft
	$A_{st, p1}' = M_{n1} / (0.9 * F_y * dc)$	$A_{st, p1}' = 3.260$ in <sup>2</sup>
	$a_{p1} = A_{st, p1}' * F_y / (\beta * F_c * w_{eff1})$	$a_{p1} = 0.555$ in
Required steel:	$A_{st, p, st1} = M_{n1} / (F_y * (dc - a_{p1} / 2))$	$A_{st, p, st1} = 2.981$ in <sup>2</sup>
Required steel in entire mat:	$A_{st, p, ste1} = A_{st, p, st1} * W / w_{eff1}$	$A_{st, p, ste1} = 12.250$ in <sup>2</sup>
Moment transferred: (Pier 2 or 3)	$M_{n2} = \gamma_f * M_{sc}$ (Controlling Case: Corner.)	$M_{n2} = 361.054$ ft-kips
Effective Beam Width:	$w_{eff2} = deq + 1.5 * T + \text{MIN}(1.5 * T, (W - w) - deq) / 2$	$w_{eff2} = 7.204$ ft
	$A_{st, p2}' = M_{n2} / (0.9 * F_y * dc)$	$A_{st, p2}' = 4.552$ in <sup>2</sup>
	$a_{p2} = A_{st, p2}' * F_y / (\beta * F_c * w_{eff2})$	$a_{p2} = 0.851$ in
Required steel:	$A_{st, p, st2} = M_{n2} / (F_y * (dc - a_{p2} / 2))$	$A_{st, p, st2} = 4.198$ in <sup>2</sup>
Required steel in entire mat:	$A_{st, p, ste2} = A_{st, p, st2} * W / w_{eff2}$	$A_{st, p, ste2} = 18.940$ in <sup>2</sup>
		Pier Controlling Case <b>Pier 2: Corner</b>
Pier Reinforcement Dia	$d_{iT} = d_i - 2 * cc - 2 * db_t - 1 * db_c$	$d_{iT} = 28.000$ in
Eq. Square Column (ACI 8.10.1.3 & 22.6.4.1.2)	$d_{eq, T} = d_{prebar} / 2 * \sqrt{\pi}$	$d_{eq, T} = 24.81$ in
Critical Section Length:	$b_{1, T} = deq_T + dc$	$b_{1, T} = 42.439$ in
Critical Section Perimeter:	$b_{o, T} = 4 * (deq + dc)$	$b_{o, T} = 169.76$ in
Polar MOI	$J_{c, T} = (b_{1, T}^3 * dc / 6) + (b_{1, T} * d^3 / 6) + (dc * b_{1, T} * b_{2, T}^2 / 2)$	$J_{c, T} = 936866.446$ in <sup>4</sup>
Shear Force at Section:	$V_{n, pier, T} = U$	$V_{n, pier, T} = 387.213$ kips
Required shear: $\phi_s = 0.75$ [ACI 21.2.1] = $(V_{n, pier, T} / b_{1, T} * dc) + (\gamma_v * M_{sc} * c_T / J_{c, T})$		157.610 psi
Available shear: [ACI 22.6.5.2] = $\phi_s * \text{MIN}(4 * \lambda * \sqrt{F_c}, (2 + (4/\beta)) * \lambda * \sqrt{F_c}, (2 + (as * dc / bo)) * \lambda * \sqrt{F_c})$		201.25 psi
	<b>Check</b> $V_{l2} = 201.25$ psi $\geq$	$V_{n12} = 157.61$ psi <b>OK</b>
<b>Column Compression Capacity:</b>		
Compression reaction: $\phi_c = 0.65$ [ACI 21.2.2.2]	$P_c = \phi_c * 0.85 * F_c * (d_i^2 / 4 * \pi)$	$P_c = 2530.7$ kips
	<b>Check</b> $P_c = 2530.69$ kips $\geq$	$C = 439.79$ kips <b>OK</b>
<b>Pier Reinforcement:</b>		
Cross-sectional area:	$A_g = d_i^2 * \pi / 4$	$A_g = 1017.88$ in <sup>2</sup>
Min. area of steel (pier): [ACI 10.6.1.1] & [ACI 10.3.1.2]	$A_{st, c} = A_g * 0.01$	$A_{st, c} = 10.18$ in <sup>2</sup>
Cage circle:	$d_o = d_i - 2 * cc - db_c - 2 * db_t$	$d_o = 28.00$ in
Rebar:	$s_c = 8$	$d_{b, c} = 1$ in
	$m_c = 13$	$A_{b, c} = 0.79$ in <sup>2</sup>
	$A_{s, c} = A_{b, c} * m_c$	$A_{s, c} = 10.27$ in <sup>2</sup>
	<b>Check</b> $A_{s, c} = 10.27$ in <sup>2</sup> $\geq$	$A_{st, c} = 10.18$ in <sup>2</sup> <b>OK</b>
Actual moment:	$M_{max} = (D - T + E) * S / 2$	$M_{max} = 187.67$ ft-kips
Pier moment capacity:	$M_{allow}$ per Maxmomnt.xls (see attached)	$M_{allow} = 189.94$ ft-kips
	<b>Check</b> $M_{allow} = 189.94$ ft-kips $\geq$	$M_{max} = 187.67$ ft-kips <b>OK</b>
Bar separation:	$B_{s, c} = (d_o * \pi) / m_c - db_c$	$B_{s, c} = 5.77$ in
	<b>Check</b> $17 \geq$ $B_{s, c} = 5.77$ in $\geq$	$4"$ <b>OK</b>

**Vertical Rebar Development Length:**

Reinforcement location: [ACI 25.4.2.4]	$\psi_{l_c}$ = if the space under the rebar > 12 in, use 1.3, else use 1.0	$\psi_{l_c}$ = 1.3
Epoxy coating: [ACI 25.4.2.4]	$\psi_{e_c}$ = if epoxy-coated bars are not used, use 1.0; but if epoxy-coated bars are used, then if $B_s < 6 * db$ or $cc < 3 * db$ , use 1.5, else 1.2	$\psi_{e_c}$ = 1.0
Max term: [ACI 25.4.2.4]	$\psi_l \psi_{e_c}$ = the product of $\psi_l$ & $\psi_{e_c}$ , need not be taken larger than 1.7	$\psi_l \psi_{e_c}$ = 1.3
Reinforcement size: [ACI 25.4.2.4]	$\psi_{s_c}$ = if the bar size is 6 or less, then use 0.8, else use 1.0	$\psi_{s_c}$ = 1
Light weight concrete: [ACI 25.4.2.4]	$\lambda_c$ = if lightweight concrete is used, 0.75, else use 1.0	$\lambda_c$ = 1.0
Spacing/cover: [ACI 25.4.2.4]	$c_c$ the smaller of: half the bar spacing or the concrete edge distance	$c_c$ = 3.38 in
Transverse bars: [ACI 25.4.2.3]	$k_{tr_c}$ = 0 in (per simplification)	$k_{tr_c}$ = 0 in
Max term: [ACI 25.4.2.3]	$c_c' = \text{MIN}(2.5, (c_c + k_{tr_c}) / db_c)$	$c_c'$ = 2.500
Excess reinforcement: [ACI 25.4.10.1]	$R_c = 1$ (excess reinforcement reduction is not used)	$R_c$ = 1.00
Development (tensile): [ACI 25.4.2.2]	$L_{dt_c} = (3 / 40) * (F_y / \lambda_c * \sqrt{F_c}) * (\psi_l \psi_{e_c} * \psi_{s_c} * R_c / c_c') * db_c$	$L_{dt_c}$ = 34.88 in
Minimum length: [ACI 25.4.2.1]	$L_{d_{min}} = 12$ inches	$L_{d_{min}}$ = 12.0 in
Development length:	$L_{dt_c} = \text{MAX}(L_{d_{min}}, L_{dt_c})$	$L_{dt_c}$ = 34.88 in
Confining Reinforcement: [ACI 25.4.9.3]	$\psi_{r_c} = 1$	$\psi_{r_c}$ = 1.00
Development (comp.): [ACI 25.4.9.2]	$L_{dc_c} = F_y * \psi_{r_c} * db_c * R_c / (50 * \lambda_c * \sqrt{F_c})$	$L_{dc_c}$ = 17.89 in
	$L_{dc_c}'' = 0.0003 * db_c * F_y * \psi_{r_c} * R_c$	$L_{dc_c}''$ = 18.00 in
Development length:	$L_{dc_c} = \text{MAX}(8, L_{dc_c}', L_{dc_c}'')$	$L_{dc_c}$ = 18.00 in
Length available in pier:	$L_{vc} = D - T + E - cc$	$L_{vc}$ = 78.0 in
	<b>Check</b> $L_{vc} = 78.0$ in $\geq$ $L_{dt_c} = 34.9$ in <b>OK</b>	
	<b>Check</b> $L_{vc} = 78.0$ in $\geq$ $L_{dc_c} = 18.0$ in <b>OK</b>	
Length available in pad:	$L_{vp} = T - cc$	$L_{vp} = 18.0$ in
	<b>Check</b> $L_{vp} = 18.0$ in $\geq$ $L_{dt_c} = 34.9$ in <b>HOOKS</b>	
	<b>Check</b> $L_{vp} = 18.0$ in $\geq$ $L_{dc_c} = 18.0$ in <b>OK</b>	

**Vertical Rebar Hook Ending:**

Bar size & clear cover: [ACI 25.4.3.2]	$\psi_{l_h}$ = if the bar size $\leq 11$ and side $cc \geq 2.5"$ , use 0.7, else use 1.0	$\psi_{l_h}$ = 0.7
Epoxy coating: [ACI 25.4.3.1]	$\psi_{e_h}$ = if epoxy-coated bars are used, use 1.2, else use 1.0	$\psi_{e_h}$ = 1.0
Light weight concrete: [ACI 25.4.3.1]	$\lambda_h$ if lightweight concrete is used, 0.75, else use 1.0	$\lambda_h$ = 1.0
Confining Reinforcement: [ACI 25.4.3.2]	$\psi_{r_h} = 1$	$\psi_{r_h}$ = 1.00
Development (hook): [ACI 25.4.3.1]	$L_{dh}' = (F_y * \psi_{l_h} * \psi_{e_h} * \psi_{r_h} * R_c / (50 * \lambda_h * \sqrt{F_c})) * db_c$	$L_{dh}'$ = 12.5 in
Minimum length: [ACI 25.4.3.1]	$L_{dh_{min}}$ the larger of: $8 * db$ or 6 in	$L_{dh_{min}}$ = 8.0 in
Development length:	$L_{dh} = \text{MAX}(L_{dh_{min}}, L_{dh}')$	$L_{dh}$ = 12.5 in
	<b>Check</b> $L_{vp} = 18.0$ in $\geq$ $L_{dh} = 12.5$ in <b>OK</b>	
Hook tail length:	$L_{h_{tail}} = 12 * db$ beyond the bend radius	$L_{h_{tail}}$ = 16.0 in
Length available in pad:	$L_{h_{pad}} = (W - w' - d_i) / 2$	$L_{h_{pad}}$ = 21 in
	<b>Check</b> $L_{h_{pad}} = 21.0$ in $\geq$ $L_{dh_{tail}} = 16.0$ in <b>OK</b>	

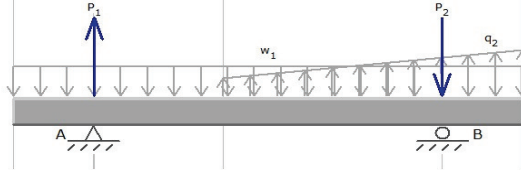
**Pier Ties:**

Minimum size: [ACI 25.7.2.2]	$s_{t\_min} = IF(s_c \leq 10, 3, 4)$	$s_{t\_min} = 3$
z factor:	$z = 0.5$ if the seismic zone is less than 2, else 1.0	$z = 1$
Tie parameters:	$s_t = 4$ $m_t = 13$	$d_{b\_t} = 0.5$ in $A_{b\_t} = 0.2$ in <sup>2</sup>
Allowable tie spacing:		
per vertical rebar [ACI 25.7.2.1] & [ACI 18.4.3.3]	$B_{s\_t\_max1} = 8 * db_c$	$B_{s\_t\_max1} = 8$ in
per tie size [ACI 25.7.2.1] & [ACI 18.4.3.3]	$B_{s\_t\_max2} = 24 * db_t$	$B_{s\_t\_max2} = 12$ in
per pier diameter [ACI 25.7.2.1] & [ACI 18.4.3.3]	$B_{s\_t\_max3} = di / 4$	$B_{s\_t\_max3} = 9$ in
per seismic zone [ACI 25.7.2.1] & [ACI 18.4.3.3]	$B_{s\_t\_max4} = 12"$ in active seismic zones, else 18"	$B_{s\_t\_max4} = 12$ in
	$B_{s\_t\_max} = \text{MIN}(B_{s\_t\_max1}, B_{s\_t\_max2}, B_{s\_t\_max3}, B_{s\_t\_max4})$	$B_{s\_t\_max} = 8$ in
	$m_{t\_min} = (D - T + E) / B_{s\_t\_max} + 2$	$m_{t\_min} = 12.1$
	<b>Check</b> $m_t = 13.0$ $\geq$ $m_{t\_min} = 12.1$ <b>OK</b>	

**Anchor Steel:**

A/S parameters:	$P_{as} = 113823$ $d_{as} = 1.5$ in	$L_{as} = 80$ in $E_{as} = 71.50$ in
Development available:	$L_{das}$ per Anchor Bolts (see attached)	$L_{das} = 61.63$ in
Required development:	$L_{das\_min}$ per Anchor Bolts (see attached)	$L_{das\_min} = 34.88$ in
	<b>Check</b> $L_{das} = 61.63$ in $\geq$ $L_{das\_min} = 34.88$ in <b>OK</b>	
To bottom rebar grid:	$E_{as\_max} = D + E - cc - 2 * db_p$	$E_{as\_max} = 97.5$ in
	<b>Check</b> $E_{as} = 71.50$ in $\leq$ $E_{as\_max} = 97.5$ in <b>OK</b>	
To top rebar grid:	rebar @ = $D + E - T + cc$	rebar @ = 84.00 in
	<b>Check</b> $84 + 6$ in $\geq$ $E_{as} = 71.50$ in <b>or</b> $\leq$ 84 in <b>OK</b>	
Min. cage dia:	$d_{o\_min}$ per ansteel.xls (see attached)	$d_{o\_min} = 24.25$ in
	<b>Check</b> $d_o = 28.00$ in $\geq$ $d_{o\_min} = 24.25$ in <b>OK</b>	

**Pad Reinforcement:**



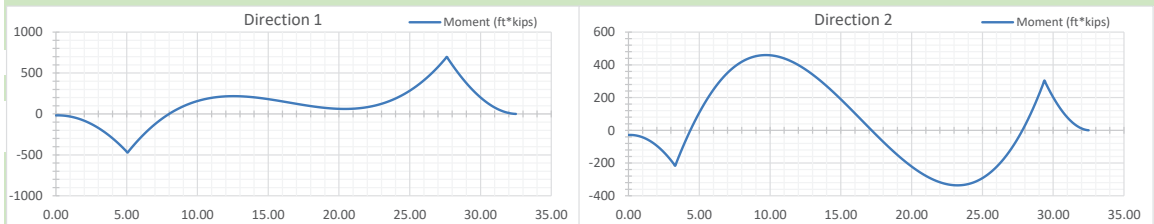
Effective length in bearing: 25.83 ft  
Effective length not bearing: 6.67 ft

**Direction 1**

Total Beam Length:	$B_{L1\_1} = W$	$B_{L1\_1} = 32.5$ ft
Location of Left Support:	$S_{L1\_1} = O$	$S_{L1\_1} = 4.992$ ft
Location of Right Support:	$S_{R1\_1} = W - O$	$S_{R1\_1} = 27.51$ ft

**Direction 2**

Total Beam Length:	$B_{L1\_2} = W$	$B_{L1\_2} = 32.5$ ft
Location of Left Support:	$S_{L1\_2} = (W - w) / 2$	$S_{L1\_2} = 3.25$ ft
Location of Right Support:	$S_{R1\_2} = S_{L1\_2} + w$	$S_{R1\_2} = 29.25$ ft



Direction 1:	$M_{max1\_1} = M_{max1\_1}$	$M_{max1\_1} = 697.36$ ft*kips
Direction 2:	$M_{max1\_2} = M_{max1\_2}$	$M_{max1\_2} = 459.67$ ft*kips
Diagonal:	$M_{max1\_diag} = M_{max1\_diag}$	$M_{max1\_diag} = 1536.81$ ft*kips
Max moment:	$M_{maxp} = \text{Max}(M_{max1\_1}, M_{max1\_2}, M_{max1\_diag})$	$M_{maxp} = 1536.81$ ft*kips
Required moment: $\phi_t = 0.9$ [ACI 21.2.2.2]	$M_n = M_{maxp} / \phi_t$	$M_n = 1707.571$ ft-kips

**Pad Reinforcement:**

	$b = \text{IF}(F_c \leq 4000, 0.85, \text{IF}(F_c >= 8000, 0.65, 0.85 - (F_c - 4000) * 0.05))$	$b = 0.825$	
Effective width:	$W_e = W$	$W_e = 32.500$	ft
	$A_{st_p}' = Mn / (0.9 * F_y * dc)$	$A_{st_p}' = 21.530$	in <sup>2</sup>
	$a_p = A_{st_p}' * F_y / (\beta * F_c * W_e)$	$a_p = 0.89$	in
Required steel:	$A_{st_p_{st}} = Mn / (F_y * (dc - a_p / 2)) * (W / W_e)$	$A_{st_p_{st}} = 19.880$	in <sup>2</sup>
Shrinkage:	$r_{sh} = \text{IF}(F_y >= 60000, 0.0018, 0.002)$	$r_{sh} = 0.0018$	
	$A_{st_p_{sh}} = \rho_{sh} * W * T / 2$	$A_{st_p_{sh}} = 7.371$	in <sup>2</sup>
	$A_{st_p} = \text{MAX}(A_{st_p_{st}}, A_{st_p_{sh}}, A_{st_p_{ste1}}, A_{st_p_{ste2}})$	$A_{st_p} = 19.880$	in <sup>2</sup>
Rebar:	$s_p = 6$ Equally spaced, top and bottom, both directions.	$d_{b_p} = 0.75$	in
	$m_p = 54$	$A_{b_p} = 0.44$	in <sup>2</sup>
	$A_{s_p} = A_{b_p} * m_p$	$A_{s_p} = 23.76$	in <sup>2</sup>
	<b>Check</b> $A_{s_p} = 23.76$ in <sup>2</sup> $\geq$ $A_{st_p} = 19.88$ in <sup>2</sup>		<b>OK</b>
Bar separation:	$B_{s_p} = (W - 2 * cc - db_p) / (m_p - 1) - db_p$	$B_{s_p} = 6.48$	in
	<b>Check</b> $17.25 \geq B_{s_p} = 6.48$ in $\geq 4$ "		<b>OK</b>

**Pad Development Length:**

Reinforcement location: [ACI 25.4.2.4]	$\psi_{t_p} = \text{if the space under the rebar} > 12 \text{ in, use } 1.3, \text{ else use } 1.0$	$\psi_{t_p} = 1.3$	
Epoxy coating: [ACI 25.4.2.4]	$\psi_{e_p} = \text{if epoxy-coated bars are not used, use } 1.0; \text{ but if epoxy-coated bars are used, then if } B_s < 6 * db \text{ or } cc < 3 * db, \text{ use } 1.5, \text{ else } 1.2$	$\psi_{e_p} = 1.0$	
Max term: [ACI 25.4.2.4]	$\psi_t \psi_{e_p} = \text{the product of } \psi_t \text{ \& } \psi_{e_p}, \text{ need not be taken larger than } 1.7$	$\psi_t \psi_{e_p} = 1.3$	
Reinforcement size: [ACI 25.4.2.4]	$\psi_{s_p} = \text{if the bar size is } 6 \text{ or less, then use } 0.8, \text{ else use } 1.0$	$\psi_{s_p} = 0.8$	
Light weight concrete: [ACI 25.4.2.4]	$\lambda_p = \text{if lightweight concrete is used, } 0.75, \text{ else use } 1.0$	$\lambda_p = 1.0$	
Spacing/cover: [ACI 25.4.2.4]	$c_p = \text{the smaller of: half the bar spacing or the concrete edge distance}$	$c_p = 3.38$	in
Transverse bars: [ACI 25.4.2.3]	$k_{tr_p} = 0 \text{ in (per simplification)}$	$k_{tr_p} = 0$	in
Max term: [ACI 25.4.2.3]	$c_p' = \text{MIN}(2.5, (c_p + k_{tr_p}) / db_p)$	$c_p' = 2.500$	
Excess reinforcement: [ACI 25.4.10.1]	$R_p = 1$ (excess reinforcement reduction is not used)	$R_p = 1.00$	
Development (tensile): [ACI 25.4.2.2]	$L_d = (3 / 40) * (F_y / \lambda_p * \sqrt{F_c}) * \psi_t \psi_{e_p} * \psi_{s_p} * R_p * db_p / c_p' u$	$L_{d_p}' = 20.9$	in
Minimum length: [ACI 25.4.2.1]	$L_{d_{min}} = 12 \text{ inches}$	$L_{d_{min}} = 12.0$	in
Development length:	$L_{dp} = \text{MAX}(L_{d_{min}}, L_{d_p}')$	$L_{dp} = 20.9$	in
Length available in pad:	$L_{pad} = (W / 2 - w' / 2) - cc$	$L_{pad} = 36.0$	in
	<b>Check</b> $L_{pad} = 36.00$ in $\geq L_{dp} = 20.93$ in		<b>OK</b>

**UNIT BASE FOUNDATION (DL - 0.9)**

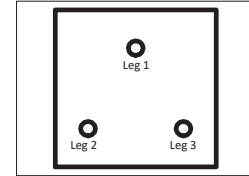
**APC Towers  
KY-1049 CK Clifty**

**U- 26.0 250  
A- 553842**

v 4.7

Reactions	stress ratio	98.9%	mark up:	1.1%
Shear (Per Leg), <b>S<sub>i</sub></b> :	38.00 kips	x 1.01 =	38.42 kips	
Shear (total), <b>S</b> :	55.00 kips	x 1.01 =	55.61 kips	
Moment, <b>M</b> :	9247.00 ft-kips	x 1.01 =	9348.72 ft-kips	
Compression / leg, <b>C</b> :	435.00 kips	x 1.01 =	439.79 kips	
Uplift / leg, <b>U</b> :	383.00 kips	x 1.01 =	387.21 kips	
Tower weight, <b>W<sub>t</sub></b> :	73.00 kips	=	73.00 kips	

Soil per: Soil Report by Collier Engineering Co., Inc. dated 05/20/2022



**Physical Parameters:**

Concrete volume:	$V = T * W^2 + 3 * (d^2 / 4 * \pi) * (D + E - T)$	V =	73.8	cy
Concrete weight:	$W_c = V * \delta$	$W_c =$	298.7	kips
Soil weight:	$W_s = (D - T) * (W^2 - 3 * (d^2 / 4 * \pi)) * \gamma$	$W_s =$	711.6	kips
Total weight:	$P = W_c + W_s + W_t$	P =	1083.33	kips

**Passive Pressure:**

<i>P<sub>p</sub></i> coefficient:	$K_p = \text{TAN}(45 + \phi / 2)^2$	$K_p =$	1.000	
	$P_{pn} = K_p * \gamma * N + 2 * C_o * \sqrt{(K_p)}$	$P_{pn} =$	0.880	ksf
	$P_{pt} = K_p * \gamma * (D - T) + 2 * C_o * \sqrt{(K_p)}$	$P_{pt} =$	0.688	ksf
	$P_{pb} = K_p * \gamma * D + 2 * C_o * \sqrt{(K_p)}$	$P_{pb} =$	0.880	ksf
	$P_{ptop} = \text{IF}(N < (D - T), P_{pt}, P_{pn})$	$P_{ptop} =$	0.9	ksf
	$P_p' = (P_{ptop} + P_{pb}) / 2$	$P_p' =$	0.880	ksf
Shear area:	$T_{pp} = 0$	$T_{pp} =$	0.0	ft
	$A_{pp} = T_{pp} * W$	$A_{pp} =$	0.00	ft <sup>2</sup>
Shear Capacity: $\phi_r = 0.75$	$S_{actual} = (P_p' * A_{pp} + \mu * P) * \phi_r$	$S_{actual} =$	162.50	kips

**Check**  $S_{actual} = 162.50$  kips  $\geq$   $S = 55.61$  kips **OK**

**Overturning Moment Resistance at Toe:**

Wt of soil wedge:	$W_{sw} = D * (D * \text{TAN}(\phi)) / 2 * W * \gamma$	$W_{sw} =$	0.0	kips
Dist. from leg to edge:	$O = (W - 0.866 * w) / 2$	O =	4.992	ft
Additional offset of Wt:	$O_a = W / 2 - (1 / 3 * 0.866 * w' + O)$	$O_a =$	3.753	ft
Resisting moments:	$M_{rwt} = P * 0.9 * W / 2 - W_t * 1.2 * O_a$	$M_{rwt} =$	15514.96	ft-kips
	$M_{rp} = P_p' * A_{pp} * (D - N) / 3 * \phi_r$	$M_{rp} =$	0.00	ft-kips
	$M_{rsw} = W_{sw} * (W + D * \text{TAN}(\phi) / 3) * \phi_r$	$M_{rsw} =$	0.00	ft-kips
Total resisting: $\phi_r = 0.75$	$M_{rt} = (M_{rwt} + M_{rp} + M_{rsw})$	$M_{rt} =$	15514.96	ft-kips
Total overturning:	$M_o = M + S * (D + E)$	$M_o =$	9821.36	ft-kips

**Check**  $M_{rt} = 15514.96$  ft-kips  $\geq$   $M_o = 9821.36$  ft-kips **OK**

**Bearing Resistance due to Pressure Distribution**

Area of mat:	area = $W^2$	area =	1056.3	ft <sup>2</sup>
Section modulus:	SM = $W^3 / 6$	SM =	5721.4	ft <sup>3</sup>
Factored total weight:	$P' = (W_t / 1.2 + W_c + W_s) * 0.9$	P' =	964.0	kips
Pressure exerted:	$P_{pos} = P' / \text{area} + M_o / \text{SM}$	$P_{max} =$	2.629	ksf
	$P_{neg} = P' / \text{area} - M_o / \text{SM}$	$P_{min} =$	-0.804	ksf

**Note: The stress resultant is NOT within the kern. Bearing area has been adjusted below.**

Load eccentricity:	$e_c = M_o / P'$	$e_c =$	10.19	ft
In Parallel Direction	$P_{adj} = 2 * P' / (3 * W * (W / 2 - e_c))$	$P_{adj} =$	3.262	ksf
In Diagonal Direction	$P_{adj\_diag}$ see Diagonal Bearing Sheet (attached)	$P_{adj\_diag} =$	3.530	ksf
Adj. applied pressure:	$q_a = \text{IF}(P_{neg} \geq 0, P_{pos}, P_{adj})$	$q_a =$	3.262	ksf
Overburden Pressure: (factored)	$q_{obp} = D * \gamma$	$q_{obp} =$	0.880	ksf

**Check**  $q_a - q_{obp} = 2.382$  ksf  $\leq$   $B_c * \phi_r = 7.500$  ksf **OK**

**Concrete Shear Strength:**

One way beam action at  $d_v$  from tower

Effective depth:	$d_c = T - cc - db_p / 2$	$d_c =$	17.625	in
Distance from edge of pad to pier face:	$d' = O - di / 2$	$d' =$	3.492	ft
Distance from edge of pad to dc	$d'' = d' - d_c$	$d'' =$	2.023	ft
Bearing Pressure Slope	$q_s = q_a / W_{eff}$	$q_s =$	0.1794	kcf
Required shear:	$V_{n1} = [(q_a - d'' * q_s) + (d'' * q_s / 2)] * d'' * W - [0.9 * (D - T) * \gamma * d'' * W]$	$V_{n1} =$	161.88	kips
Available shear: <small>[ACI 22.5.5.1] <math>\phi_s = 0.75</math> [ACI 21.2.1]</small>	$V_{c1} = \phi_s * 2 * \lambda * \sqrt{F_c} * W * d_c$	$V_{c1} =$	691.66	kips

**Check**  $V_{c1} = 691.66$  kips  $\geq$   $V_{n1} = 161.88$  kips **OK**

Two way beam action at  $d_i / 2$  from tower (ACI 22.6.5)

Eq. Square Column (ACI 8.10.1.3 & 22.6.4.1.2)		$d_{eq} = d_i / 2 * \sqrt{\pi}$	deq = 31.90 in
Mat effective width in bearing		$W_{eff} = \text{Min}(W, 3 * (W / 2 - ec))$	$W_{eff} = 18.187075$ ft
Ratio of long side to short side of Pier		$\beta = 1$ (for square or round piers)	$\beta = 1.00$
Length:		$b_1 = dc / 2 + deq / 2 + (W - w) / 2$	$b_1 = 63.76$ in
Width:		$b_2 = (dc + deq + W - \text{SIN}(60) * w) / 2$	$b_2 = 84.66$ in
Critical Section	Perimeter:	$b_o = b_1 + b_2$	$b_o = 148.43$ in
	Centroid:	$c = (b_1 * dc * b_1 / 2) / (b_1 * dc + b_2 * dc)$	$c = 13.697$ ft
	Eccentricity:	$e_c = (deq + dc) / 2 - c$	$e_c = 11.0680813$ in
	Polar MOI	$J_c = [(dc * b_1^3 / 12) + (b_1 * dc^3 / 12) + (b_1 * dc * (b_1 / 2 - c)^2) + (b_1 * dc * b_2^3 / 12) + (b_2 * dc^3 / 12) + (b_2 * dc * (b_2 / 2 - c)^2)]$	$J_c = 1.061E+06$ in <sup>4</sup>
Moment Fraction transferred by	flexure:	$\gamma_f = 1 / (1 + 2 / 3 * \sqrt{(b_1 / b_2)})$	$\gamma_f = 0.63$
	eccentricity of shear:	$\gamma_v = 1 - \gamma_f$	$\gamma_v = 0.37$
Bearing Pressure Slope:		$q_s = qa / W_{eff}$	$q_s = 0.179$ kcf
Average Bearing Pressure:		$q_{a,pl} = ((W_{eff} - b_1) * q_s + qa) / 2$	$q_{a,pl} = 2.785$ ksf
Shear Force at Section:		$V_{n, pier} = C - qa_{pl} * (b_1 * b_2)$	$V_{n, pier} = 335.357$ kips
Slab Moment:		$M_{sc} = SI * (D - T + E) + V_{n, pier} * e$	$M_{sc} = 568.64$ ft-kips
Required shear: $\phi_s = 0.75$ [ACI 21.2.1]		$= (V_{n, pier} / b_0 * dc) + (\gamma_v * M_{sc} * c / J_c)$	160.46 psi
Available shear: [ACI 22.6.5.2]		$= \phi_s * \text{MIN}(4 * \lambda * \sqrt{f_c}, (2 + (4/\beta)) * \lambda * \sqrt{f_c}), (2 + (as * dc / bo)) * \lambda * \sqrt{f_c})$	201.246 psi
		<b>Check</b> $V_{n2} = 201.25$ psi $\geq$ $V_{n2} = 160.46$ psi	<b>OK</b>
Moment transferred: (Pier 1)		$M_{n1} = \gamma_f * M_{sc}$	$M_{n1} = 260.043$ ft-kips
Effective Beam Width:		$W_{eff1} = deq + 1.5 * T + \text{MIN}(1.5 * T, (W - w) * \text{SIN}(60) - deq) / 2$	$W_{eff1} = 7.909$ ft
		$A_{st, p1} = M_{n1} / (0.9 * F_y * dc)$	$A_{st, p1} = 3.279$ in <sup>2</sup>
		$a_{p1} = A_{st, p1} * F_y / (\beta * F_c * W_{eff1})$	$a_{p1} = 0.558$ in
Required steel:		$A_{st, p, st1} = M_{n1} / (F_y * (dc - a_{p1} / 2))$	$A_{st, p, st1} = 2.998$ in <sup>2</sup>
Required steel in entire mat:		$A_{st, p, st1} = A_{st, p, st1} * W / W_{eff1}$	$A_{st, p, st1} = 12.321$ in <sup>2</sup>
Moment transferred: (Pier 2 or 3)		$M_{n2} = \gamma_f * M_{sc}$ (Controlling Case: Corner.)	$M_{n2} = 360.224$ ft-kips
Effective Beam Width:		$W_{eff2} = deq + 1.5 * T + \text{MIN}(1.5 * T, (W - w) - deq) / 2$	$W_{eff2} = 7.204$ ft
		$A_{st, p2} = M_{n2} / (0.9 * F_y * dc)$	$A_{st, p2} = 4.542$ in <sup>2</sup>
		$a_{p2} = A_{st, p2} * F_y / (\beta * F_c * W_{eff2})$	$a_{p2} = 0.849$ in
Required steel:		$A_{st, p, st2} = M_{n2} / (F_y * (dc - a_{p2} / 2))$	$A_{st, p, st2} = 4.189$ in <sup>2</sup>
Required steel in entire mat:		$A_{st, p, st2} = A_{st, p, st2} * W / W_{eff2}$	$A_{st, p, st2} = 18.895$ in <sup>2</sup>
		Controlling Case	Pier 2: Corner

Two way beam action at  $d_i / 2$  from tower (ACI 22.6.5)- Uplift

Pier Reinforcement Dia		$d_{it} = d_i - 2 * cc - 2 * db_t - 1 * db_c$	$d_{it} = 28.000$ in
Eq. Square Column (ACI 8.10.1.3 & 22.6.4.1.2)		$d_{eq, T} = dp_{rebar} / 2 * \sqrt{\pi}$	$d_{eq, T} = 24.81$ in
Critical Section Length:		$b_{1, T} = deq_T + dc$	$b_{1, T} = 42.439$ in
Critical Section Perimeter:		$b_{o, T} = 4 * (deq + dc)$	$b_{o, T} = 169.76$ in
Polar MOI		$J_{c, T} = (b_{1, T}^3 * dc / 6) + (b_{1, T} * d^3 / 6) + (dc * b_{1, T} * b_{2, T}^2 / 2)$	$J_{c, T} = 936866.446$ in <sup>4</sup>
Shear Force at Section:		$V_{n, pier, T} = U$	$V_{n, pier, T} = 387.213$ kips
Required shear: $\phi_s = 0.75$ [ACI 21.2.1]		$= (V_{n, pier, T} / b_{1, T} * dc) + (\gamma_v * M_{sc} * c_T / J_{c, T})$	157.610 psi
Available shear: [ACI 22.6.5.2]		$= \phi_s * \text{MIN}(4 * \lambda * \sqrt{f_c}, (2 + (4/\beta)) * \lambda * \sqrt{f_c}), (2 + (as * dc / bo)) * \lambda * \sqrt{f_c})$	201.25 psi
		<b>Check</b> $V_{n2} = 201.25$ psi $\geq$ $V_{n2} = 157.61$ psi	<b>OK</b>

Column Compression Capacity:

Compression reaction:		$P_c = \phi_c * 0.85 * F_c * (d_i^2 / 4 * \pi)$	$P_c = 2530.7$ kips
$\phi_c = 0.65$ [ACI 21.2.2.2]			
		<b>Check</b> $P_c = 2530.69$ kips $\geq$ $C = 439.79$ kips	<b>OK</b>

Pier Reinforcement:

Cross-sectional area:		$A_g = d_i^2 * \pi / 4$	$A_g = 1017.88$ in <sup>2</sup>
Min. area of steel (pier):		$A_{st, c} = A_g * 0.01$	$A_{st, c} = 10.18$ in <sup>2</sup>
[ACI 10.6.1.1] & [ACI 10.3.1.2]			
Cage circle:		$d_o = d_i - 2 * cc - db_c - 2 * db_t$	$d_o = 28.00$ in
Rebar:	$s_c = 8$	$d_{b, c} = 1$ in	
	$m_c = 13$	$A_{b, c} = 0.79$ in <sup>2</sup>	
		$A_{s, c} = A_{b, c} * m_c$	$A_{s, c} = 10.27$ in <sup>2</sup>
		<b>Check</b> $A_{s, c} = 10.27$ in <sup>2</sup> $\geq$ $A_{st, c} = 10.18$ in <sup>2</sup>	<b>OK</b>
Actual moment:		$M_{max} = (D - T + E) * S / 2$	$M_{max} = 187.67$ ft-kips
Pier moment capacity:		$M_{allow}$ per Maxmomnt.xls (see attached)	$M_{allow} = 189.94$ ft-kips
		<b>Check</b> $M_{allow} = 189.94$ ft-kips $\geq$ $M_{max} = 187.67$ ft-kips	<b>OK</b>
Bar separation:		$B_{s, c} = (d_o * \pi) / m_c - db_c$	$B_{s, c} = 5.77$ in
		<b>Check</b> $17 \geq B_{s, c} = 5.77$ in $\geq 4$ "	<b>OK</b>

**Vertical Rebar Development Length:**

Reinforcement location: [ACI 25.4.2.4]	$\psi_{t,c} =$ if the space under the rebar > 12 in, use 1.3, else use 1.0	$\psi_{t,c} =$	1.3
Epoxy coating: [ACI 25.4.2.4]	$\psi_{e,c} =$ if epoxy-coated bars are not used, use 1.0; but if epoxy-coated bars are used, then if $B_s < 6 * db$ or $cc < 3 * db$ , use 1.5, else 1.2	$\psi_{e,c} =$	1.0
Max term: [ACI 25.4.2.4]	$\psi_t \psi_{e,c} =$ the product of $\psi_t$ & $\psi_e$ , need not be taken larger than 1.7	$\psi_t \psi_{e,c} =$	1.3
Reinforcement size: [ACI 25.4.2.4]	$\psi_{s,c} =$ if the bar size is 6 or less, then use 0.8, else use 1.0	$\psi_{s,c} =$	1
Light weight concrete: [ACI 25.4.2.4]	$\lambda_c =$ if lightweight concrete is used, 0.75, else use 1.0	$\lambda_c =$	1.0
Spacing/cover: [ACI 25.4.2.4]	$c_c =$ the smaller of: half the bar spacing or the concrete edge distance	$c_c =$	3.38 in
Transverse bars: [ACI 25.4.2.3]	$k_{tr,c} = 0$ in (per simplification)	$k_{tr,c} =$	0 in
Max term: [ACI 25.4.2.3]	$c_c' = \text{MIN}(2.5, (c_c + k_{tr,c}) / db_c)$	$c_c' =$	2.500
Excess reinforcement: [ACI 25.4.10.1]	$R_c = 1$ (excess reinforcement reduction is not used)	$R_c =$	1.00
Development (tensile): [ACI 25.4.2.2]	$L_{dt,c}' = (3 / 40) * (F_y / \lambda_c * \sqrt{F_c}) * (\psi_t \psi_{e,c} * \psi_{s,c} * R_c / c_c') * db_c$	$L_{dt,c}' =$	34.88 in
Minimum length: [ACI 25.4.2.1]	$L_{d,min} = 12$ inches	$L_{d,min} =$	12.0 in
Development length:	$L_{dt,c} = \text{MAX}(L_{d,min}, L_{dt,c}')$	$L_{dt,c} =$	34.88 in
Confining Reinforcement: [ACI 25.4.9.3]	$\psi_{f,c} = 1$	$\psi_{f,c} =$	1.00
Development (comp.): [ACI 25.4.9.2]	$L_{dc,c}' = F_y * \psi_{r,c} * db_c * R_c / (50 * \lambda_c * \sqrt{F_c})$	$L_{dc,c}' =$	17.89 in
	$L_{dc,c}'' = 0.0003 * db_c * F_y * \psi_{r,c} * R_c$	$L_{dc,c}'' =$	18.00 in
Development length:	$L_{dc,c} = \text{MAX}(8, L_{dc,c}', L_{dc,c}'')$	$L_{dc,c} =$	18.00 in
Length available in pier:	$L_{vc} = D - T + E - cc$	$L_{vc} =$	78.0 in
	<b>Check</b> $L_{vc} = 78.0$ in $\geq$ $L_{dt,c} = 34.9$ in <b>OK</b>		
	<b>Check</b> $L_{vc} = 78.0$ in $\geq$ $L_{dc,c} = 18.0$ in <b>OK</b>		
Length available in pad:	$L_{vp} = T - cc$	$L_{vp} =$	18.0 in
	<b>Check</b> $L_{vp} = 18.0$ in $\geq$ $L_{dt,c} = 34.9$ in <b>HOOKS</b>		
	<b>Check</b> $L_{vp} = 18.0$ in $\geq$ $L_{dc,c} = 18.0$ in <b>OK</b>		

**Vertical Rebar Hook Ending:**

Bar size & clear cover: [ACI 25.4.3.2]	$\psi_{t,h} =$ if the bar size $\leq 11$ and side $cc \geq 2.5"$ , use 0.7, else use 1.0	$\psi_{t,h} =$	0.7
Epoxy coating: [ACI 25.4.3.1]	$\psi_{e,h} =$ if epoxy-coated bars are used, use 1.2, else use 1.0	$\psi_{e,h} =$	1.0
Light weight concrete: [ACI 25.4.3.1]	$\lambda_h$ if lightweight concrete is used, 0.75, else use 1.0	$\lambda_h =$	1.0
Confining Reinforcement: [ACI 25.4.3.2]	$\psi_{f,h} = 1$	$\psi_{f,h} =$	1.00
Development (hook): [ACI 25.4.3.1]	$L_{dh}' = (F_y * \psi_{t,h} * \psi_{e,h} * \psi_{r,h} * R_c / (50 * \lambda_h * \sqrt{F_c})) * db_c$	$L_{dh}' =$	12.5 in
Minimum length: [ACI 25.4.3.1]	$L_{dh,min}$ the larger of: $8 * db$ or 6 in	$L_{dh,min} =$	8.0 in
Development length:	$L_{dh} = \text{MAX}(L_{dh,min}, L_{dh}')$	$L_{dh} =$	12.5 in
	<b>Check</b> $L_{vp} = 18.0$ in $\geq$ $L_{dh} = 12.5$ in <b>OK</b>		
Hook tail length:	$L_{h,tail} = 12 * db$ beyond the bend radius	$L_{h,tail} =$	16.0 in
Length available in pad:	$L_{h,pad} = (W - w' - dj) / 2$	$L_{h,pad} =$	21 in
	<b>Check</b> $L_{h,pad} = 21.0$ in $\geq$ $L_{h,tail} = 16.0$ in <b>OK</b>		



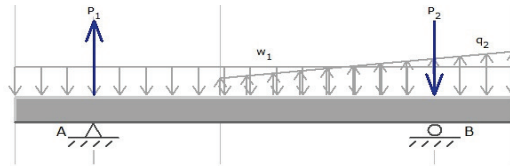
**Pier Ties:**

Minimum size: [ACI 25.7.2.2]	$s_{t\_min} = IF(s_c \leq 10, 3, 4)$	$s_{t\_min} =$	3
z factor:	z = 0.5 if the seismic zone is less than 2, else 1.0	z =	1
Tie parameters:	$s_t = 4$ $m_t = 13$	$d_{b,t} =$ $A_{b,t} =$	0.5 in 0.2 in <sup>2</sup>
Allowable tie spacing:			
per vertical rebar [ACI 25.7.2.1] & [ACI 18.4.3.3]	$B_{s\_t\_max1} = 8 * db_c$	$B_{s\_t\_max1} =$	8 in
per tie size [ACI 25.7.2.1] & [ACI 18.4.3.3]	$B_{s\_t\_max2} = 24 * db_t$	$B_{s\_t\_max2} =$	12 in
per pier diameter [ACI 25.7.2.1] & [ACI 18.4.3.3]	$B_{s\_t\_max3} = di / 4$	$B_{s\_t\_max3} =$	9 in
per seismic zone [ACI 25.7.2.1] & [ACI 18.4.3.3]	$B_{s\_t\_max4} = 12"$ in active seismic zones, else 18"	$B_{s\_t\_max4} =$	12 in
	$B_{s\_t\_max} = MIN(B_{s\_t\_max1}, B_{s\_t\_max2}, B_{s\_t\_max3}, B_{s\_t\_max4})$	$B_{s\_t\_max} =$	8 in
	$m_{t\_min} = (D - T + E) / B_{s\_t\_max} + 2$	$m_{t\_min} =$	12.1
	<b>Check</b> $m_t = 13.0$	$\geq$	$m_{t\_min} = 12.1$ <b>OK</b>

**Anchor Steel:**

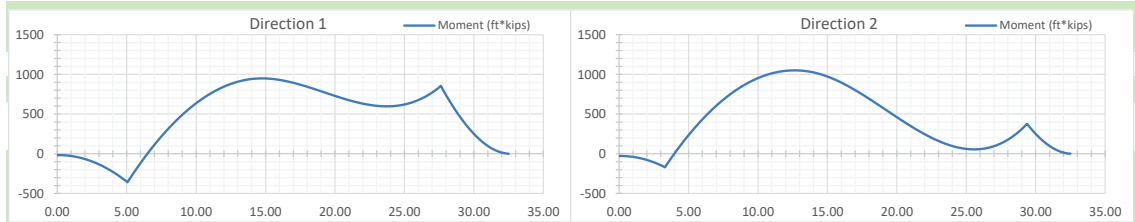
A/S parameters:	$P_{as} = 113823$ $d_{as} = 1.5$ in	$L_{as} = 80$ in $E_{as} = 71.50$ in
Development available:	$L_{das}$ per Anchor Bolts (see attached)	$L_{das} = 61.63$ in
Required development:	$L_{das\_min}$ per Anchor Bolts (see attached)	$L_{das\_min} = 34.88$ in
	<b>Check</b> $L_{das} = 61.63$ in	$\geq$ $L_{das\_min} = 34.88$ in <b>OK</b>
To bottom rebar grid:	$E_{as\_max} = D + E - cc - 2 * db_p$	$E_{as\_max} = 97.5$ in
	<b>Check</b> $E_{as} = 71.50$ in	$\leq$ $E_{as\_max} = 97.5$ in <b>OK</b>
To top rebar grid:	rebar @ = D + E - T + cc	rebar @ = 84.00 in
	<b>Check</b> 84 + 6 in	$\geq$ $E_{as} = 71.50$ in <b>or</b> $\leq$ 84 in <b>OK</b>
Min. cage dia:	$d_{o\_min}$ per ancsteel.xls (see attached)	$d_{o\_min} = 24.25$ in
	<b>Check</b> $d_o = 28.00$ in	$\geq$ $d_{o\_min} = 24.25$ in <b>OK</b>

**Pad Reactions:**



Effective length in bearing: 18.19 ft  
Effective length not bearing: 14.31 ft

Total Beam Length:	$B_{L2,1} = W$	$B_{L2,1} =$	32.5 ft
Location of Left Support:	$S_{L2,1} = 0$	$S_{L2,1} =$	4.992 ft
Location of Right Support:	$S_{R2,1} = W - O$	$S_{R2,1} =$	27.51 ft
MDSolids Geometry Input (Option 2)			
Total Beam Length:	$B_{L2,2} = W$	$B_{L2,2} =$	32.5 ft
Location of Left Support:	$S_{L2,2} = (W - w) / 2$	$S_{L2,2} =$	3.25 ft
Location of Right Support:	$S_{R2,2} = S_{L1,2} + W$	$S_{R2,2} =$	29.25 ft



**MDSolids Design Result**

Direction 1:	$M_{max2,1} = M_{max2,1}$	$M_{max2,1} =$	949.57 ft*kips
Direction 2:	$M_{max2,2} = M_{max2,2}$	$M_{max2,2} =$	1050.79 ft*kips
Diagonal:	$M_{max2\_diag} = M_{max1\_diag}$	$M_{max2\_diag} =$	1814.47 ft*kips
Max moment:	$M_{maxp} = Max(M_{max2,1}, M_{max2,2}, M_{max2\_diag})$	$M_{maxp} =$	1814.47 ft*kips
Required moment:	$M_n = M_{maxp} / \phi_t$	$M_n =$	2016.08 ft*kips
	$\phi_t = 0.9$ [ACI 21.2.2.2]		

**Pad Reinforcement:**

	$b = \text{IF}(F'c \leq 4000, 0.85, \text{IF}(F'c \geq 8000, 0.65, 0.85 - (F'c - 4000) * 0.05))$	$b =$	0.825	
Effective width:	$W_e = W$	$W_e =$	32.500	ft
	$A_{st\_p}' = Mn / (0.9 * F_y * dc)$	$A_{st\_p}' =$	25.419	in <sup>2</sup>
	$a_p = A_{st\_p}' * F_y / (\beta * F'c * W_e)$	$a_p =$	1.05	in
Required steel:	$A_{st\_p\_st} = Mn / (F_y * (dc - a_p / 2)) * (W / W_e)$	$A_{st\_p\_st} =$	23.582	in <sup>2</sup>
Shrinkage:	$f_{sh} = \text{IF}(F_y \geq 60000, 0.0018, 0.002)$	$f_{sh} =$	0.0018	
	$A_{st\_p\_sh} = p_{sh} * W * T / 2$	$A_{st\_p\_sh} =$	7.371	in <sup>2</sup>
	$A_{st\_p} = \text{MAX}(A_{st\_p\_st}, A_{st\_p\_sh}, A_{st\_p\_ste1}, A_{st\_p\_ste2})$	$A_{st\_p} =$	23.582	in <sup>2</sup>
Rebar:	$s_p = 6$	Equally spaced, top and bottom, both directions.	$d_{b\_p} = 0.75$	in
	$m_p = 54$		$A_{b\_p} = 0.44$	in <sup>2</sup>
	$A_{s\_p} = A_{b\_p} * m_p$	$A_{s\_p} =$	23.76	in <sup>2</sup>
	<b>Check</b>	$A_{s\_p} = 23.76$ in <sup>2</sup>	$\geq$	$A_{st\_p} = 23.58$ in <sup>2</sup> <b>OK</b>
Bar separation:	$B_{s\_p} = (W - 2 * cc - db_p) / (m_p - 1) - db_p$	$B_{s\_p} =$	6.48	in
	<b>Check</b>	17.25 $\geq$	$B_{s\_p} = 6.48$ in	$\geq$ 4" <b>OK</b>

**Pad Development Length:**

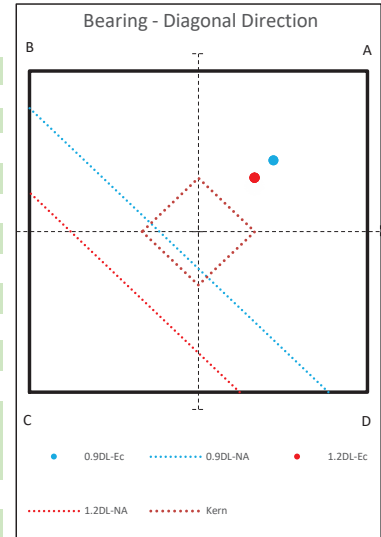
Reinforcement location: [ACI 25.4.2.4]	$\psi_{t\_p} =$ if the space under the rebar > 12 in, use 1.3, else use 1.0	$\psi_{t\_p} =$	1.3	
Epoxy coating: [ACI 25.4.2.4]	$\psi_{e\_p} =$ if epoxy-coated bars are not used, use 1.0; but if epoxy-coated bars are used, then if $B_s < 6 * db$ or $cc < 3 * db$ , use 1.5, else 1.2	$\psi_{e\_p} =$	1.0	
Max term: [ACI 25.4.2.4]	$\psi_t \psi_{e\_p} =$ the product of $\psi_t$ & $\psi_e$ , need not be taken larger than 1.7	$\psi_t \psi_{e\_p} =$	1.3	
Reinforcement size: [ACI 25.4.2.4]	$\psi_{s\_p} =$ if the bar size is 6 or less, then use 0.8, else use 1.0	$\psi_{s\_p} =$	0.8	
Light weight concrete: [ACI 25.4.2.4]	$\lambda_p =$ if lightweight concrete is used, 0.75, else use 1.0	$\lambda_p =$	1.0	
Spacing/cover: [ACI 25.4.2.4]	$c_p =$ the smaller of: half the bar spacing or the concrete edge distance	$c_p =$	3.38	in
Transverse bars: [ACI 25.4.2.3]	$k_{tr\_p} = 0$ (per simplification)	$k_{tr\_p} =$	0	in
Max term: [ACI 25.4.2.3]	$c_p' = \text{MIN}(2.5, (c_p + k_{tr\_p}) / db_p)$	$c_p' =$	2.500	
Excess reinforcement: [ACI 25.4.10.1]	$R_p = 1$ (excess reinforcement reduction is not used)	$R_p =$	1.00	
Development (tensile): [ACI 25.4.2.2]	$L_d = (3 / 40) * (F_y / \lambda_p * \sqrt{F'c}) * \psi_t \psi_{e\_p} * \psi_{s\_p} * R_p * db_p / c_{p\_u}$	$L_{dp}' =$	20.9	in
Minimum length: [ACI 25.4.2.1]	$L_{d\_min} = 12$ inches	$L_{d\_min} =$	12.0	in
Development length:	$L_{dp} = \text{MAX}(L_{d\_min}, L_{dp}')$	$L_{dp} =$	20.9	in
Length available in pad:	$L_{pad} = (W / 2 - w' / 2) - cc$	$L_{pad} =$	36.0	in
	<b>Check</b>	$L_{pad} = 36.00$ in	$\geq$	$L_{dp} = 20.93$ in <b>OK</b>

## UNIT BASE FOUNDATION DIAGONAL BEARING CHECK

**APC Towers**  
**KY-1049 CK Clifty**

**U- 26.0      250**  
**A- 553842**

		Load Case - DL 1.2	Load Case - DL 0.9	
Moment of Inertia of Mat	MOI	92972.01	92972.01	ft <sup>4</sup>
Total Factored Weight	P'	1285.40	964.05	kips
Load Eccentricity	e	7.64	10.19	ft
Bearing at Corner A	B <sub>c,a</sub>	3.64	3.34	ksf
Bearing at Corner B	B <sub>c,b</sub>	1.22	0.91	ksf
Bearing at Corner C	B <sub>c,c</sub>	-1.21	-1.51	ksf
Bearing at Corner D	B <sub>c,d</sub>	1.22	0.91	ksf
Initial Location of Neutral Axis from C	NA <sub>c,ini</sub>	11.46	14.34	ft
Calculated Location of Neutral Axis from C	NA <sub>c,cal</sub>	14.29	20.32	ft
MOI for Effective Bearing Area	MOI	165780.47	71991.33	ft <sup>4</sup>
Distance to Point Load from NA	L <sub>p</sub>	16.33	12.84	ft
Effective Length in Bearing along AB & AD	W <sub>eff</sub>	32.50	32.50	ft
Total Vol.	Vol <sub>tot</sub>	1285.39	964.05	kips
Difference		-0.0004	0.0000	kips
		ok	ok	
Adjusted Bearing at A	B <sub>c,a,adj</sub>	4.0102	4.4098	ksf
Adjusted Bearing at B & D	B <sub>c,bd,adj</sub>	1.10	0.46	ksf
Overburden Pressure	q <sub>obp</sub>	0.8800	0.8800	ksf
Maximum Diagonal Bearing Pressure	B <sub>c,dia,max</sub>	3.1302	3.5298	ksf
Bearing Available	B <sub>c</sub> * φ <sub>r</sub>	7.5000	7.5000	ksf
<b>Check</b>		<b>OK</b>	<b>OK</b>	



**THIS SPREADSHEET IS SET UP FOR A MAXIMUM OF 56 BARS.  
MAXIMUM FACTORED MOMENT OF A CIRCULAR SECTION**

Loading (negative for compression)	
Axial load =	387.21 kips

Foundation	
<i>Concrete</i>	
Pier diameter =	3.00 ft
Pier area =	1017.9 in <sup>2</sup>
<i>Reinforcement</i>	
Clear cover =	3.00 in
Cage diameter =	2.33 ft
Bar size =	8
Bar diameter =	1.000 in
Bar area =	0.785 in <sup>2</sup>
Number of bars =	13

Material Strengths	
Concrete compressive strength =	4500 psi
Reinforcement yield strength =	60000 psi
Modulus of elasticity =	29000 ksi
Reinforcement yield strain =	0.00207
Limiting compressive strain =	0.003

(per ACI 10.3.5 - OK)

458.04

Seismic	
SDC =	D
Are hooks required?	yes

**Minimum Area of Steel**

Required area of steel = 10.18 in<sup>2</sup>  
 Actual area of steel = 10.21 in<sup>2</sup> **OK**  
 Bar spacing = 6.25 in

**Axial Loading**

Load factor = 1.00  
 Reduction factor = 0.65575 (per ACI 9.3.1 & 2) 0.6557471  
 Factored axial load = 387.21 kips

**Neutral Axis**

Distance from extreme edge to neutral axis = 3.72 in  
 Equivalent compression zone factor = 0.825 (per ACI 10.2.7.3)  
 Distance from extreme edge to  
 Equivalent compression zone factor = 3.07 in  
 Distance from centroid to neutral axis = 14.28 in

**Compression Zone**

Area of steel in compression zone = 0.00 in<sup>2</sup>  
 Angle from centroid of pier to intersection of  
 equivalent compression zone and edge of pier = 33.94 deg  
 Area of concrete in compression = 41.86 in<sup>2</sup> 41.859912  
 Force in concrete =  $0.85 * f_c * (\text{Acc} - \text{steel in comp zone})$  = 160.11 kips (per ACI 10.3.6.2)  
 Total reinforcement forces = -547.33 kips  
 Factored axial load = 387.21 kips  
 Force in concrete = -160.11 kips  
 Sum of the forces in concrete = 0.00 kips **OK**

**Maximum Moment**

First moment of the concrete area in compression about the centroid = 676.84 in<sup>3</sup>  
 Distance between centroid of concrete in compression and centroid of pier = 16.17 in  
 Moment of concrete in compression = 2588.89 in-kips  
 Total reinforcement moment = 886.94 in-kips  
 Nominal moment strength of column = 3475.83 in-kips  
 Factored moment strength of column = 2279.27 in-kips 189.94 ft-kips

<b>Maximum allowable moment of the pier = 189.94 ft-kips</b>	
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**Individual Bars**

Bar #	Angle from first bar (deg)	Distance to centroid (in)	Distance to neutral axis (in)	Distance to equivalent comp. zone (in)	Strain	Area of steel in compression (in <sup>2</sup> )	Axial force (kips)	Moment (in-kips)
1	0.00	0.00	-14.28	-14.93	-0.01152	0.00	-47.12	0.00
2	27.69	6.51	-7.78	-8.43	-0.00627	0.00	-47.12	-306.59
3	55.38	11.52	-2.76	-3.41	-0.00223	0.00	-47.12	-542.95
4	83.08	13.90	-0.38	-1.03	-0.00031	0.00	-7.06	-98.12
5	110.77	13.09	-1.19	-1.84	-0.00096	0.00	-21.90	-286.73
6	138.46	9.28	-5.00	-5.65	-0.00403	0.00	-47.12	-437.48
7	166.15	3.35	-10.93	-11.58	-0.00882	0.00	-47.12	-157.88
8	193.85	-3.35	-17.63	-18.28	-0.01423	0.00	-47.12	157.88
9	221.54	-9.28	-23.57	-24.22	-0.01902	0.00	-47.12	437.48
10	249.23	-13.09	-27.37	-28.02	-0.02209	0.00	-47.12	616.86
11	276.92	-13.90	-28.18	-28.83	-0.02274	0.00	-47.12	654.92
12	304.62	-11.52	-25.80	-26.45	-0.02082	0.00	-47.12	542.95
13	332.31	-6.51	-20.79	-21.44	-0.01677	0.00	-47.12	306.59

**DEVELOPMENT LENGTH CHECK OF PIER REINFORCEMENT**

Foundation:	Pier diameter =	3.0	ft	Cover between side of pier and cage =	3.00	in.
	Cage diameter =	2.33	ft	Cover between top of pier and cage =	3.00	in.
	Rebar size =	8		Compressive strength of concrete =	4500	psi
	Number of bars =	13		Rebar yield strength =	60000	psi
	Clear spacing =	5.77	in.			
	Are there hooks?	n				
	Check Compression?	n				

Anchor Steel:	Part number:	113823	
	Embedment length =	71.5	in.
	Bolt Diameter =	1.5	

Anchor Plate:	Part number:	281260	
	Plate width =	18.25	in.

Required development length (compression) =	999.00	in.	Min. Anchor Bolt Embedment per TIA-222-H 9.6 =	15	in
Required development length (tension) =	34.88	in.	Actual Anchor Bolt Embedment =	68.5	in
Available development length =	61.625	in.			

**OK**

The length available in the pier for the development of the vertical reinforcement exceeds the required length (ACI 318-14, section 25.4).

**CHECK EMBEDMENT PLATE CLEARANCE IN THE PIER**

Foundation:	Pier diameter =	3.0	ft	Cover between side of pier and cage =	3.00	in.
	Cage diameter =	2.333333	ft	Minimum cover between A/S and cage =	3.00	in.

Anchor Steel:	Part number:	113823		Angle of anchor steel in foundation =	0	degrees
	Embedment length =	71.5	in.			

Anchor Plate:	Part number:	281260	
	Largest plate width =	18.25	in.
	Bolt Diameter =	1.5	in.

Minimum cage diameter =	24.25	in.
Actual cage diameter =	28	in.

**OK**

The available space exceeds the minimum cage diameter required for anchor steel installed in the pier at an angle.

**SELF-SUPPORT TOWER FOUNDATION DESIGN SUMMARY**

**APC Towers  
KY-1049 CK Clifty**

**U- 26 250  
A- 553842**

V 2.6

Pier Dimensions	
Pier diameter, $d_i$ :	<b>3.00</b> ft
Depth, $D$ :	<b>16.5</b> ft
Ext. above grade, $E$ :	<b>0.50</b> ft
Bell diameter, $b_d$ :	<b>none</b> ft
Volume, $V_o$ :	<b>4.45</b> cy / leg

Soil Information Per:
Soil Report by Collier Engineering Co., Inc. dated 05/20/2022

Material Properties	
Steel tensile str, $F_y$ :	<b>60000</b> psi
Conc. Comp. str, $F'_c$ :	<b>4500</b> psi
Conc. Density, $\delta$ :	<b>150.0</b> pcf
Clear cover, $cc$ :	<b>3.00</b> in

Reinforcement Design	
Rebar $m_c$ :	<b>13</b> verticals
size, $s_c$ :	<b>8</b> equally spaced in 2.5' cage
Ties size, $s_t$ :	<b>4</b> default hook
$m_t$ :	<b>32</b> tie qty
Horizontal Rebar in top 6in of pier for temp. & shrinkage?:	<b>NO</b> per TIA-222-H 9.6

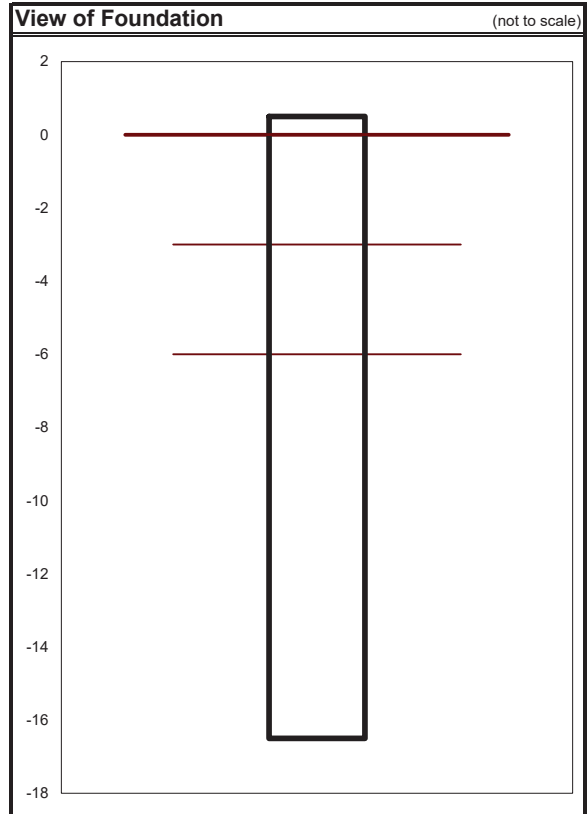
Site Parameters	
Ultimate Bearing, $B_c$ :	<b>15.000</b> ksf
Ultimate $P_p$ :	<b>39.167</b> kcf
Ult. Skin Friction, $SF$ :	<b>3.327</b> ksf
Seismic Design Cat.:	<b>D</b>
Depth neglected, $N$ :	<b>3.00</b> ft
Neglect bottom, $N_b$ :	<b>none</b> ft

**Tower design conforms to the following:**  
 \* International Building Code (IBC)  
 \* ANSI TIA-222-H  
 \* Building Code Requirements for Reinforced Concrete (ACI 318-14)

**Additional Notes:**  
 \* No foundation modifications listed.  
 \* See attached "Foundation Notes" for further information.

Anchor Bolts	
P/N:	<b>113823</b> 80" long, 1.5" diameter

Foundation Loading			
Max Corner Reactions			
		stress ratio: 94.8%	mark up: 5.5%
Shear/Leg, $S$ :	<b>38.00</b> kips	x 1.055 =	<b>40.09</b> kips
Moment/Leg, $M$ :	<b>0.00</b> ft-kips	x 1.055 =	<b>0.00</b> ft-kips
Compression/Leg, $C$ :	<b>435.00</b> kips	x 1.055 =	<b>458.93</b> kips
Uplift/Leg, $U$ :	<b>383.00</b> kips	x 1.055 =	<b>404.07</b> kips



Digitally signed by Joseph P Jacobs  
 Date: 2022-06-20 09:36-04:00

## FOUNDATION NOTES

- 1 THE ON-SITE GEOTECHNICAL ENGINEER SHALL CONFIRM THAT THE INSITU SOIL STRENGTHS MEET OR EXCEED THOSE PARAMETERS GIVEN IN THE SOIL REPORT.
- 2 GRADE THE SITE TO DRAIN AWAY FROM FOUNDATION.
- 3 SEE GEOTECHNICAL REPORT FOR ADDITIONAL CONSTRUCTION RECOMMENDATIONS, BACKFILL COMPACTION DETAIL, SUBGRADE PREPARATION, ETC.
- 4 A TEMPORARY, FULL LENGTH STEEL CASING MAY BE REQUIRED DURING INSTALLATION.
- 5 THE PIER LENGTH SHOULD BE ADJUSTED IF SOIL AND BEDROCK CONDITIONS ARE ENCOUNTERED THAT VARY SIGNIFICANTLY FROM THOSE ENCOUNTERED AT THE BORING LOCATIONS



**SST DRILLED PIER FOUNDATION**

**APC Towers  
KY-1049 CK Clifty**

**U- 26.0 250  
A- 553842**

v 2.6

Design Summary	
Pier diameter:	<b>3.00</b> ft
Design depth:	<b>16.5</b> ft
Concrete volume:	<b>4.45</b> cu.yd. each

Use #4 circular ties.  
Min. concrete compressive strength to be 4500 psi.  
Use anchor bolt p/n 135616

Maximum Loading	
Max. Uplift, $U_{max}$ :	<b>404.07</b> kips/leg
Max. Comp., $C_{max}$ :	<b>461.69</b> kips/leg
Max. Shear, $S_{max}$ :	<b>40.09</b> kips/leg

Soil per: **Soil Report by Collier Engineering Co., Inc.  
dated 05/20/2022**

Ultimate bearing: **15.000** ksf  
Ultimate S F (uplift): **3.327** ksf  
Ultimate S F (comp.): **3.327** ksf

Skin friction by: Given											Uplift Resistance				Compression Resistance			
Layer #	From (ft)	To (ft)	Cont. layer length (ft)	Pier diameter (ft)	Cohesion (ksf)	Phi (deg)	Unit weight of soil (pcf)	Overburden pressure (ksf)	Average overburden pressure (ksf)	Factored skin friction (ksf)	Factored friction force (kips)	Factored concrete weight (kips)	Uplift Resist. (kips)	Factored skin friction (ksf)	Factored friction force (kips)	Factored bearing capacity (ksf)		
1	0.00	3.00	3.00	3.00	0.000	0.000	110.0	0.330	0.165	0.000	0.00	3.34	3.34	0.000	0.00	-		
2	3.00	6.00	3.00	3.00	1.250	0.000	120.0	0.690	0.510	0.600	16.96	2.86	19.83	0.600	16.96	-		
3	6.00	16.50	10.50	3.00	50.000	0.000	140.0	2.160	1.425	3.750	371.10	10.02	381.12	3.750	371.10	11.25		
				Lateral pressure coefficient =	0.7													
											Total Uplift Capacity (kips) =		404.29	OK		Total friction capacity (kips) =		388.07
																Factored Tip capacity (kips) =		79.52
																Total Comp. Capacity (kips) =		467.59
											Weighted Average Skin Friction (ultimate) =		3.327	ksf	uplift compression		3.327	ksf

**Reinforcement Design:**

Concrete Clear Cover (in) = 3.00

# of bars	Bar size #	Area per bar (sq.in.)	Clear spacing (in.)	Bar area (sq.in.)	Steel required (sq.in.)	Ultimate Lateral Resist. (kcf) *	Minimum length (ft) **
13	8	0.79	6.25	10.27	10.18	39.167	4.38

\* see Passive (attached)  
\* see Broms method (attached)  
\*\*\* see Maximum Factored Moment of a Circular Section (attached).

Minimum area of steel is **OK**  
Minimum pier length is **OK**  
Rebar spacing is **OK**

Moment Check (ft-k)
Induced * 141.26
φ Capacity *** 176.73
<b>OK</b>

**Equivalent Weighted Average Cohesion**

Layer	From (ft)	To (ft)	Layer Length (ft)	Neglect?	Cohesion (ksf)	Weighted Cohesion (ksf)
1	0.00	3.00	0.00	y	0.000	0.00
2	3.00	6.00	3.00	n	1.250	3.75
3	6.00	16.50	10.50	n	50.000	525.00
4	16.50	16.50	0.00	n	50.000	0.00
5	16.50	16.50	0.00	n	50.000	0.00
6	16.50	16.50	0.00	n	50.000	0.00
7	16.50	16.50	0.00	n	50.000	0.00
8	16.50	16.50	0.00	n	50.000	0.00
9	16.50	16.50	0.00	n	50.000	0.00
10	16.50	16.50	0.00	n	50.000	0.00
11	16.50	16.50	0.00	n	50.000	0.00
12	16.50	16.50	0.00	n	50.000	0.00
13	16.50	16.50	0.00	n	50.000	0.00
14	16.50	16.50	0.00	n	50.000	0.00
15	16.50	16.50	0.00	n	50.000	0.00
16	16.50	16.50	0.00	n	50.000	0.00
17	16.50	16.50	0.00	n	50.000	0.00
18	16.50	16.50	0.00	n	50.000	0.00
19	16.50	16.50	0.00	n	50.000	0.00
20	16.50	16.50	0.00	n	50.000	0.00
Bell	16.50	16.50	0.00	n	50.000	0.00
		Total =	13.50		Total =	528.75

Weighted Average Equivalent Cohesion = 39.17 (ksf)
--

## Broms Method for Laterally Loaded Caissons ,Piles,or Piers in Clay

(Reference "Drilled Shafts: Construction Procedures and Design Methods", ADSC No. ADSC-TL-4, August 1988

*revised for LRFD*

Diameter of pier, $d_i$ :	<b>3.00</b>	ft			
Extension above grade, $E$ :	<b>0.50</b>	ft		S/leg (kips)	M/leg (k-ft)
Neglect at ground surface, $N$ :	<b>3.00</b>	ft			
Ultimate Passive Pressure, $P_p$ :	<b>39.167</b>	kcf	LC	<b>40.09</b>	<b>0</b>
Reduction Factor, $f$ :	<b>0.75</b>				
Nominal Passive Pressure ( $P_p * f$ ), $P_{pa}$ :	29.375	kcf			
# of pier dia. $P_p$ acts over, $N_d$ :	<b>3.00</b>				

Depth to Max. M, F (ft)      $F = S / ((N_d / 3) * 9 * P_p * d_i)$

LC  
**0.04**

Solved Brom's Equation for  $G_a$  (ft)      $G_a = \sqrt{((S * (E + N + F / 2) + M) / ((N_d / 3) * 2.25 * P_{pa} * d_i))}$

LC  
**0.84**

Minimum length of pier, L (ft)      $L = E + N + F + G_a$

LC  
**4.38**

Minimum length req'd, L: **4.38** ft

Max induced moment,  $M_u$  (k-ft)      $M_u = S * (E + N + F) + M - (N_d / 3 * 9 * P_{pa} * d_i * F^2 / 2)$

LC  
**141.26**

**THIS SPREADSHEET IS SET UP FOR A MAXIMUM OF 56 BARS.  
MAXIMUM FACTORED MOMENT OF A CIRCULAR SECTION**

Loading (negative for compression)	
Axial load =	404.07 kips

Foundation	
<i>Concrete</i>	
Pier diameter =	3.00 ft
Pier area =	1017.9 in <sup>2</sup>
<i>Reinforcement</i>	
Clear cover =	3.00 in
Cage diameter =	2.33 ft
Bar size =	8
Bar diameter =	1.000 in
Bar area =	0.785 in <sup>2</sup>
Number of bars =	13

Material Strengths	
Concrete compressive strength =	4500 psi
Reinforcement yield strength =	60000 psi
Modulus of elasticity =	29000 ksi
Reinforcement yield strain =	0.00207
Limiting compressive strain =	0.003

(per ACI 10.3.5 - OK)

458.04

Seismic	
SDC=	D
Are hooks required?	yes

**Minimum Area of Steel**

Required area of steel = 10.18 in<sup>2</sup>  
 Actual area of steel = 10.21 in<sup>2</sup> **OK**  
 Bar spacing = 6.25 in

**Axial Loading**

Load factor = 1.00  
 Reduction factor = 0.65575 (per ACI 9.3.1 & 2)  
 Factored axial load = 404.07 kips

**Neutral Axis**

Distance from extreme edge to neutral axis = 3.56 in  
 Equivalent compression zone factor = 0.825 (per ACI 10.2.7.3)  
 Distance from extreme edge to  
 Equivalent compression zone factor = 2.94 in  
 Distance from centroid to neutral axis = 14.44 in

**Compression Zone**

Area of steel in compression zone = 0.00 in<sup>2</sup>  
 Angle from centroid of pier to intersection of  
 equivalent compression zone and edge of pier = 33.21 deg  
 Area of concrete in compression = 39.33 in<sup>2</sup>  
 Force in concrete =  $0.85 * f_c * (\text{Acc} - \text{steel in comp zone}) = 150.43$  kips (per ACI 10.3.6.2)  
 Total reinforcement forces = -554.49 kips  
 Factored axial load = 404.07 kips  
 Force in concrete = -150.43 kips  
 Sum of the forces in concrete = 0.00 kips **OK**

**Maximum Moment**

First moment of the concrete area in compression about the centroid = 638.86 in<sup>3</sup>  
 Distance between centroid of concrete in compression and centroid of pier = 16.24 in  
 Moment of concrete in compression = 2443.62 in-kips  
 Total reinforcement moment = 790.51 in-kips  
 Nominal moment strength of column = 3234.13 in-kips  
 Factored moment strength of column = 2120.77 in-kips      176.73 ft-kips

<b>Maximum allowable moment of the pier = 176.73 ft-kips</b>	
--	--

**Individual Bars**

Bar #	Angle from first bar (deg)	Distance to centroid (in)	Distance to neutral axis (in)	Distance to equivalent comp. zone (in)	Strain	Area of steel in compression (in <sup>2</sup> )	Axial force (kips)	Moment (in-kips)
1	0.00	0.00	-14.44	-15.06	-0.01215	0.00	-47.12	0.00
2	27.69	6.51	-7.93	-8.55	-0.00668	0.00	-47.12	-306.59
3	55.38	11.52	-2.91	-3.54	-0.00245	0.00	-47.12	-542.95
4	83.08	13.90	-0.54	-1.16	-0.00045	0.00	-10.32	-143.45
5	110.77	13.09	-1.35	-1.97	-0.00113	0.00	-25.81	-337.83
6	138.46	9.28	-5.15	-5.78	-0.00434	0.00	-47.12	-437.48
7	166.15	3.35	-11.09	-11.71	-0.00933	0.00	-47.12	-157.88
8	193.85	-3.35	-17.79	-18.41	-0.01497	0.00	-47.12	157.88
9	221.54	-9.28	-23.72	-24.34	-0.01997	0.00	-47.12	437.48
10	249.23	-13.09	-27.53	-28.15	-0.02317	0.00	-47.12	616.86
11	276.92	-13.90	-28.33	-28.96	-0.02385	0.00	-47.12	654.92
12	304.62	-11.52	-25.96	-26.58	-0.02185	0.00	-47.12	542.95
13	332.31	-6.51	-20.94	-21.57	-0.01763	0.00	-47.12	306.59

## DEVELOPMENT LENGTH CHECK OF PIER REINFORCEMENT

Foundation:	Pier diameter =	3.0	ft	Cover between side of pier and cage =	3.00	in.
	Cage diameter =	2.5	ft	Cover between top of pier and cage =	3.00	in.
	Rebar size =	8		Compressive strength of concrete =	4500	psi
	Number of bars =	13		Rebar yield strength =	60000	psi
	Clear spacing =	6.25	in.			
	Are there hooks?	n				
	Check Compression?	n				

Anchor Steel:	Part number:	113823	
	Embedment length =	71.5	in.
	Bolt Diameter =	1.5	

Anchor Plate:	Part number:	281260	
	Plate width =	18.25	in.

Required development length (compression) =	999.00	in.	Min. Anchor Bolt Embedment per TIA-222-H 9.6 =	15	in.
Required development length (tension) =	26.83	in.	Actual Anchor Bolt Embedment =	Interface!L65	in.
Available development length =	60.625	in.			

**OK**

The length available in the pier for the development of the vertical reinforcement exceeds the required length (ACI 318-14, section 25.4).

## CHECK EMBEDMENT PLATE CLEARANCE IN THE PIER

Foundation:	Pier diameter =	3.0	ft	Cover between side of pier and cage =	3.00	in.
	Cage diameter =	2.5	ft	Minimum cover between A/S and cage =	3.00	in.

Anchor Steel:	Part number:	113823		Angle of anchor steel in foundation =	0	degrees
	Embedment length =	71.5	in.			

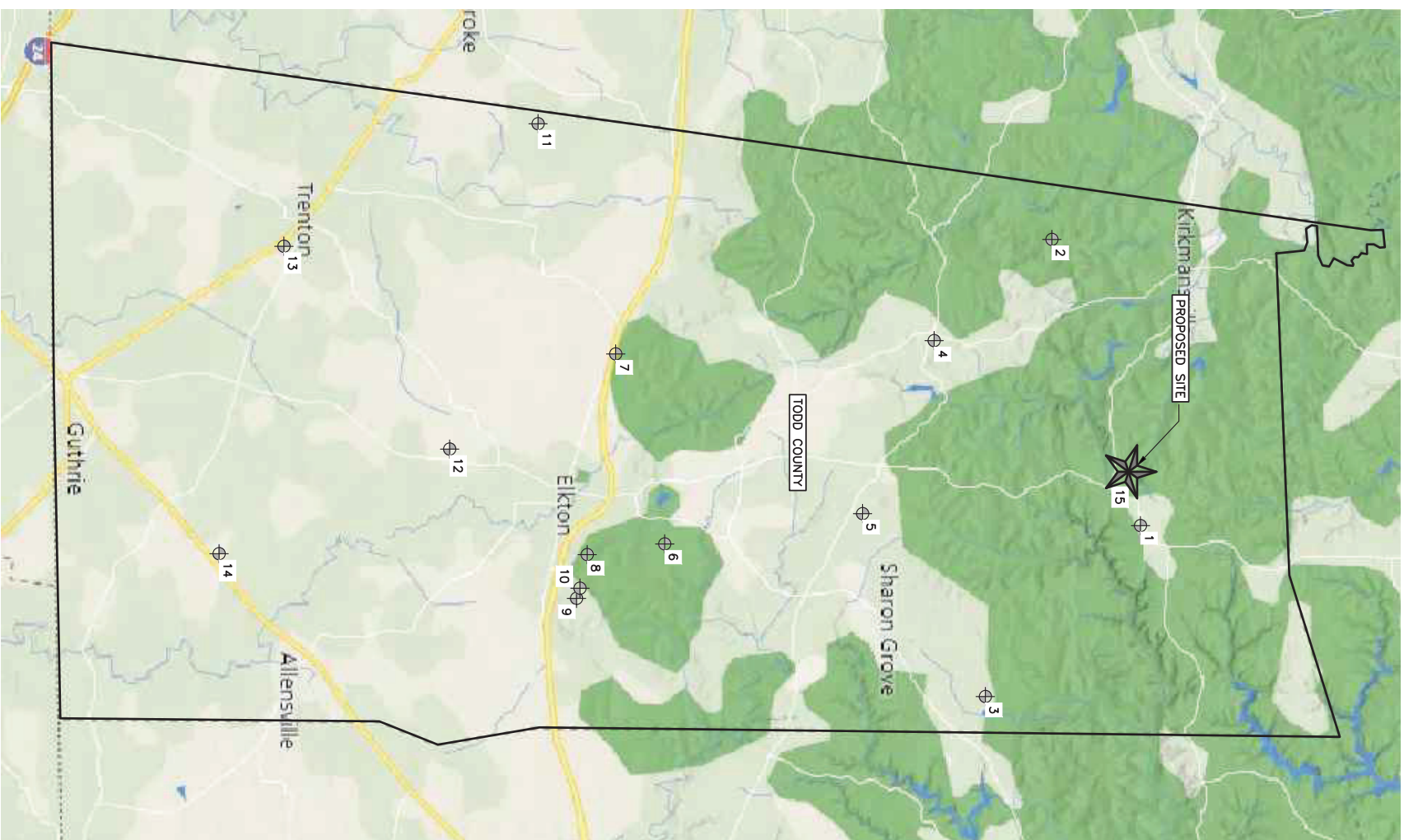
Anchor Plate:	Part number:	281260	
	Largest plate width =	18.25	in.
	Bolt Diameter =	1.5	in.
	Minimum cage diameter =	24.25	in.
	Actual cage diameter =	30	in.

**OK**

The available space exceeds the minimum cage diameter required for anchor steel installed in the pier at an angle.

**FCC REGISTERED SITES  
(TODD COUNTY)**

TOWER	ASR	LATITUDE	LONGITUDE	TOWER OWNER
1	1052933	36° 59' 46.4" N	87° 08' 24.4" W	GLOBAL TOWER, LLC. THRU AMERICAN TOWER, LLC
2	1044827	36° 58' 03.0" N	87° 15' 24.0" W	KY COMMONWEALTH OF DBA = KEWS
3	1311770	36° 56' 42.5" N	87° 04' 14.4" W	UNITI TOWERS LLC
4	1309970	36° 55' 44.4" N	87° 12' 55.7" W	UNITI TOWERS LLC
5	1306716	36° 54' 23.2" N	87° 08' 42.4" W	TILLMAN INFRASTRUCTURE, LLC
6	1065292	36° 50' 29.0" N	87° 07' 59.0" W	WILSON, PAUL D
7	1319483	36° 49' 34.7" N	87° 12' 36.0" W	TILLMAN INFRASTRUCTURE, LLC
8	1206469	36° 48' 57.2" N	87° 07' 40.0" W	EZELL'S COMMUNICATIONS
9	1043533	36° 48' 48.0" N	87° 06' 42.0" W	PENNYRILE RECC
10	1240659	36° 48' 46.6" N	87° 06' 40.0" W	GLOBAL TOWER, LLC. THRU AMERICAN TOWER, LLC
11	130577	36° 48' 01.3" N	87° 18' 10.1" W	TILLMAN INFRASTRUCTURE, LLC
12	1317471	36° 46' 16.9" N	87° 10' 18.1" W	TILLMAN INFRASTRUCTURE, LLC
13	1290301	36° 43' 04.8" N	87° 15' 12.0" W	AMERICAN TOWERS LLC
14	1274279	36° 41' 48.4" N	87° 07' 44.2" W	CELCO PARTNERSHIP
15		36° 59' 26.0" N	87° 09' 43.9" W	VERIZON WIRELESS



COUNTY TOWER MAP



**BTM Engineering, Inc.**  
a Bowman Company  
CONSULTING ENGINEERS,  
LANDSCAPE ARCHITECTS,  
PLANNERS  
AND SURVEYORS  
3001 TAYLOR SPRINGS DRIVE  
LOUISVILLE, KY 40299  
PHONE: (502) 498-4400  
FAX: (502) 498-9427

**CELLCO PARTNERSHIP D/B/A**  
**verizon wireless**  
2421 HOLLOWAY RD  
LOUISVILLE, KY 40299  
PHONE (502) 552-0330  
FAX (502) 266-7548

REV.	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT
B	01/26/22	ISSUE FOR ZONING
C	02/16/22	ISSUE FOR ZONING



CK CLIFTY  
462 CLIFTY KIRKSMANVILLE  
ROAD  
ELKTON, KY 42220  
COUNTY TOWER MAP

ISSUED FOR:	
REVIEW	
PERMIT	
CONSTRUCTION	
RECORD	
PROJECT MANAGER	DESIGNER
JTL	CWS

JOB NUMBER  
210350

**C-1C**  
MKT PLO & CADOP REV 5 08/29/18



Proposed Case for : 2022-ASO-8404-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.

Overview				
Study (ASN): 2022-ASO-8404-OE	Received Date: 03/01/2022			
Prior Study:	Entered Date: 03/01/2022			
Status: Work In Progress	Map: <a href="#">View Map</a>			
Construction Info				
Notice Of: CONSTR	Structure Summary			
Duration: PERM (Months: 0 Days: 0)	Structure Type: Antenna Tower			
Work Schedule:	Structure Name: CK CLIFTY - 16687080			
	FCC Number:			
Structure Details				
Latitude (NAD 83): 36° 59' 26.09" N	Height and Elevation			
Longitude (NAD 83): 87° 09' 44.12" W	Site Elevation: <b>Proposed</b>			
Datum: NAD 83	Structure Height: 798			
City: Elkton	Total Height (AMSL): 255			
State: KY				
Nearest County: Todd				
Frequencies				
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	2000	W
614	698	MHz	1000	W
698	806	MHz	1000	W
806	824	MHz	500	W
806	901	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	2310	MHz	2000	W
2305	2360	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W
3550	3700	MHz	47	dBm
3700	3980	MHz	3280	W
27500	28350	MHz	75	dBm
29100	29250	MHz	75	dBm
31000	31300	MHz	75	dBm
38600	40000	MHz	75	dBm

Previous [Back to Search Result](#) Next







## APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

### JURISDICTION

602 KAR 50:030

Section 1. The commission has zoning jurisdiction over that airspace over and around the public use and military airports within the Commonwealth which lies above the imaginary surface that extends outward and upward at one (1) of the following slopes:

- (1) 100 to one (1) for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each public use airport and military airport with at least one (1) runway 3,200 feet or more in length; or
- (2) fifty (50) to one (1) for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each public use and military airport with its longest runway less than 3,200 feet in length.

Section 2. The commission has zoning jurisdiction over the use of land and structures within public use airports within the state.

Section 3. The commission has jurisdiction from the ground upward within the limits of the primary and approach surfaces of each public use airport and military airport as depicted on airport zoning maps approved by the Kentucky Airport Zoning Commission.

Section 4. The Commission has jurisdiction over the airspace of the Commonwealth that exceeds 200 feet in height above the ground.

Section 5. The owner or person who has control over a structure which penetrates or will penetrate the airspace over which the Commission has Jurisdiction shall apply for a permit from the Commission in accordance with 602 KAR 50:090.

### INSTRUCTIONS

1. "Alteration" means to increase or decrease the height of a structure or change the obstruction marking and lighting.
2. "Applicant" means the person who will own or have control over the completed structure.
3. "Certification by Applicant" shall be made by the individual who will own or control the completed structure; or a partner in a partnership; or the president or authorized officer of a corporation company, or association; or the authorized official of a body politic; or the legally designated representative of a trustee, receiver, or assignee.
4. Prepare the application and forward to the Kentucky Dept. of Aviation, ATTN: Airport Zoning Commission, 90 Airport Drive, Frankfort KY 40601. For questions, telephone 502-782-4043.
5. The statutes applicable to the Kentucky Airport Commission are KRS 183.861 to 183.990 and the administrative regulations are 602 KAR Chapter 50.
6. When applicable, attach the following appendices to the application:

Appendix A. A 7.5 minute quadrangle topographical map prepared by the U.S. Geological Survey and the Kentucky Geological Survey with the exact location of the structure which is the subject of the application indicated thereon. (*The 7.5 minute quadrangle map may be obtained from the Kentucky Geological Survey, Department of Mines and Minerals, Lexington, KY 40506.*)

Appendix B. For structures on or very near to property of a public use airport, a copy of the airport layout drawing (ALP) with the exact location of the structure which is the subject of this application indicated thereon. (*The ALP may be obtained from the Chairperson of the local airport board or the Kentucky Airport Zoning Commission.*)

Appendix C. Copies of Federal Aviation Administration Applications (*FFA Form 7460-1*) or any orders issued by the manager, Air Traffic Division, FAA regional office.

Appendix D. If the applicant has indicated in item number 7 of the application that the structure will not be marked or lighted in accordance with the regulations of the Commission, the applicant shall attach a written request for a determination by the commission that the marking and lighting are not necessary. The applicant shall specifically state the reasons that the absence of marking and lighting will not impair the safety of air navigation.

Appendix E. The overall height in feet of the overhead transmission line or static wire above ground level or mean water level with span length 1,000 feet and over shall be depicted on a blueprint profile map.

### PENALTIES

1. Persons failing to comply with the Airport Zoning Commission statutes and regulations are liable for a fine or imprisonment as set forth in KRS 183.990(3).
2. Applicants are cautioned: Noncompliance with Federal Aviation Administration Regulations may provide for further penalties.



KENTUCKY TRANSPORTATION CABINET  
**KENTUCKY AIRPORT ZONING COMMISSION**

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

<b>APPLICANT (name)</b> Verizon Wireless		<b>PHONE</b> 770-797-1233	<b>FAX</b>	<b>KY AERONAUTICAL STUDY #</b>	
<b>ADDRESS (street)</b> 5055 North Point Parkway		<b>CITY</b> Alpharetta		<b>STATE</b> GA	<b>ZIP</b> 30022
<b>APPLICANT'S REPRESENTATIVE (name)</b> Crystal Swanson		<b>PHONE</b> 770-797-1233	<b>FAX</b>		
<b>ADDRESS (street)</b> 5055 North Point Parkway		<b>CITY</b> Alpharetta		<b>STATE</b> GA	<b>ZIP</b> 30022
<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 type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white <input type="checkbox"/> Other			
<b>LATITUDE</b> 36°59'26.09"		<b>LONGITUDE</b> 087°09'44.12"		<b>DATUM</b> <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27 <input type="checkbox"/> Other	
<b>NEAREST KENTUCKY</b> City Elkton County Todd		<b>NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT</b> Muhlenberg County			
<b>SITE ELEVATION (AMSL, feet)</b> 798		<b>TOTAL STRUCTURE HEIGHT (AGL, feet)</b> 255		<b>CURRENT (FAA aeronautical study #)</b>	
<b>OVERALL HEIGHT (site elevation plus total structure height, feet)</b> 1053				<b>PREVIOUS (FAA aeronautical study #)</b>	
<b>DISTANCE (from nearest Kentucky public use or Military airport to structure)</b> 14.12 NM				<b>PREVIOUS (KY aeronautical study #)</b>	
<b>DIRECTION (from nearest Kentucky public use or Military airport to structure)</b> NE					
<b>DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)</b>					
<b>DESCRIPTION OF PROPOSAL</b> Proposed 255' monopole. CK CLIFTY - 16687080					
<b>FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?)</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes, when? 3/1/22 2022-ASO-8404-OE curenly work in progress					
<b>CERTIFICATION (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>					
<b>PENALTIES (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>					
<b>NAME</b> Crystal Swanson	<b>TITLE</b> Regulatory	<b>SIGNATURE</b> <i>Crystal Swanson</i>		<b>DATE</b> 3/1/22	
<b>COMMISSION ACTION</b> <input type="checkbox"/> Chairperson, KAZC <input type="checkbox"/> Administrator, KAZC					
<input type="checkbox"/> Approved	<b>SIGNATURE</b>		<b>DATE</b>		
<input type="checkbox"/> Disapproved					

May 20, 2022

Mr. Rodney Strong, P.E.  
BTM Engineering, Inc. (BTM)  
3001 Taylor Springs Drive  
Louisville, KY 40220

**Re: Geotechnical Report  
Proposed 250-foot Telecommunications Tower  
CK Clifty KY Site, Location Code 617103749  
Elkton, KY**

Dear Mr. Strong:

Collier Engineering Company, Inc. (Collier) has completed the geotechnical report for the above referenced project. Our services were performed in general accordance with our proposal dated March 8, 2022. This report presents the findings of the limited subsurface exploration and provides geotechnical recommendations for sitework and the design and construction of foundations for the proposed tower and ancillary structures.

The design parameters provided herein are suitable for the type of tower proposed and a constructed structural height that is within a tolerance of about a quarter of the planned tower height. If the tower design or type is different than the kind assumed / stated in this correspondence, Collier should be allowed to evaluate our geotechnical recommendations with respect to the modifications in design.

### **PROJECT INFORMATION**

The following description is based on our review of the project construction drawings provided by BTM dated February 2022. The aspects of tower design, assumed parameters, and the project location are as follows:

- Site location: 462 Clifty Kirkmansville Road, Elkton, KY (see Exhibit 1)
- Cell tower: 250-foot self-supporting lattice design with ancillary equipment structures
- Assumed tower loads: axial – 600 kips; shear – 80 kips; uplift – 500 kips;
- Assumed pad loads / equipment weight (gravity load): 70 kips
- Assumed grading: less than about 3 feet of cut or fill

### Site and Subsurface Conditions

The project site includes open, near level terrain in a pasture adjacent to a greenhouse business. Based upon our perusal of the site plan included in the drawing set provided to us, less than about 3 feet of topographic relief is present across the area of proposed construction.

### Geology

The *Geologic Map of the Allegre Quadrangle, Todd County, Kentucky*<sup>1</sup> indicates the site is blanketed by Pennsylvanian Age sandstone of the Caseyville Formation. This unit is generally described as thin bedded to massive, commonly cross-bedded, and fine to coarse grained.

### Typical Profile

Near-surface conditions at the site were assessed with three borings that were drilled at the approximate locations and to the depth shown by the attached boring location plan and logs (Exhibit 1 and 2, respectively). The drilling locations generally coincide with stipulated tower leg locations as oriented on project drawings. Our interpretations and descriptions of the recovered samples and core specimens are indicated on the appropriate horizons on the log. Brief descriptions of the materials encountered within the drilling depths are summarized below.

Layer	Approximate Depth to Bottom of Stratum (feet)	Description	Consistency/Density
Stratum 1	~1	Topsoil/root mat	NA
Stratum 2	7	Silty clay/lean clay	Soft to very stiff <sup>1</sup>
Stratum 3	19	Weathered sandstone	Rec 96-100%, RQD 58-61% <sup>2</sup>

1. Based on standard penetration test (SPT) N-values ranging from 2 to 20 blows per foot (bpf). Two borings were advanced with flight augers and without sampling to ascertain soil thickness.
2. Rec = percentage of rock recovered in the coring run or interval; RQD = Rock Quality Designation; refer to the boring log in Exhibit 2 for details.

Auger refusal was encountered at a depth of about 7 feet. Below this depth, one boring was advanced into the refusal materials using a diamond bit attached to the outer barrel of a double core barrel. The inner barrel collected the cored material as the outer barrel was rotated at high speeds to cut the rock. The barrel was retrieved to the surface upon completion of each drill run. Once the core samples were retrieved, they were placed in a box and logged. The rock was later classified by an engineer and the “percent recovery” and rock quality designation (RQD) were determined.

The “percent recovery” is the ratio of the sample length retrieved to the drilled length expressed as a percent. An indication of the actual in-situ rock quality is provided by calculating

<sup>1</sup> As published on the *Kentucky Geological Survey* website, USGS Map GQ-446 (1965).

the sample's Rock Quality Designation (RQD) which is the ratio of the cumulative length of 4-inch or longer cores (discounting mechanical breaks) to the drilled length. The percent recovery and RQD are related to rock soundness and quality as illustrated below:

Relation of RQD and In-situ Rock Quality	
RQD (%)	Rock Quality
90 - 100	Excellent
75 - 90	Good
50 - 75	Fair
25 - 50	Poor
0 -25	Very Poor

### Groundwater

The boring was checked while drilling and after completion for groundwater. At these times and before coring operations commenced, the borehole was dry. Long term observations in piezometers or observation wells sealed from surface water are often required to define groundwater levels in this geologic setting. Groundwater level fluctuations occur due to seasonal rainfall, runoff, and other factors not evident at the time the borings were performed. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

## **RECOMMENDATIONS FOR DESIGN AND CONSTRUCTION**

### Geotechnical Considerations

Based on the drilling results, a drilled pier or a mat (buried) footing is suitable for support of the proposed tower. The lightly loaded equipment pads or ancillary structures can be built or supported on grade supported slabs with perimeter turn downs, shallow spread footings, or short piers. Foundation recommendations are presented in the following sections.

### **Foundation Recommendations**

#### Drilled Pier

The proposed tower can be founded on straight shaft drilled piers whose design may be predicated upon the following parameters.

Approximate depth (feet) <sup>1, 2</sup>	Allowable values for:			Cohesion (psf)	Internal friction angle (degrees)	Strain $\epsilon_{50}$	Lateral subgrade modulus (pci)
	skin friction (psf)	end bearing pressure (psf)	passive pressure (psf)				
0 – 3	Ignore	Ignore	Ignore	Ignore	Ignore	Ignore	Ignore
Silty lean clay 3 – 6	400	Ignore	1,250	1,250	-	0.008	100
Weathered sandstone 6 - 19	2,500	5,000	5,000	50,000	-	0.0001	3,000

1. The pier length should be adjusted if soil and bedrock conditions are encountered that vary significantly from those encountered at the boring location.
2. A total unit weight of 120 pcf can be assumed for the clay layer. The unit weight of sandstone bedrock may be taken as 140 pcf.

The above indicated cohesion, friction angle, lateral subgrade moduli, and strain values have no factors of safety, and the allowable skin friction and the passive resistances have a factor of safety of about 2. Listed parameters for cohesion, internal friction angle, lateral subgrade moduli, and strain values are approximate and are based on the boring results, published values, and our experience with similar soil and rock types. The allowable end bearing pressures are predicated on an approximate factor of safety of at least 3. If the drilled pier is designed using the above parameters, foundation settlement is not anticipated to exceed 1 inch.

The upper 3 feet of overburden should be ignored due to the potential negative effects of frost action and construction disturbance. To avoid decreases in lateral and uplift resistance caused by variable subsurface conditions, we recommend that drawings instruct the contractor to notify the engineer if subsurface conditions significantly different than encountered in our boring are disclosed during drilled pier installation. Under these circumstances, it may be necessary to adjust the overall length of the piers. To facilitate these adjustments and confirm that the piers are embedded in suitable materials, we recommended that a qualified geotechnical engineer observe the drilled pier excavations.

The drilled pier should be designed and constructed with a minimum shaft diameter of 30 inches to facilitate clean out and possible dewatering of the pier excavation. Temporary casing will be required during the pier excavation to control groundwater seepage and support the sides of the excavations in weak soil zones, through horizons of perched water, and below the water table, if encountered at the time of construction. The sides and bottom of the excavation should not be

disturbed during construction and the base of the shaft should be free of water, loose soil, and debris prior to placement of reinforcing steel and concrete.

We recommend a minimum concrete slump of at least 6 inches to facilitate removal of temporary casing. Casing may be extracted from a pier excavation during concrete placement provided that the concrete inside the casing is maintained at a sufficient level to resist any earth and hydrostatic pressures outside the casing during the entire casing removal procedure.

#### Shallow Mat (Buried) Foundation

If desired, a mat / shallow buried foundation bearing within or below the weathered bedrock interval (at or below a depth of about 8 feet) can be used to support the proposed tower. Any unsuitable conditions or materials encountered at the foundation contact elevation shall be removed and replaced with approved granular fill prior to foundation construction. The shallow footing can be designed using the following parameters.

- Subgrade ..... bedrock
- Net allowable bearing pressure <sup>1</sup> ..... 5,000 psf
- Allowable passive pressure <sup>2</sup> ..... 1,500 psf (below 3 feet)
- Ultimate coefficient of sliding friction ..... 0.55
- Minimum embedment below finished grade for frost protection ..... 24 inches

1. The recommended net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base.
2. The sides of the foundation excavation must be near-vertical and the concrete should be placed neat against these sidewalls for the passive earth pressure value to be valid. This parameter will be significantly reduced if the loaded side is sloped or benched and then backfilled. Lateral resistance due to friction at the footing base should be ignored where uplift occurs.

If the mat / buried foundation is designed using the above criteria and is constructed on an approved subgrade, total foundation settlement is expected to be 1 inch or less. The foundation settlement will depend upon the variations within the near surface rock profile, the structural loading conditions, the embedment depth of the footing, the thickness of compacted fill, and the quality of the earthwork operations.

A qualified geotechnical engineer should verify the character and integrity of the bedrock surface exposed at the planned footing subgrade prior to concrete placement. Any unsuitable conditions such as delaminated or detached bedrock intervals, clay layers, seams or slots, voids, etc., if encountered, should be undercut, and replaced, with approved engineered granular fill. The base of all foundation excavations should be free of water, debris, and loose rock fragments prior to placing concrete which should proceed as soon as practical after the excavation is opened. Should the subgrade at bearing level become disturbed, saturated, or



frozen, the affected material should be removed and replaced with compacted engineered fill prior to placing concrete.

Uplift forces can be resisted by the dead weight of the footing and the effective weight of any soil above the footing. A unit weight of soil not exceeding 115 pcf is appropriate for the on-site soils backfilled above the foundation assuming that it is compacted to at least 95 percent of standard Proctor maximum dry density (ASTM D-698). A unit weight of 150 pcf could be used for mat foundation concrete. The ground surface should be sloped away from the foundation to avoid ponding of water and saturation of the backfill materials.

### Foundations for Ancillary Structures

- Subgrade ..... stiff natural soil or approved engineered fill
- Net allowable bearing pressure <sup>1</sup>.....2,000 psf
- Coefficient of sliding friction..... 0.35
- Minimum embedment below finished grade for frost protection..... 24 inches
- Minimum footing size: 2 feet by 2 feet

1. The recommended net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base.

If grade supported pads, shallow spread footings, short canopy-support piers, or turn down slabs are designed using the above criteria and are constructed on an approved subgrade, total foundation settlement is expected to be 1 inch or less. Foundation settlement will depend upon the variations within the subsurface soil profile, actual loads, embedment depth, the type and thickness of underlying compacted fill, and the quality of the earthwork operations.

A geotechnical engineer should verify footing subgrade prior to concrete placement. Any soft or unsuitable soils, if encountered, should be undercut, and replaced, with approved engineered granular fill.

### Earthwork

Site preparation should begin with removal of topsoil, vegetation, organics, and any soft or otherwise unsuitable materials from the entire construction area. We recommend the actual stripping depth along with any soft soils that will require undercutting be evaluated by the geotechnical engineer at the time of construction.

Granular fill (sand, crushed stone, or well graded gravel) is recommended exclusively for engineered fill beneath buried or shallow foundations for the project. General engineered fill (exclusive of beneath / near foundations) may consist of approved native soil (clayey material) that is free of rocks greater than 3 inches, organic matter, and debris. Granular and clay soil fill should be spread in 9-inch-thick loose lifts and each layer should be compacted to at least 98% of the soil's standard Proctor maximum dry density. Moisture levels for granular fill should be

maintained at a level not only to achieve adequate density but that will afford the compacted material to demonstrate stability when subsequently proofrolled. The moisture content of soil fill should be controlled to within  $\pm 2\%$  of the materials optimum moisture as determined by the Proctor test.

Engineered fill should be tested for moisture content and compaction during the placement operations. Areas represented by failing tests should be reworked and retested as required until the specified moisture and compaction requirements are achieved. A qualified geotechnical engineer should be retained during construction to perform necessary tests during site preparation and foundation construction.

### Construction Considerations

Based on the available data, the upper soil subgrades are anticipated to be relatively unstable upon initial exposure. Unstable subgrade conditions could prevail during general construction operations particularly if the soils are wetted and / or subjected to repetitive construction traffic. Should unstable subgrade conditions persist, stabilization measures will need to be employed. Depending upon the site conditions as disclosed and as encountered at the time of grading / construction, stabilization might be accomplished at isolated locations or across widespread areas via scarification / recompaction, chemical additives (lime, kiln dust, cement, etc.), or crushed stone underlain by geotextiles (woven ground stabilization fabric or high modulus grid).

Construction traffic over completed and working soil subgrades should be avoided to the extent practical. The site should also be graded to prevent ponding and pooling of surface water on subgrades or in excavations. If subgrades should become frozen, desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and recompacted to the criteria stated for engineered fill.

All excavations should comply with applicable local, state, and federal safety regulations, including the current *OSHA Excavation and Trench Safety Standards*.

### Resistivity Analysis

Near-surface soil resistivity was field-measured using a resistivity meter and employing the Wenner Vertical Profiling Method. With this technique, potential electrodes are centered on a traverse line between the current electrodes and an equal "A" spacing between electrodes is maintained. Resistivity measurements were taken along the approximate traverse alignment shown on Exhibit 1. Individual resistivity values at the requested probe spacing are summarized on Page 8.

ELECTRICAL RESISTIVITY READINGS		
Traverse alignment	"A" Spacing (ft.)	Resistivity (ohm-cm)
E – W	2½	11,825
E – W	5	13,213
E – W	10	16,928
E – W	12½	20,801
E – W	20	30,869

### **CLOSING**

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. This report does not reflect any variations which may occur across the site, or between/beyond the boring locations. The nature and extent of such variations may not become evident until construction. If variations appear evident, it will be necessary to reevaluate the recommendations of this report.

Excluded from our geotechnical services are any evaluation of the cultural and natural resource aspects of the subject site and surrounding areas. In addition, the scope of geotechnical services for this project does not include any environmental or biological assessment of the site, or adjacent property, nor identification or prevention of pollutants, hazardous materials, or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

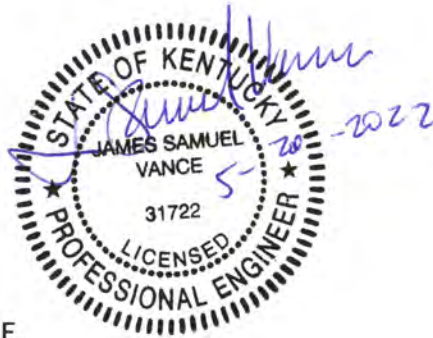
The information presented in this report is based upon the data obtained from the exploration limits at the boring locations and from other information discussed in this report. If changes are proposed in the design or location of the project as assumed / noted in this report, the conclusions and recommendations contained in this report shall not be considered valid unless Collier reviews the changes / differences and either verifies or augments the recommendations of this report in writing. A qualified geotechnical engineer should be retained to provide observation and testing services during grading, excavation, foundation construction, and other earth-related construction phases of the project.

Geotechnical Report for CK Clifty Cell Tower  
Elkton, KY  
May 20, 2022



We appreciate the opportunity to be of service to you. If you have any questions concerning this correspondence, or if we may be of further service to you in any way, please do not hesitate to contact us.

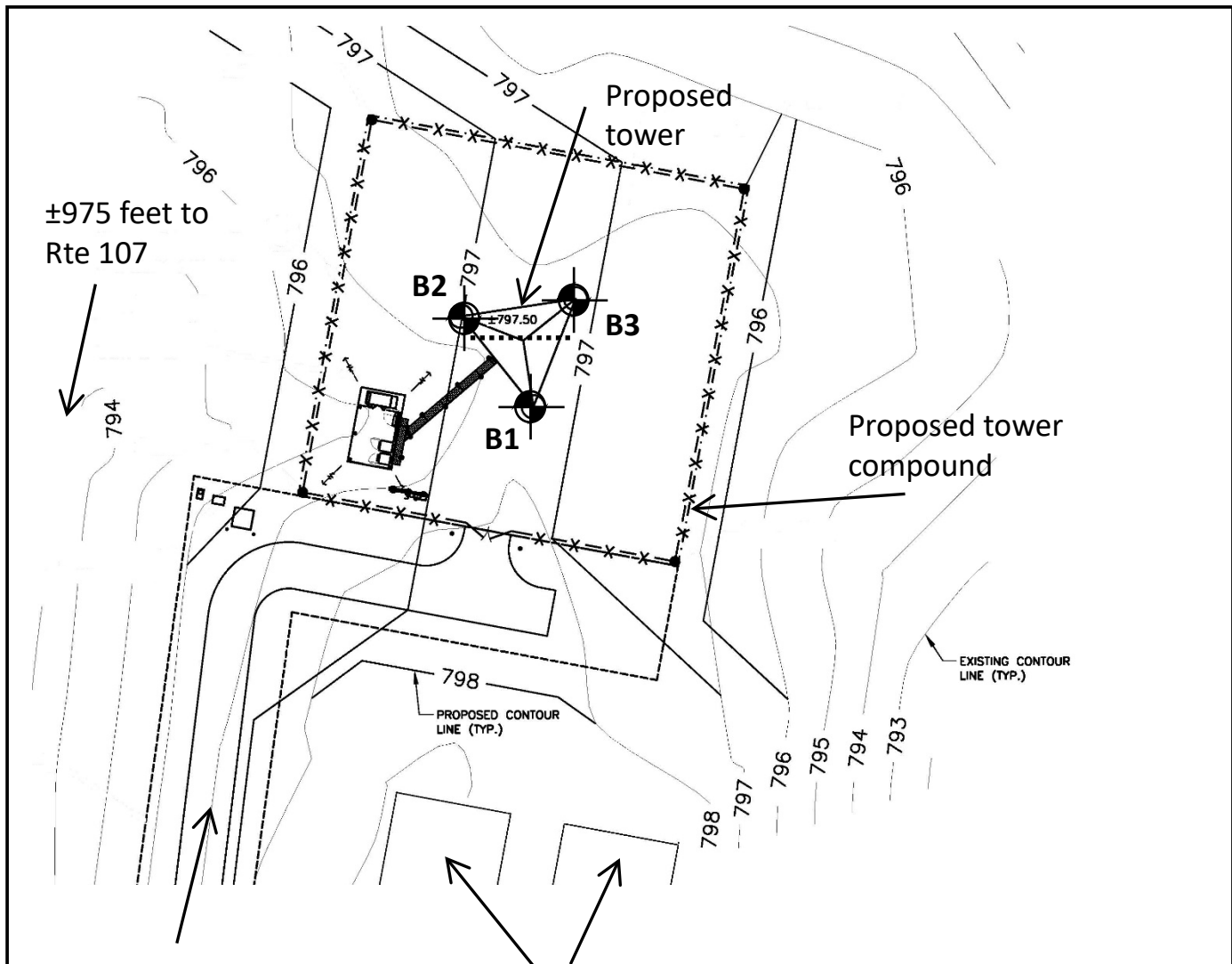
Sincerely,  
**Collier Engineering Company, Inc.**



J. Samuel Vance, P.E.  
Geotechnical Manager  
Kentucky PE #37122

- |              |           |                        |
|--------------|-----------|------------------------|
| Attachments: | Exhibit 1 | Boring Location Plan   |
|              | Exhibit 2 | Boring Logs (3 sheets) |
|              | Exhibit 3 | Supporting Notes       |





±975 feet to  
Rte 107

Proposed  
tower

Proposed tower  
compound

B2  
B3  
B1


EXISTING CONTOUR  
LINE (TYP.)

PROPOSED CONTOUR  
LINE (TYP.)

Proposed access and  
utility easement

Existing greenhouses

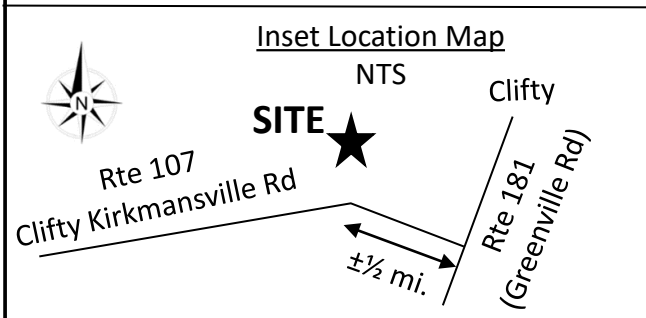
**Legend**


-  **B1** Approximate boring location and label
- ..... Approximate resistivity array alignment



**Notes**

1. Sketch adapted from drawings provided by BTM.
2. Borings drilled April 15 and May 11, 2022.
3. Electrical resistivity survey conducted on March 29, 2022.
4. Boring and electrical resistivity array locations shown are approximate and were established with reference to tower stake set by others.
5. Boring elevation obtained from drawing provided by BTM.



Project Mgr.	Project No. 3363-22-03	 2949 Nolensville Pike Nashville, Tennessee 37211 PH. (615) 333-6444 FAX. (615) 331-1050	<b>BORING LOCATION SKETCH</b>  Proposed CK Clifty Cell Tower 462 Clifty Kirksmanville Road Elkton, KY	Exh.
Drawn by: SV	Scale: Shown			<b>1</b>
Reviewed by:	File Name: Exh. 1			
Approved by:	Date: 11May2022			



2949 Nolensville Pike  
Nashville, TN 37211

### LOG OF BORING B-1

Project Name/Site No.: CK Clifty Tower, Site #617103749  
 Site Location: 462 Clifty Kirkmansville Road, Elkton, KY  
 Collier Project Number: 3363-22-03  
 Client: BTM Engineering, Inc.  
 Louisville, KY

Sheet 1 of 3

Depth (ft.)	Elevation (ft.)	Location:	Material Description	Depth	Groundwater	Sample type	SPT N-values (blows/foot)	Laboratory hand penetrometer (psf)	Water content (%)	Unconfined compressive strength (psf)	Atterberg Limits LL-PL-PI
		See Exhibit 1									
		*Surface Elevation: 798									
		*Latitude/Longitude: 36° 59' 26.09" N / -87° 09' 44.12" W									
		*See remarks below									
				<1							
			Topsoil/root mat	<1							
			Silty clay (CL), mottled tan/light grey, soft	3½		X	0 (12")/2		24		27-18-9
5	793		Lean clay (CL), sandy with weathered sandstone fragments, stiff to very stiff	7/6*		X	4-5-6 (11)		13		
						X	4-6-14 (20)		22		
10	788		<i>Auger refusal at 7 feet in original hole</i> <i>*Performed rock coring in an offset hole which refused at 6 feet</i>								
			Descriptions and photographs below								
15	783										
				19							
20	778		<b>6 to 7.7 feet:</b> sandstone, soft to moderately hard, grey-brown, thinly bedded and jointed, medium to fine grained								
25	773		<b>7.7 to 11 feet:</b> sandstone, moderately hard, orange brown/brown/tan, thin to medium bedded and jointed, medium to fine grained, diagonal fracture at 8.3 feet								
30	768		<b>11 to 19 feet:</b> sandstone, moderately hard, orange brown/brown/tan, thin to medium bedded and jointed, medium to fine grained								
35	763										
40	758										
45	753										
50	748										



Exhibit 2

Date started/completed: **May 15, 2022 (cored May 11&19)**  
 Drilled by: **ESE (cored by American Eng. Inc.)**  
 Drill rig: **Geoprobe 7822 - CME 45**  
 Hammer type: **Autohammer**  
 Driller:  
 Water while drilling: **Dry (before coring)**  
 Water upon completion: **Dry**  
 Borehole advanced by: **Hollow stem auger**  
 Borehole abandoned by: **Soil cuttings**

**Remarks:** The boring was positioned near the proposed tower center as reportedly staked by the project surveyor and at/near the approximate leg location as per the postulated tower orientation. The approximate boring location is indicated on Exhibit 1. The stated ground surface elevation and latitude/longitude information (relative to the proposed tower location) was obtained from the drawing information provided by BTM Engineering.  
 Soil descriptions are based on visual examination of the recovered samples and stratification lines represent the inferred boundary between soil types. Insitu, the transition may be gradual.



2949 Nolensville Pike  
Nashville, TN 37211

**LOG OF BORING B-2**

Project Name/Site No.: CK Clifty Tower, Site #617103749  
 Site Location: 462 Clifty Kirkmansville Road, Elkton, KY  
 Collier Project Number: 3363-22-03  
 Client: BTM Engineering, Inc.  
 Louisville, KY

Sheet 2 of 3

Depth (ft.)	Elevation (ft.)	Location: *Surface Elevation: *Latitude/Longitude: *See remarks below	See Exhibit 1 798 36° 59' 26.09" N / -87° 09' 44.12" W	Groundwater	Sample type	SPT N-values (blows/foot)	Laboratory hand penetrometer (psf)	Water content (%)	Unconfined compressive strength (psf)	Atterberg Limits  LL-PL-PI
		Material Description	Depth							
		Topsoil/root mat	<1							
5	793	Variably silty, sandy clay, some weathered rock fragments at depth	6½							
10	788	<i>Auger refusal at 6 ½ feet (no sampling performed, boring was an auger probe to assess soil thickness)</i>								
15	783									
20	778									
25	773									
30	768									
35	763									
40	758									
45	753									
50	748									

Exhibit 2

Date started/completed: **April 15, 2022**  
 Drilled by: **Earth Science Engineering (ESE)**  
 Drill rig: **Geoprobe 7822**  
 Hammer type: **Autohammer**  
 Driller:  
 Water while drilling: **Dry**  
 Water upon completion: **Dry**  
 Borehole advanced by: **Hollow stem auger**  
 Borehole abandoned by: **Soil cuttings**

**Remarks:** The boring was positioned near the proposed tower center as reportedly staked by the project surveyor and at/near the approximate leg location as per the postulated tower orientation. The approximate boring location is indicated on Exhibit 1. The stated ground surface elevation and latitude/longitude information (relative to the proposed tower location) was obtained from the drawing information provided by BTM Engineering.  
 Soil descriptions are based on visual examination of the recovered samples and stratification lines represent the inferred boundary between soil types. Insitu, the transition may be gradual.



2949 Nolensville Pike  
Nashville, TN 37211

**LOG OF BORING B-3**

Project Name/Site No.: CK Clifty Tower, Site #617103749  
 Site Location: 462 Clifty Kirkmansville Road, Elkton, KY  
 Collier Project Number: 3363-22-03  
 Client: BTM Engineering, Inc. Louisville, KY

Sheet 3 of 3

Depth (ft.)	Elevation (ft.)	Location: *Surface Elevation: *Latitude/Longitude: *See remarks below	See Exhibit 1 798 36° 59' 26.09" N / -87° 09' 44.12" W	Groundwater	Sample type	SPT N-values (blows/foot)	Laboratory hand penetrometer (psf)	Water content (%)	Unconfined compressive strength (psf)	Atterberg Limits  LL-PL-PI
		Material Description								
		Topsoil/root mat								
		Variably silty, sandy clay, some weathered rock fragments at depth								
5	793									
10	788									
15	783									
20	778									
25	773									
30	768									
35	763									
40	758									
45	753									
50	748									
Auger refusal at 6 ½ feet (no sampling performed, boring was an auger probe to assess soil thickness)										

Exhibit 2

Date started/completed: **April 15, 2022**  
 Drilled by: **Earth Science Engineering (ESE)**  
 Drill rig: **Geoprobe 7822**  
 Hammer type: **Autohammer**  
 Driller:  
 Water while drilling: **Dry**  
 Water upon completion: **Dry**  
 Borehole advanced by: **Hollow stem auger**  
 Borehole abandoned by: **Soil cuttings**

**Remarks:** The boring was positioned near the proposed tower center as reportedly staked by the project surveyor and at/near the approximate leg location as per the postulated tower orientation. The approximate boring location is indicated on Exhibit 1. The stated ground surface elevation and latitude/longitude information (relative to the proposed tower location) was obtained from the drawing information provided by BTM Engineering.  
 Soil descriptions are based on visual examination of the recovered samples and stratification lines represent the inferred boundary between soil types. Insitu, the transition may be gradual.



## Supporting Notes and Information

### Standard Penetration Test (SPT)

Standard penetration resistance - the number of blows required to advance a standard 2-inch O.D. split-spoon sampler the last 12 inches of the total 18-inch penetration with a 140-pound safety hammer falling 30 inches (using a cathead and rope) is considered the "Standard Penetration" or "N-value". An automatic hammer was used, and the greater efficiency realized with this tool has been considered in the interpretation and analysis of the subsurface information for this report. The SPT field test procedure was performed in general accordance with ASTM D1586.

### Lab Testing

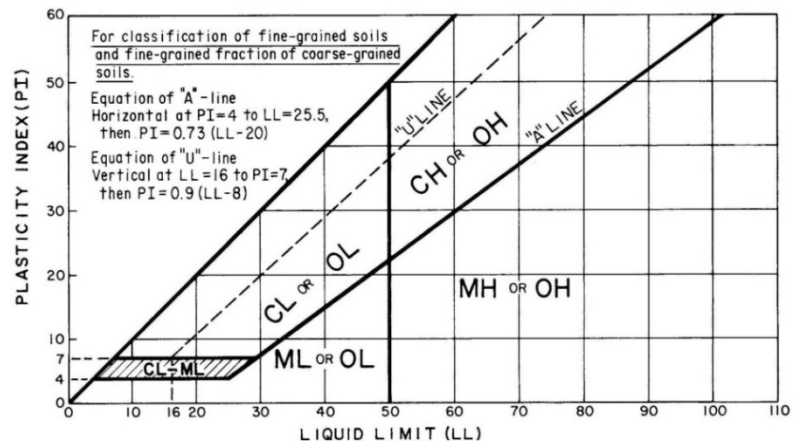
Selected SPT samples were subjected to laboratory testing to assess natural moisture content and Atterberg Limits. Samples not consumed by the testing will be stored and discarded after 60 days. A rock core specimen was tested for unconfined compressive strength.

### Soil Strength Terms

RELATIVE DENSITY OF COARSE-GRAINED SOILS Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS Consistency determined by laboratory shear strength testing, field visual-manual procedures, or standard penetration resistance		
Descriptive Term (Density)	Standard Penetration or N-Value (blows/ft.)	Descriptive Term (Consistency)	Correlated Unconfined Compressive Strength (psf)	Standard Penetration or N-Value (blows/ft.)
Very loose	0-3	Very soft	Less than 500	<2
Loose	4-9	Soft	500 to 1,000	2-4
Medium dense	10-29	Firm/medium stiff	1,000 to 2,000	4-8
Dense	30-50	Stiff	2,000 to 4,000	8-15
Very dense	>50	Very stiff	4,000 to 8,000	15-30
		Hard	>8,000	>30

### USCS Discussion and Plasticity Chart

Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.



Grain Size Terminology	
Major component of sample	Range in particle size
Boulder	>12 inches (300 mm)
Cobble	3 to 12 inches (75 to 300 mm)
Gravel	#4 sieve to 3 inches (4.75 mm to 75 mm)
Sand	#200 sieve to #4 sieve (0.075 mm to 4.75 mm)
Silt or clay	Passing #200 sieve (<0.075 mm)



**Directions to the Site**

Head north on N. Main St. / KY181, continue 13 miles to KY107 / Clifty-Kirkmansville Road; turn left onto KY107 / Clifty-Kirkmansville, continue .5 mile; site is on the right.

Prepared by Elizabeth Bentz Williams, AICP 317-637-1321

### LAND LEASE AGREEMENT

This Land Lease Agreement (the "Agreement") made this 26 day of April, 2022 between **Stevie and Brenda Powell**, husband and wife, and both Kentucky residents with a mailing address of 12160 Greenville Road, Elkton, Kentucky 42220, hereinafter collectively designated LESSOR and **Cellco Partnership d/b/a Verizon Wireless** with its principal offices at One Verizon Way, Mail Stop 4AW100, Basking Ridge, New Jersey 07920 (telephone number 866-862-4404), hereinafter designated LESSEE. LESSOR and LESSEE are at times collectively referred to hereinafter as the "Parties" or individually as the "Party."

### WITNESSETH

In consideration of the mutual covenants contained herein and intending to be legally bound hereby, the Parties hereto agree as follows:

1. **GRANT.** In accordance with this Agreement, LESSOR hereby grants to LESSEE the right to install, maintain and operate a telecommunications tower, facility, and equipment ("Use") upon the Premises (as hereinafter defined), which are a part of that real property owned, leased or controlled by LESSOR at approximately 462 Clifty Kirksmanville Road, Elkton, Kentucky 42220 (the "Property"). The Property is legally described on Exhibit "A" attached hereto and made a part hereof. The Premises are a portion of the Property including a portion of the parcel of land space (the "Land Space") consisting of approximately 100' x 100', or 10,000 square feet of land, as shown in detail on Exhibit "B" attached hereto and made a part hereof. LESSOR hereby grants permission to LESSEE to install, maintain and operate the telecommunications tower, facility, and equipment, antennas and appurtenances described in Exhibit "B" attached hereto. LESSEE reserves the right to replace the aforementioned equipment with similar and comparable equipment. In addition, LESSOR hereby grants to LESSEE a non-exclusive right (the "Easements") over the Property for access, ingress and egress, seven (7) days a week twenty-four (24) hours a day, on foot or motor vehicle, including trucks over or along a thirty foot (30') wide right-of-way extending from the nearest public right-of-way, Clifty Kirksmanville Road, to the Land Space, and for the installation and maintenance of utility wires, poles, cables, conduits, fiber, and pipes over, under, or along one or more rights of way from the Land Space, said Land Space and Rights of Way (hereinafter collectively referred to as the "Premises") being substantially as described herein in Exhibit "B" attached hereto and made a part hereof. The Property is also shown on the Tax Map of the City of Elkton, as Tax Map ID Number 050-21.

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

LESSEE may survey the Premises and said survey shall then become Exhibit "C" which shall be attached hereto and made a part hereof, and shall control in the event of boundary and access discrepancies between it and Exhibit "B". Cost for such work shall be borne by the LESSEE.

2. **INITIAL TERM.** This Agreement shall be effective as of the date of execution by both Parties ("Effective Date"). The initial term of the Agreement shall be for five (5) years beginning on the Commencement Date (as hereinafter defined). The "Commencement Date" shall be the first (1<sup>st</sup>) day of the month after LESSEE begins construction of the telecommunications facility. LESSOR and LESSEE agree

VzW Site Name: CK Clifty

Location Code: 706080

Atty Coots Henke & Wheeler, P.C.: Daniel E Coots

that they shall acknowledge, in writing, the Commencement Date once construction of the telecommunications facility has commenced.

3. EXTENSIONS. This Agreement shall automatically be extended for 4 additional five (5) year terms unless LESSEE terminates it at the end of the then current term by giving LESSOR written notice of the intent to terminate at least three (3) months prior to the end of the then current term. The initial term and all extensions shall be collectively referred to herein as the "Term".

4. RENTAL.

(a). Rental payments shall begin on the Commencement Date and be due at a total annual rental of [REDACTED], to be paid in equal monthly installments of [REDACTED] on the first (1<sup>st</sup>) day of the month, in advance, to LESSOR at 12160 Greenville Road, Elkton, Kentucky 42220 or to such other person, firm, or place as LESSOR may, from time to time, designate in writing at least 30 days in advance of any rental payment date by notice given in accordance with Paragraph 20 below. LESSOR and LESSEE acknowledge and agree that the initial rental payment shall not be delivered by LESSEE until 60 days after the Commencement Date. Upon agreement of the Parties, LESSEE may pay rent by electronic funds transfer and in such event, LESSOR agrees to provide to LESSEE bank routing information for such purpose upon request of LESSEE.

(b). For any party to whom rental payments are to be made, LESSOR or any successor in interest of LESSOR hereby agrees to provide to LESSEE (i) a completed, current version of Internal Revenue Service Form W-9, or equivalent; (ii) complete and fully executed state and local withholding forms if required; and (iii) other documentation to verify LESSOR's or such other party's right to receive rental as is reasonably requested by LESSEE. Rental shall accrue in accordance with this Agreement, but LESSEE shall have no obligation to deliver rental payments until the requested documentation has been received by LESSEE. Upon receipt of the requested documentation, LESSEE shall deliver the accrued rental payments as directed by LESSOR.

(c). The rental amount shall increase by ten percent (10%) at the beginning of each 5 year renewal term from the Commencement Date, as defined herein.

(d). ADDITIONAL EXTENSIONS. If at the end of the fourth (4th) five (5) year extension term this Agreement has not been terminated by either Party by giving to the other written notice of an intention to terminate it at least three (3) months prior to the end of such term, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of five (5) years and for five (5) year terms thereafter until terminated by either Party by giving to the other written notice of its intention to so terminate at least three (3) months prior to the end of such term. Annual rental for each such additional five (5) year term shall be equal to the annual rental payable with respect to the immediately preceding five (5) year term. The initial term and all extensions shall be collectively referred to herein as the "Term".

5. ACCESS. LESSEE shall have the non-exclusive right of ingress and egress from a public right-of-way, 7 days a week, 24 hours a day, over the Property to and from the Premises for the purpose of installation, operation and maintenance of LESSEE's communications equipment over or along a thirty foot (30') right-of-way ("Easement"), which shall be depicted on Exhibit "B". LESSEE may use the Easement for the installation, operation and maintenance of wires, cables,

VzW Site Name: CK Clifty

Location Code: 706080

Atty: Coots Henke & Wheeler, P.C.: Daniel E. Coots

conduits and pipes for all necessary electrical, telephone, fiber and other similar support services. In the event it is necessary, LESSOR agrees to grant LESSEE or the provider the right to install such services on, through, over and/or under the Property, provided the location of such services shall be reasonably approved by LESSOR. Notwithstanding anything to the contrary, the Premises shall include such additional space sufficient for LESSEE's radio frequency signage and/or barricades as are necessary to ensure LESSEE's compliance with Laws (as defined in Paragraph 27).

6. CONDITION OF PROPERTY. LESSOR shall deliver the Premises to LESSEE in a condition ready for LESSEE's Use and clean and free of debris. Notwithstanding the foregoing, LESSEE shall be responsible for any tree clearing/site preparation associated with the Land Space and/or Easement areas. LESSOR represents and warrants to LESSEE that as of the Effective Date, the Premises is (a) in compliance with all Laws; and (b) in compliance with all EH&S Laws (as defined in Paragraph 24).

7. IMPROVEMENTS. The communications equipment including, without limitation, the tower, equipment shelters/platforms, antenna mounts, antennas, conduits, and other improvements shall be at LESSEE's expense and installation shall be at the discretion and option of LESSEE. LESSEE shall have the right to replace, repair, add or otherwise modify its communications equipment, antennas, conduits, fencing and other screening, or other improvements or any portion thereof and the frequencies over which the communications equipment operates, whether or not any of the communications equipment, antennas, conduits or other improvements are listed on any exhibit.

8. GOVERNMENT APPROVALS. LESSEE's Use is contingent upon LESSEE obtaining all of the certificates, permits and other approvals (collectively the "Government Approvals") that may be required by any Federal, State or Local authorities (collectively, the "Government Entities") as well as a satisfactory soil boring test, environmental studies, or any other due diligence LESSEE chooses that will permit LESSEE's Use. By signing this Agreement, LESSOR consents to LESSEE making all necessary applications with the appropriate zoning authority and shall cooperate with LESSEE in its effort to obtain such approvals. LESSOR shall take no action which would adversely affect the status of the Property with respect to LESSEE's Use.

9. TERMINATION. LESSEE may, unless otherwise stated, immediately terminate this Agreement upon written notice to LESSOR in the event that (i) any applications for such Government Approvals should be finally rejected; (ii) any Government Approval issued to LESSEE is canceled, expires, lapses or is otherwise withdrawn or terminated by any Government Entity; (iii) LESSEE determines that such Government Approvals may not be obtained in a timely manner; (iv) LESSEE determines any structural analysis is unsatisfactory; (v) LESSEE, in its sole discretion, determines the Use of the Premises is obsolete or unnecessary; (vi) with 3 months prior notice to LESSOR, upon the annual anniversary of the Commencement Date; or (vii) at any time before the Commencement Date for any reason or no reason in LESSEE's sole discretion.

10. INDEMNIFICATION. Subject to Paragraphs 11 and 12, each Party shall indemnify and hold the other harmless against any claim of liability or loss from personal injury or property damage resulting from or arising out of the negligence or willful misconduct of the indemnifying Party, its employees, contractors or agents, except to the extent such claims or damages may be due to or caused by the negligence or willful misconduct of the other Party, or its employees, contractors or agents. The indemnified Party will provide the indemnifying Party with prompt, written notice

VzW Site Name: CK Clifty

Location Code: 706080

Atty Coots Henke & Wheeler, P.C : Daniel E. Coots

of any claim covered by this indemnification; provided that any failure of the indemnified Party to provide any such notice, or to provide it promptly, shall not relieve the indemnifying Party from its indemnification obligation in respect of such claim, except to the extent the indemnifying Party can establish actual prejudice and direct damages as a result thereof. The indemnified Party will cooperate appropriately with the indemnifying Party in connection with the indemnifying Party's defense of such claim. The indemnifying Party shall defend any indemnified Party, at the indemnified Party's request, against any claim with counsel reasonably satisfactory to the indemnified Party. The indemnifying Party shall not settle or compromise any such claim or consent to the entry of any judgment without the prior written consent of each indemnified Party and without an unconditional release of all claims by each claimant or plaintiff in favor of each indemnified Party.

11. INSURANCE. The LESSOR agrees that at its own cost and expense, LESSOR will maintain commercial liability insurance with limits not less than \$1,000,000 for injury to or death of one or more persons in any one occurrence and \$1,000,000 for damage or destruction in any one occurrence. The LESSEE agrees that at its own cost and expense, it will maintain commercial general liability insurance with limits not less than \$2,000,000 for injury to or death of one or more persons in any one occurrence and \$2,000,000 for damage or destruction in any one occurrence. The Parties agree to include the other Party as an additional insured. The Parties hereby waive and release any and all rights of action for negligence against the other which may hereafter arise on account of damage to the Premises or the Property, resulting from any fire, or other casualty which is insurable under "Causes of Loss – Special Form" property damage insurance or for the kind covered by standard fire insurance policies with extended coverage, regardless of whether or not, or in what amounts, such insurance is now or hereafter carried by the Parties, even if any such fire or other casualty shall have been caused by the fault or negligence of the other Party. These waivers and releases shall apply between the Parties and they shall also apply to any claims under or through either Party as a result of any asserted right of subrogation. All such policies of insurance obtained by either Party concerning the Premises or the Property shall waive the insurer's right of subrogation against the other Party.

12. LIMITATION OF LIABILITY. Except for indemnification pursuant to Paragraphs 10 and 24, a violation of Paragraph 30, or a violation of law, neither Party shall be liable to the other, or any of their respective agents, representatives, or employees for any lost revenue, lost profits, loss of technology, rights or services, incidental, punitive, indirect, special or consequential damages, loss of data, or interruption or loss of use of service, even if advised of the possibility of such damages, whether under theory of contract, tort (including negligence), strict liability or otherwise.

13. INTERFERENCE.

(a). LESSOR agrees that LESSOR and other occupants of the Property will not cause interference to LESSEE's equipment (that is measurable in accordance with industry standards to the then existing equipment of LESSEE).

(b). Without limiting any other rights or remedies, if interference occurs and continues for a period in excess of 48 hours following notice to the interfering party via telephone to LESSEE'S Network Operations Center (at (800) 224-6620/(800) 621-2622) or to LESSOR at (270) 604-5515, the interfering party shall or shall require any other user to reduce power or cease operations of the interfering equipment until the interference is cured.

VzW Site Name: CK Clifty

Location Code: 706080

Atty: Coots Henke & Wheeler, P.C. Daniel E. Coots

(c). The Parties acknowledge that there will not be an adequate remedy at law for noncompliance with the provisions of this Paragraph and therefore the Parties shall have the right to equitable remedies such as, without limitation, injunctive relief and specific performance.

14. REMOVAL AT END OF TERM. Upon expiration or within ninety (90) days of earlier termination, LESSEE shall remove LESSEE's Communications Equipment (except footings) and restore the Premises to its original condition, reasonable wear and tear and casualty damage excepted. LESSOR agrees and acknowledges that the communications equipment shall remain the personal property of LESSEE and LESSEE shall have the right to remove the same at any time during the Term, whether or not said items are considered fixtures and attachments to real property under applicable laws. If such time for removal causes LESSEE to remain on the Premises after termination of the Agreement, LESSEE shall pay rent at the then existing monthly rate or on the existing monthly pro-rata basis if based upon a longer payment term, until the removal of the *communications equipment is completed.*

15. HOLDOVER. If upon expiration of the Term the Parties are negotiating a new lease or a lease extension, then this Agreement shall continue during such negotiations on a month to month basis at the rental in effect as of the date of the expiration of the Term. In the event that the Parties are not in the process of negotiating a new lease or lease extension and LESSEE holds over after the expiration or earlier termination of the Term, then LESSEE shall pay rent at the then existing monthly rate or on the existing monthly pro-rata basis if based upon a longer payment term, until the removal of the communications equipment is completed.

16. RIGHT OF FIRST REFUSAL. If at any time after the Effective Date, LESSOR receives an offer or letter of intent from any person or entity that is in the business of owning, managing or operating communications facilities or is in the business of acquiring landlord interests in agreements relating to communications facilities, to purchase fee title, an easement, a lease, a license, or any other interest in the Premises or any portion thereof or to acquire any interest in this Agreement, or an option for any of the foregoing, LESSOR shall provide written notice to LESSEE of said offer ("LESSOR's Notice"). LESSOR's Notice shall include the prospective buyer's name, the purchase price being offered, any other consideration being offered, the other terms and conditions of the offer, a description of the portion of and interest in the Premises and/or this Agreement which will be conveyed in the proposed transaction, and a copy of any letters of intent or form agreements presented to LESSOR by the third party offeror. LESSEE shall have the right of first refusal to meet any bona fide offer of sale or transfer on the terms and conditions of such offer or by effectuating a transaction with substantially equivalent financial terms. If LESSEE fails to provide written notice to LESSOR that LESSEE intends to meet such bona fide offer within thirty (30) days after receipt of LESSOR's Notice, LESSOR may proceed with the proposed transaction in accordance with the terms and conditions of such third party offer, in which event this Agreement shall continue in full force and effect and the right of first refusal described in this Paragraph shall survive any such conveyance to a third party. If LESSEE provides LESSOR with notice of LESSEE's intention to meet the third party offer within thirty (30) days after receipt of LESSOR's Notice, then if LESSOR's Notice describes a transaction involving greater space than the Premises, LESSEE may elect to proceed with a transaction covering only the Premises and the purchase price shall be pro-rated on a square footage basis. Further, LESSOR acknowledges and agrees that if LESSEE exercises this right of first refusal, LESSEE may require a reasonable period of time to conduct due diligence and effectuate the closing of a transaction on substantially equivalent financial terms of

VzW Site Name. CK Clifty

Location Code. 706080

Atty: Coots Henke & Wheeler, P.C.. Daniel E. Coots

the third party offer. For purposes of this Paragraph, any transfer, bequest or devise of LESSOR's interest in the Property as a result of the death of LESSOR, whether by will or intestate succession, or any conveyance to LESSOR's family members by direct conveyance or by conveyance to a trust for the benefit of family members shall not be considered a sale for which LESSEE has any right of first refusal.

17. RIGHTS UPON SALE. Should LESSOR, at any time during the Term, decide (i) to sell or otherwise transfer all or any part of the Property, or (ii) to grant to a third party by easement or other legal instrument an interest in and to any portion of the Premises, such sale, transfer, or grant of an easement or interest therein shall be under and subject to this Agreement and any such purchaser or transferee shall recognize LESSEE's rights hereunder. In the event that LESSOR completes any such sale, transfer, or grant described in this Paragraph without executing an assignment of the Agreement whereby the third party agrees in writing to assume all obligations of LESSOR under this Agreement, then LESSOR shall not be released from its obligations to LESSEE under this Agreement, and LESSEE shall have the right to look to LESSOR and the third party for the full performance of the Agreement.

18. LESSOR'S TITLE. LESSOR covenants that LESSEE, on paying the rent and performing the covenants herein, shall peaceably and quietly have, hold and enjoy the Premises. LESSOR represents and warrants to LESSEE as of the Effective Date and covenants during the Term that LESSOR has full authority to enter into and execute this Agreement and that there are no liens, judgments, covenants, easements, restrictions or other impediments of title that will adversely affect LESSEE's Use.

19. ASSIGNMENT. Without any approval or consent of the other Party, this Agreement may be sold, assigned or transferred by either Party to (i) any entity in which the Party directly or indirectly holds an equity or similar interest; (ii) any entity which directly or indirectly holds an equity or similar interest in the Party; or (iii) any entity directly or indirectly under common control with the Party. LESSEE may unilaterally assign this Agreement without the approval or consent of LESSOR to any third party tower company that agrees to construct and develop the Premises. LESSEE may also assign this Agreement to any entity which acquires all or substantially all of LESSEE's assets in the market defined by the FCC in which the Property is located by reason of a merger, acquisition or other business reorganization without approval or consent of LESSOR. As to other parties, this Agreement may not be sold, assigned or transferred without the written consent of the other Party, which such consent will not be unreasonably withheld, delayed or conditioned. No change of stock ownership, partnership interest or control of LESSEE or transfer upon partnership or corporate dissolution of either Party shall constitute an assignment hereunder. LESSEE may sublet the Premises in LESSEE's sole discretion.

20. NOTICES. Except for notices permitted via telephone in accordance with Paragraph 13, all notices hereunder must be in writing and shall be deemed validly given if sent by certified mail, return receipt requested or by commercial courier, provided the courier's regular business is delivery service and provided further that it guarantees delivery to the addressee by the end of the next business day following the courier's receipt from the sender, addressed as follows (or any other address that the Party to be notified may have designated to the sender by like notice):



VzW Site Name: CK Clifty  
Location Code: 706080  
Atty: Coots Henke & Wheeler, P.C.: Daniel E. Coots

LESSOR: Stevie and Brenda Powell  
12160 Greenville Road  
Elkton, Kentucky 42220

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

Notice shall be effective upon actual receipt or refusal as shown on the receipt obtained pursuant to the foregoing.

21. SUBORDINATION AND NON-DISTURBANCE. If applicable and within fifteen (15) days of the Effective Date, LESSOR shall obtain a Non-Disturbance Agreement, as defined below, from its existing mortgagee(s), ground lessors and master lessors, if any, of the Property. At LESSOR's option, this Agreement shall be subordinate to any future master lease, ground lease, mortgage, deed of trust or other security interest (a "Mortgage") by LESSOR which from time to time may encumber all or part of the Property; provided, however, as a condition precedent to LESSEE being required to subordinate its interest in this Agreement to any future Mortgage covering the Property, LESSOR shall obtain for LESSEE's benefit a non-disturbance and attornment agreement for LESSEE's benefit in the form reasonably satisfactory to LESSEE, and containing the terms described below (the "Non-Disturbance Agreement"), and shall recognize LESSEE's rights under this Agreement. The Non-Disturbance Agreement shall include the encumbering party's ("Lender's") agreement that, if Lender or its successor-in-interest or any purchaser of Lender's or its successor's interest (a "Purchaser") acquires an ownership interest in the Property, Lender or such successor-in-interest or Purchaser will honor all of the terms of the Agreement. Such Non-Disturbance Agreement must be binding on all of Lender's participants in the subject loan (if any) and on all successors and assigns of Lender and/or its participants and on all Purchasers. In return for such Non-Disturbance Agreement, LESSEE will execute an agreement for Lender's benefit in which LESSEE (1) confirms that the Agreement is subordinate to the Mortgage or other real property interest in favor of Lender, (2) agrees to attorn to Lender if Lender becomes the owner of the Property and (3) agrees to accept a cure by Lender of any of LESSOR's defaults, provided such cure is completed within the deadline applicable to LESSOR. In the event LESSOR defaults in the payment and/or other performance of any mortgage or other real property interest encumbering the Property, LESSEE, may, at its sole option and without obligation, cure or correct LESSOR's default and upon doing so, LESSEE shall be subrogated to any and all rights, titles, liens and equities of the holders of such mortgage or other real property interest and LESSEE shall be entitled to deduct and setoff against all rents that may otherwise become due under this Agreement the sums paid by LESSEE to cure or correct such defaults.

22. DEFAULT. It is a "Default" if (i) either Party fails to comply with this Agreement and does not remedy the failure within thirty (30) days after written notice by the other Party or, if the failure cannot reasonably be remedied in such time, if the failing Party does not commence a remedy within the allotted thirty (30) days and diligently pursue the cure to completion within ninety (90) days after the initial written notice, or (ii) LESSOR fails to comply with this Agreement

VzW Site Name CK Clifty

Location Code. 706080

Atty. Coots Henke & Wheeler, P C . Daniel E. Coots

and the failure substantially interferes with LESSEE's Use, in LESSEE's reasonable discretion, and LESSOR does not remedy the failure within five (5) days after written notice from LESSEE or, if the failure cannot reasonably be remedied in such time, if LESSOR does not commence a remedy within the allotted five (5) days and diligently pursue the cure to completion within fifteen (15) days after the initial written notice. The cure periods set forth in this Paragraph 22 do not extend the period of time in which either Party has to cure interference pursuant to Paragraph 13 of this Agreement.

23. REMEDIES. In the event of a Default, without limiting the non-defaulting Party in the exercise of any right or remedy which the non-defaulting Party may have by reason of such default, the non-defaulting Party may terminate this Agreement and/or pursue any remedy now or hereafter available to the non-defaulting Party under the Laws or judicial decisions of the state in which the Property is located. Further, upon a Default, the non-defaulting Party may at its option (but without obligation to do so), perform the defaulting Party's duty or obligation. The costs and expenses of any such performance by the non-defaulting Party shall be due and payable by the defaulting Party upon invoice therefor. If LESSEE undertakes any such performance on LESSOR's behalf and LESSOR does not pay LESSEE the full undisputed amount within thirty (30) days of its receipt of an invoice setting forth the amount due, LESSEE may offset the full undisputed amount due against all fees due and owing to LESSOR under this Agreement until the full undisputed amount is fully reimbursed to LESSEE.

24. ENVIRONMENTAL. LESSEE shall conduct its business in compliance with all applicable laws governing the protection of the environment or employee health and safety ("EH&S Laws"). LESSEE shall indemnify and hold harmless the LESSOR from claims to the extent resulting from LESSEE's violation of any applicable EH&S Laws or to the extent that LESSEE causes a release of any regulated substance to the environment. LESSOR shall indemnify and hold harmless LESSEE from all claims resulting from the violation of any applicable EH&S Laws by LESSOR or its employees, contractors or agents, or a release of any regulated substance to the environment caused by LESSOR, its employees, contractors or agents, except to the extent resulting from the activities of LESSEE. The Parties recognize that LESSEE is only leasing a small portion of LESSOR's property and that LESSEE shall not be responsible for any environmental condition or issue except to the extent resulting from LESSEE's specific activities and responsibilities. In the event that LESSEE encounters any hazardous substances that do not result from its activities, LESSEE may relocate its facilities to avoid such hazardous substances to a mutually agreeable location or, if LESSEE desires to remove at its own cost all or some the hazardous substances or materials (such as soil) containing those hazardous substances, LESSOR agrees to sign any necessary waste manifest associated with the removal, transportation and/or disposal of such substances.

25. CASUALTY. If a fire or other casualty damages the Property or the Premises and substantially impairs LESSEE's Use, in LESSEE's reasonable discretion, rent shall abate until LESSEE'S Use is restored. If LESSEE's Use is not restored within forty-five (45) days, LESSEE may terminate this Agreement.

26. CONDEMNATION. If a condemnation of any portion of the Property or Premises substantially impairs LESSEE's Use, in LESSEE's reasonable discretion, LESSEE may terminate this Agreement. LESSEE may on its own behalf make a claim in any condemnation proceeding involving the Premises for losses related to LESSEE's communications equipment, relocation costs

VzW Site Name: CK Clifty

Location Code 706080

Atty: Coots Henke & Wheeler, P.C. Daniel E. Coots

and, specifically excluding loss of LESSEE's leasehold interest, any other damages LESSEE may incur as a result of any such condemnation.

27. APPLICABLE LAWS. During the Term, LESSOR shall maintain the Property in compliance with all applicable laws, EH&S Laws, rules, regulations, ordinances, directives, covenants, easements, consent decrees, zoning and land use regulations, and restrictions of record, permits, building codes, and the requirements of any applicable fire insurance underwriter or rating bureau, now in effect or which may hereafter come into effect (including, without limitation, the Americans with Disabilities Act and laws regulating hazardous substances) (collectively "Laws"). LESSEE shall, in respect to the condition of the Premises and at LESSEE's sole cost and expense, comply with (i) all Laws relating solely to LESSEE's specific and unique nature of use of the Premises; and (ii) all building codes requiring modifications to the Premises due to the improvements being made by LESSEE in the Premises. It shall be LESSOR's obligation to comply with all Laws relating to the Property, without regard to specific use (including, without limitation, modifications required to enable LESSEE to obtain all necessary building permits).

28. TAXES.

(a). LESSOR shall invoice and LESSEE shall pay any applicable transaction tax (including sales, use, gross receipts, or excise tax) imposed on the LESSEE and required to be collected by the LESSOR based on any service, rental space, or equipment provided by the LESSOR to the LESSEE. LESSEE shall pay all personal property taxes, fees, assessments, or other taxes and charges imposed by any Government Entity that are imposed on the LESSEE and required to be paid by the LESSEE that are directly attributable to the LESSEE's equipment or LESSEE's use and occupancy of the Premises. Payment shall be made by LESSEE within sixty (60) days after presentation of a receipted bill and/or assessment notice which is the basis for such taxes or charges. LESSOR shall pay all ad valorem, personal property, real estate, sales and use taxes, fees, assessments or other taxes or charges that are attributable to LESSOR's Property or any portion thereof imposed by any Government Entity.

(b). LESSEE shall have the right, at its sole option and at its sole cost and expense, to appeal, challenge or seek modification of any tax assessment or billing for which LESSEE is wholly or partly responsible for payment. LESSOR shall reasonably cooperate with LESSEE at LESSEE's expense in filing, prosecuting and perfecting any appeal or challenge to taxes as set forth in the preceding sentence, including but not limited to, executing any consent, appeal or other similar document. In the event that as a result of any appeal or challenge by LESSEE, there is a reduction, credit or repayment received by the LESSOR for any taxes previously paid by LESSEE, LESSOR agrees to promptly reimburse to LESSEE the amount of said reduction, credit or repayment. In the event that LESSEE does not have the standing rights to pursue a good faith and reasonable dispute of any taxes under this paragraph, LESSOR will pursue such dispute at LESSEE's sole cost and expense upon written request of LESSEE.

29. ACCESS TO TOWER. LESSOR agrees the LESSEE shall have free access to the Tower at all times for the purpose of installing and maintaining the said equipment. LESSOR shall furnish LESSEE with necessary means of access for the purpose of ingress and egress to this site and Tower location. It is agreed, however, that only authorized engineers, employees or properly authorized contractors of LESSEE or persons under their direct supervision will be permitted to enter said premises.

VzW Site Name: CK Clifty

Location Code: 706080

Atty: Coots Henke & Wheeler, P.C.: Daniel E Coots

30. NON-DISCLOSURE. The Parties agree this Agreement and any information exchanged between the Parties regarding the Agreement are confidential. The Parties agree not to provide copies of this Agreement or any other confidential information to any third party without the prior written consent of the other or as required by law. If a disclosure is required by law, prior to disclosure, the Party shall notify the other Party and cooperate to take lawful steps to resist, narrow, or eliminate the need for that disclosure.

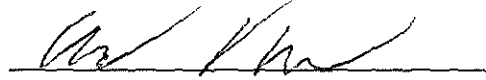
31. MOST FAVORED LESSEE. LESSOR represents and warrants that the rent, benefits and terms and conditions granted to LESSEE by LESSOR hereunder are now and shall be, during the Term, no less favorable than the rent, benefits and terms and conditions for substantially the same or similar tenancies or licenses granted by LESSOR to other parties. If at any time during the Term LESSOR shall offer more favorable rent, benefits or terms and conditions for substantially the same or similar tenancies or licenses as those granted hereunder, then LESSOR shall, within thirty (30) days after the effective date of such offering, notify LESSEE of such fact and offer LESSEE the more favorable offering. If LESSEE chooses, the parties shall then enter into an amendment that shall be effective retroactively to the effective date of the more favorable offering, and shall provide the same rent, benefits or terms and conditions to LESSEE. LESSEE shall have the right to decline to accept the offering. LESSOR's compliance with this requirement shall be subject, at LESSEE's option, to independent verification.

32. MISCELLANEOUS. This Agreement contains all agreements, promises and understandings between the LESSOR and the LESSEE regarding this transaction, and no oral agreement, promises or understandings shall be binding upon either the LESSOR or the LESSEE in any dispute, controversy or proceeding. This Agreement may not be amended or varied except in a writing signed by all Parties. This Agreement shall extend to and bind the heirs, personal representatives, successors and assigns hereto. The failure of either party to insist upon strict performance of any of the terms or conditions of this Agreement or to exercise any of its rights hereunder shall not waive such rights and such party shall have the right to enforce such rights at any time. The performance of this Agreement shall be governed, interpreted, construed and regulated by the laws of the state in which the Premises is located without reference to its choice of law rules. Except as expressly set forth in this Agreement, nothing in this Agreement shall grant, suggest or imply any authority for one Party to use the name, trademarks, service marks or trade names of the other for any purpose whatsoever. LESSOR agrees to execute a Memorandum of this Agreement, which LESSEE may record with the appropriate recording officer. The provisions of the Agreement relating to indemnification from one Party to the other Party shall survive any termination or expiration of this Agreement.

[Signature page follows. The remainder of this page is intentionally blank.]

VzW Site Name CK Clifty  
Location Code: 706080  
Atty Coots Henke & Wheeler, P.C., Daniel E Coots

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



WITNESS

LESSOR:



Stevie Powell

Date: 3-18-2022

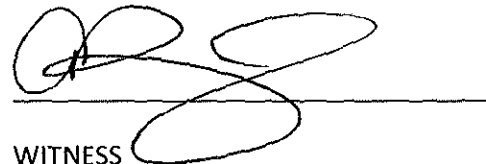


WITNESS



Brenda Powell

Date: 3-18-2022



WITNESS

Abigail Ball

LESSEE:

CELLCO PARTNERSHIP d/b/a Verizon Wireless

By: 

Its: Ed Maher

Director - Network Field Engineering

Date: 4/26/22

VzW Site Name: CK Clifty

Location Code: 706080

Atty. Coots Henke & Wheeler, P.C. Daniel E. Coots

**EXHIBIT "A"**

**DESCRIPTION OF PROPERTY**

Property located in Todd County, Kentucky

A certain tract of land in Todd County, Kentucky, located on the North side of Ky. Hwy. No. 107 approximately 1.5 miles Southwest of Clifty, and further described from a survey by E. T. Riley, Land Surveyor, Ky. Reg. No. 128 on April 11, 1978, as follows.

Beginning at a stake in the North right of way line of Hwy. 107, a corner with Gilbert Francis; thence with Francis' line, passing just East of a well house, N 02° 51' W - 14.71 chains to a rock, a corner with same; thence with Francis' line N 14° 34' W - 5.77 chains to a stake in the center of an old road; thence with Francis' line along the old road N 44° 44' W - 4.63 chains to a stake, a corner with same; thence with Francis' line leaving the old road N 57° 02' W - 8.51 chains crossing the branch to a bench on the West side thereof, a corner with Francis and the Petrie Heirs; thence with the line of the Petrie Heirs 12 calls along a bluff crossing the branch N 20° 30' E - 5.71 chains to a point on the bluff, N 36° 04' E - 6.37 chains, S 28° 51' E - 2.80 chains, N 85° 14' E - 1.20 chains, S 42° 31' E - 1.63 chains, N 33° 41' E - 1.44 chains, N 79° 13' E - 2.14 chains, East - 7.00 chains, S 52° 53' E - 4.64 chains, S 11° 19' E - 8.67 chains, S 30° 15' W - 1.39 chains, S 86° 11' E - 3.01 chains to a waterfall, a corner with the Petrie Heirs and William Carver; thence up the branch with Carver's line S 06° 20' E - 9.06 chains and S 11° 38' W - 2.78 chains to a point in the fork of the branch; thence with the Southwest fork along Carver's line S 31° 22' W - 4.80 chains and S 09° 3' E - 5.12 chains to an oak tree near the head of the branch, a corner with Carver; thence with the lines of Carver and Harold Shemwell S 09° 27' W - 4.69 chains to a rock on the East side of a gravel drive, said rock being 31 feet North of the North right of way line of Ky. Hwy. 107; thence along the North side of the old road N 85° 36' W - 5.99 chains to an oak tree in the North right of way line of Hwy. 107 at the junction with the North side of the old road; thence with the said right of way line N 83° 15' W - 3.92 chains and N 86° 51' W - 2.55 chains to the beginning point, containing 63.905 acres.

EXCEPTION There is excepted from the foregoing described property a certain tract conveyed therefrom by Huston McGehee, widower, to Morris B. McGehee and wife by Deed dated August 5, 1968, and recorded in Deed Book 85, Page 694, records of the Todd County Court Clerk's Office, and more fully described as follows:

Beginning at a stake in the North right of way line of Ky. Hwy. No. 107, 162 feet West of the Southeast corner of the Huston McGehee property, a new corner with said McGehee; thence on a new line with said McGehee N 9° E 190.4 feet to a stake, thence on a new line with McGehee N 78° W 132.0 feet to a stake; thence on a new line with McGehee S 9° W 197.9 feet to a stake in the North right of way line of Ky. Hwy. No. 107, a new corner with McGehee, thence with the North right of way line of said Hwy. S 81° E 133.5 feet, to the point of beginning, containing .59 acres.

The above description is according to a survey made by V. Glenn Hughes, Surveyor on August 3, 1968.

LESS AND EXCEPT that portion of property conveyed to Danan Micheal Ray and Shannon Denise Powell Ray from Stevie A. Powell and Brenda L. Powell by Deed of Conveyance dated February 22, 2016 and recorded February 23, 2016 in Deed Book 200, Page 366.

AND BEING the same property conveyed to Stevie A. Powell and Brenda L. Powell from Eleanor Frazier, George Frazier, Eula Adams, Junior McGehee, Patricia McGehee, Audrey Raulston, Ross Raulston, by Dorris McGehee and Morris McGehee, their joint attorney in fact, Dorris McGehee, Karlene McGehee, Morris McGehee, Louise McGehee, William McGehee and Verna McGehee by Deed of Conveyance dated July 25, 1978 and recorded July 25, 1978 in Deed Book 102, Page 489.

Tax Parcel No. 050-21

VzW Site Name CK Clifty

Location Code: 706080

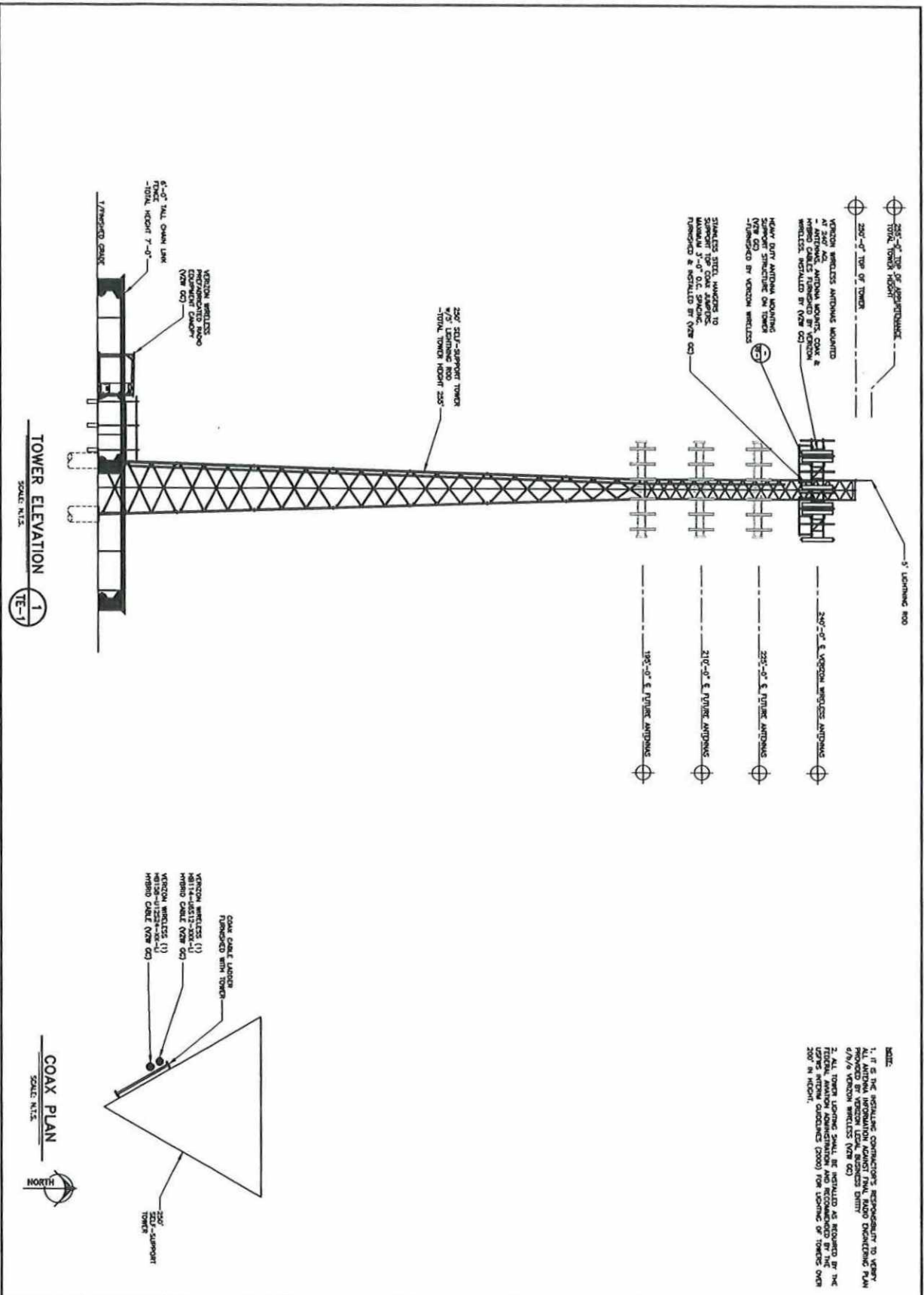
Atty: Coots Henke & Wheeler, P.C.: Daniel E. Coots

**EXHIBIT "B"**

**SITE PLAN OF THE PREMISES AND DESCRIPTION OF TOWER EQUIPMENT**







**NOTES:**  
 1. IF THE INSTALLED CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL ANTENNA INFORMATION AGAINST FINAL DESIGN PLAN PROVIDED BY VERIZON WIRELESS (VER CO) 5/19/09 VERIZON WIRELESS (VER CO)  
 2. ALL TOWER LANDING SHALL BE INSTALLED AS REQUIRED BY THE LOCAL PERMITS AND REGULATIONS FOR LANDING OF TOWER OVER 200' IN HEIGHT.

BTM Engineering, Inc.  
 8 Bowman Company, Inc.

CELCO PARTNERSHIP D.B.A.  
**verizon** wireless  
 2411 HOLLOWAY RD  
 COVINGTON KY 40309  
 502-591-5500 (EXT) 204  
 FAX 502-591-7548

REV	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT

**LEASE EXHIBIT**

CK CLIFTY  
 462 CLIFTY KIRKSMANVILLE ROAD  
 ELKTON, KY 42220  
 TOWER ELEVATION

PROJECT NUMBER	DATE
210350	01/13/22

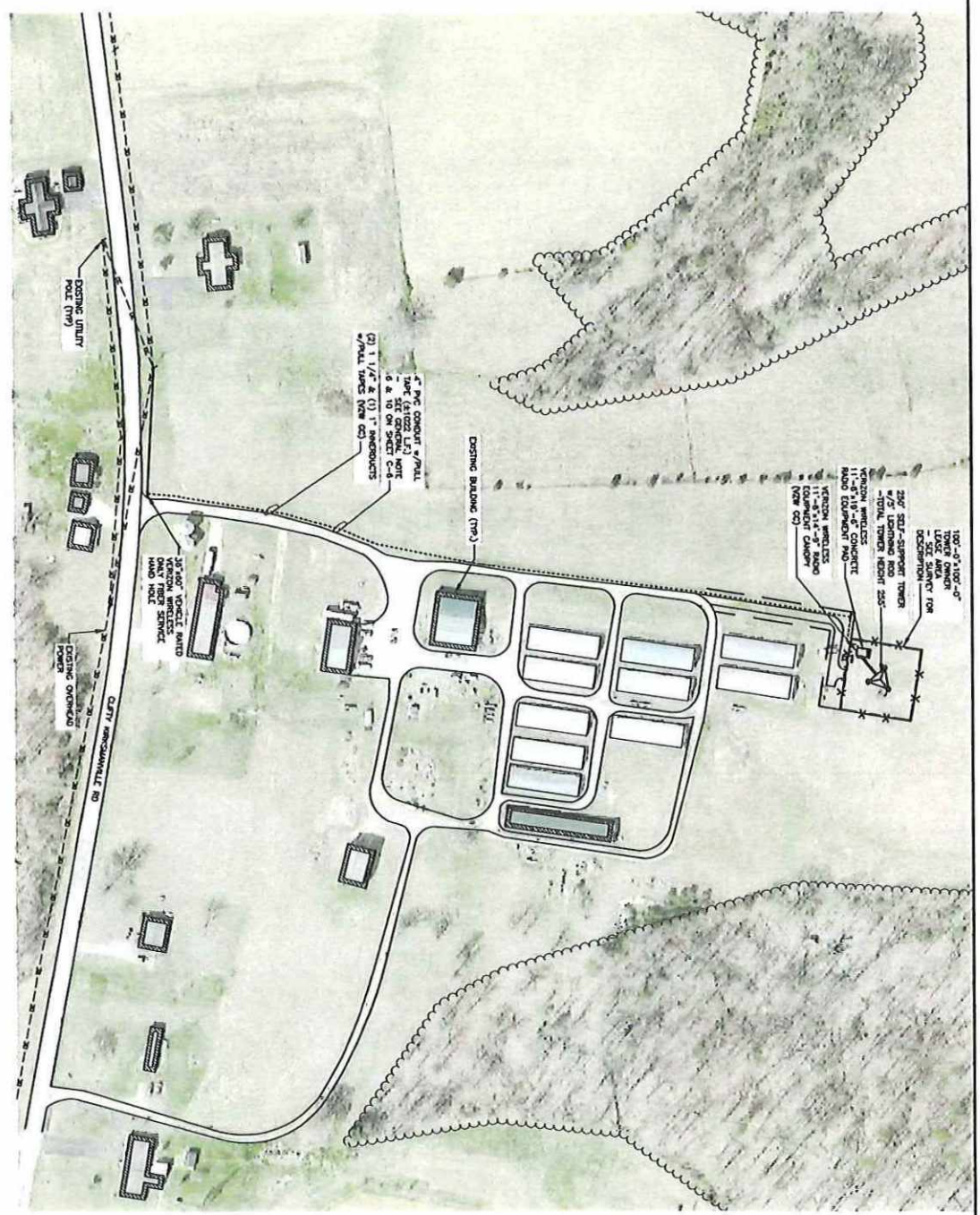
JOB NUMBER  
210350

**TE-1**

**Kentucky**  
 811  
 CALL BEFORE YOU DIG  
 1-800-752-6007  
 FOR A LIST OF PARTICIPATING UTILITIES  
 VISIT US ONLINE AT [www.ky811.com](http://www.ky811.com)



OVERALL SITE PLAN  
 w/ AERIAL OVERLAY  
 SCALE: 1" = 150'



DESIGNED BY	CHK
REVIEWED BY	CHK
CONSTRUCTION	-
RECORD	-
PROJECT MANAGER	CHK
DATE	08/11/11
JOB NUMBER	210350

CK CLIFTY  
 462 CLIFTY KIRKSMANVILLE  
 ROAD  
 ELKTON, KY 42220  
 OVERALL SITE PLAN WITH  
 AERIAL OVERLAY

**LEASE EXHIBIT**

REV	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT

**CELLCO PARTNERSHIP D.B.A.**  
**verizon wireless**  
 2421 HOLLADAY RD  
 LOUISVILLE, KY 40299  
 PHONE (502) 352-6330  
 FAX (502) 346-7546

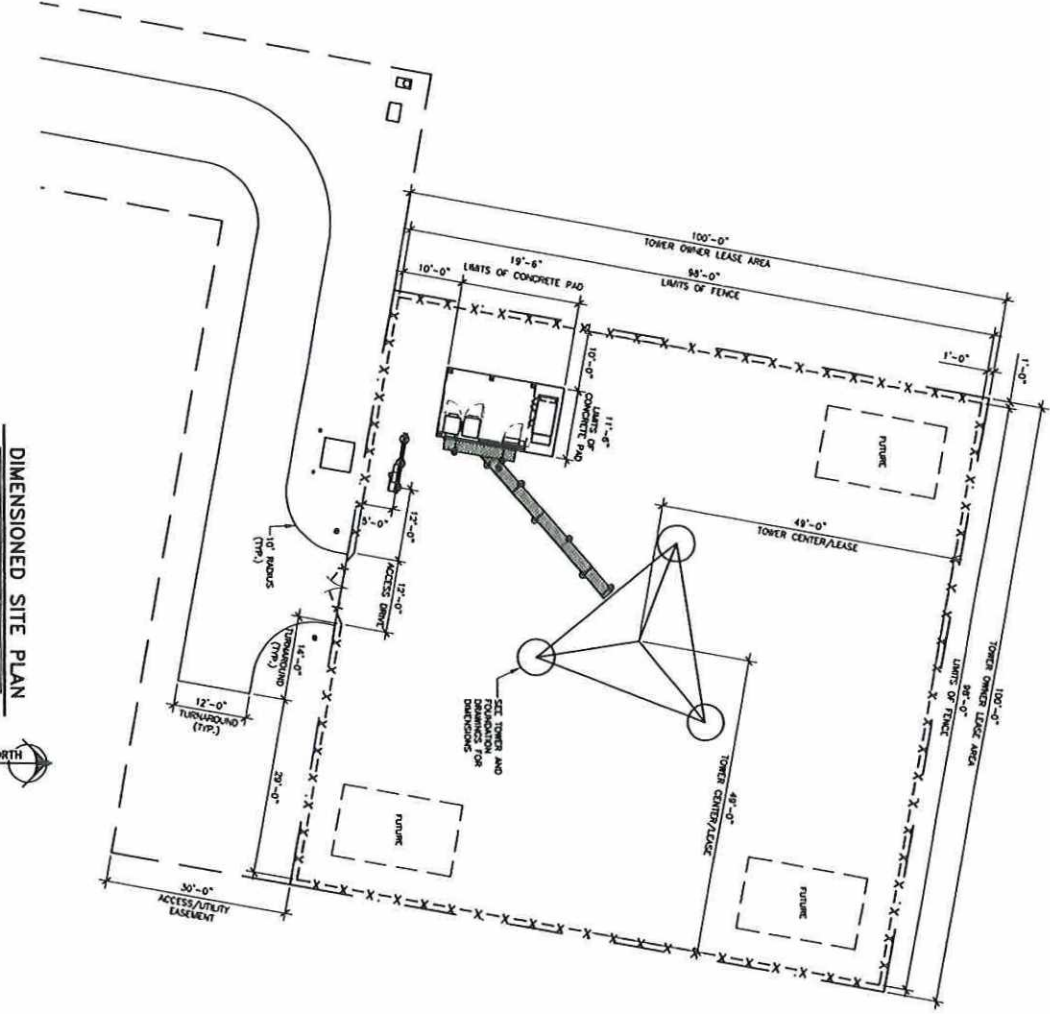
**BTM Engineering, Inc.**  
 a Bowman Company  
 1000 W. MARKET STREET  
 SUITE 200  
 LOUISVILLE, KY 40203  
 PHONE (502) 261-1111  
 FAX (502) 261-1112





CALL BEFORE YOU DIG  
 811  
 1-800-752-5007  
 FOR A LIST OF PARTICIPATING CONTRACTORS, VISIT  
 WWW.KY811.COM

NOTE:  
 CONTRACTOR TO VERIFY  
 ALL UTILITIES, ETC. BEFORE  
 ANY CONSTRUCTION. ALL  
 UTILITIES TO BE MARKED  
 AND DEPTH TO BE  
 VERIFIED BY CONTRACTOR.



**DIMENSIONED SITE PLAN**  
 SCALE: 1" = 30'-0"



**LEGEND**

- IRON PIN
- OBSCURE LINE
- SPOT ELEVATION
- CONCRETE
- ACCESS DRIVE
- NEW LEASE AREA AND EASEMENT
- UNDERGROUND ELECTRICAL CONDUIT
- UNDERGROUND TELEPHONE CONDUIT
- NEW CONDUIT
- NEW FENCE LINE
- NEW SPLIT FENCE LINE
- POWER POLE/OVERHEAD ELEC./TELE
- DOCK OF NEW DRIVE
- CONCRETE
- ACCESS DRIVE

JOB NUMBER	210350
DATE	05/13/22
PROJECT MANAGER	SCHEIDT
DATE	05/13/22
PROJECT MANAGER	SCHEIDT

CK CLIFTY  
 462 CLIFTY KIRKSMANVILLE  
 ROAD  
 ELKTON, KY 42220  
 DIMENSIONED SITE PLAN

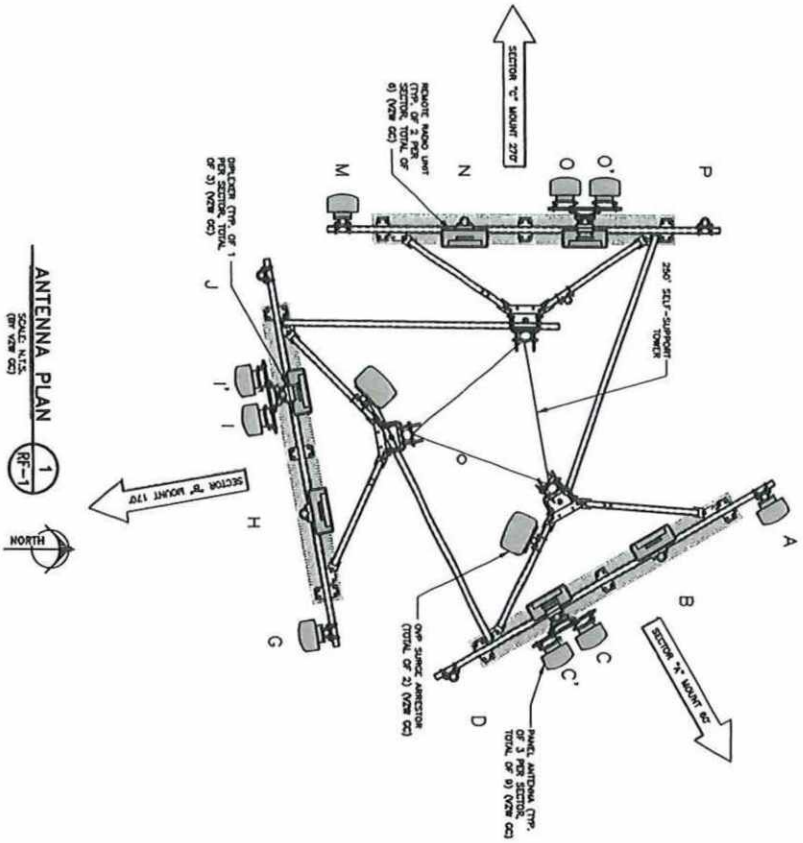
**LEASE EXHIBIT**

REV	DATE	DESCRIPTION
A	05/13/22	LEASE EXHIBIT

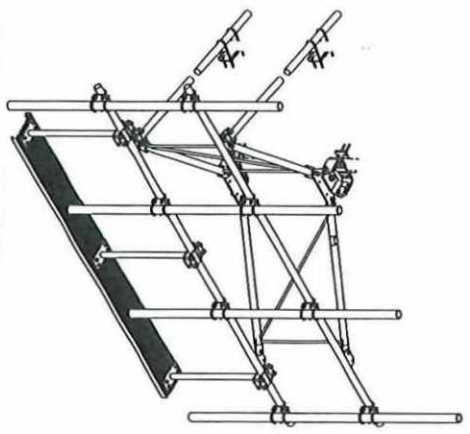
**CELCO PARTNERSHIP D/B/A**  
**verizon wireless**  
 2121 HOLLOWAY RD  
 LOUISVILLE, KY 40299  
 PHONE (502) 562-6330  
 FAX (502) 244-7548

**BTM Engineering, Inc.**  
 a Bowman Company  
 2121 HOLLOWAY RD  
 LOUISVILLE, KY 40299  
 PHONE (502) 562-6330  
 FAX (502) 244-7548





ANTENNA PLAN 1  
SCALE: N.T.S.  
(BY VIEW ONLY)



ANTENNA MOUNTING STRUCTURE DETAIL 2  
SCALE: N.T.S.  
(BY VIEW ONLY)

SECTOR	ANTENNA POSITION	MODEL	TECHNOLOGY	ASSEMBLY CENTER	ANTENNA CENTER
ALPHA	A	AMP449	L-3/B 6	60'	240'
ALPHA	B	-	-	-	-
ALPHA	C	JMH-55C-43B-1C	LTE 700/850/MCS	60'	240'
ALPHA	C'	JMH-55C-43B-1C	LTE 700/850/MCS	60'	240'
ALPHA	D	-	-	-	-
BETA	C	AMP449	L-3/B 6	170'	240'
BETA	H	-	-	-	-
BETA	I	JMH-55C-43B-1C	LTE 700/850/MCS	170'	240'
BETA	F	JMH-55C-43B-1C	LTE 700/850/MCS	170'	240'
BETA	J	-	-	-	-
GAMMA	M	AMP449	L-3/B 6	270'	240'
GAMMA	N	-	-	-	-
GAMMA	O	JMH-55C-43B-1C	LTE 700/850/MCS	270'	240'
GAMMA	O'	JMH-55C-43B-1C	LTE 700/850/MCS	270'	240'
GAMMA	P	-	-	-	-

NOTE: ANTENNA INSTALLER SHALL UTILIZE VERIZON WIRELESS INFO FOR FINAL CONFIGURATION SEE VERIZON WIRELESS CONSTRUCTION MANUAL.

REV	DATE	DESCRIPTION
A	01/13/22	LEASE EXHIBIT

CELLCO PARTNERSHIP D/B/A  
**verizon wireless**  
2421 HOLLOWAY RD  
KNOXVILLE, KY 42299  
P.O. BOX 520  
KNOX, TN 37921  
TEL: (615) 252-2500  
FAX: (615) 252-2500

BTM Engineering, Inc.  
a Bowman Company  
10000 Highway 100  
Suite 200  
Knoxville, TN 37921  
Tel: (615) 252-2500  
Fax: (615) 252-2500

CK CLIFTY  
462 CLIFTY KIRKSMANVILLE  
ROAD  
ELKTON, KY 42220  
ANTENNA PLAN AND  
DETAILS (REFERENCE ONLY)

JOB NUMBER  
210350

RF-1  
REV 10 2 2020 REV 1 2021



EAST - Great Lakes > Michigan/Indiana/KY > Louisville > **CK CLIFTY**

Snyder, Gordon - gordon.snyder2@verizonwireless.com - 12/6/2021 15:31:2

### Project Details

FUZE Project ID: 16687080

Project Name: CK CLIFTY (STL - WPZV472)

Project Alt Name: CK CLIFTY - New Build STL WPZV472

Project Type: Initial Build

Modification Type:

Designed Sector Carrier 4G: 18

Designed Sector Carrier 5G: N/A

Additional Sector Carrier 4G: N/A

Additional Sector Carrier 5G: N/A

FP Solution Type & Tech Type: MCR;4G\_700,4G\_850,4G\_AWS3,4G\_PCS

Carrier Aggregation: true

MPT Id:

eCIP-O: false

Suffix:

### Location Information

Site ID: 617103749

E-NodeB ID: 2347999,234999

PSLC: 706080

Switch Name:

Tower Owner:

Tower Type: Self Support (Lattice Tower)

Site Type: MACRO

Site Sub Type: TRADITIONAL

Street Address: 462 Clifty Kirksmanville Road

City: Elktion

State: KY

Zip Code: 42220

County: Todd

Latitude: 36.990556 / 36° 59' 26.0016" N

Longitude: -87.162222 / 87° 9' 43.9992" W

RFDS Project Scope: New Build

Install 6 Jahn antennas

Instal 3 air 6449's

Install 4449's

Install 8843's

Install side by side mounts

Install diplexers

Install 6630 and 6648

Install hybrids and ovps

EE CPS input 12/6/2021

Add (3) Mount

Add (4) OVP

Add (2) Hybrid

Add (5) Battery

Add (2) Cabinets

Add (1) Electric Service  
Add (1) Generator  
Add (1) Fuel Tank



### Antenna Summary

Added		Removed		Retained									
700	1900	AWS	AWS3	L-Sub6 Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
LTE	LTE	LTE	LTE	ANDREW	JAHH-55C-R3B-V2	240	244	60(01) 170(02) 270(03)	true	true	PHYSICAL	6	JAHH-55C-R3B-V2
				ERICSSON	AIR6449	240	241.3	60(0001) 170(0002) 270(0003)	false	false	PHYSICAL	3	

Removed

700 1900 AWS AWS3 L-Sub6 Make Model Centerline Tip Height Azimuth RET 4xRx Inst. Type Quantity Item ID  
No data available.

Retained

700 1900 AWS AWS3 L-Sub6 Make Model Centerline Tip Height Azimuth RET 4xRx Inst. Type Quantity Item ID  
No data available.

Added: 9      Removed: 0      Retained: 0

## Equipment Summary

Added

Equipment Type	Location	700	1900	AWS	AWS3	L-Subs	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
Mount	Tower						Commscope	BSAMINT-SSS-2-2			PHYSICAL	3	
Diplexer	Tower	LTE					Commscope	CBC78T-DS-43-2X			PHYSICAL	3	
RRU	Tower	LTE					Ericsson	4449			PHYSICAL	3	KRC16T749/1
RRU	Tower		LTE	LTE	LTE		Ericsson	8843			PHYSICAL	3	KRC16T707/2
OVP Box	Tower					5G	RFS	DB-C1-12C-24AB-0Z			PHYSICAL	1	DB-C1-12C-24AB-0Z
OVP Box	Tower	LTE	LTE	LTE	LTE		RFS	DB-C1-12C-24AB-0Z			PHYSICAL	1	DB-C1-12C-24AB-0Z
Hybrid Cable	Tower					5G	RFS	HB114-J6S12-XXX-LI		TBD	PHYSICAL	1	
Hybrid Cable	Tower	LTE	LTE	LTE	LTE		RFS	HB158-U12S24-XX-LI		TBD	PHYSICAL	1	
Mount	Tower						Sabre	C108S7007C-4108-273W			PHYSICAL	3	
BBU	Shelter	LTE					Ericsson	6630			PHYSICAL	1	
BBU	Shelter		LTE	LTE	LTE	5G	Ericsson	6648			PHYSICAL	1	
Power Plants	Ground (Outdoor)						ABB	109163473			PHYSICAL	1	109163473
Power Plants	Ground (Outdoor)						ABB	37984910159600-S			PHYSICAL	1	37984910159600-S
Power Plants	Ground (Outdoor)						ABB	848798702			PHYSICAL	4	848798702
Alarm	Ground (Outdoor)						Asentria	S3406CRANCAB1			PHYSICAL	1	S3406CRANCAB1
Shelter/Cabinets	Ground (Outdoor)						DELTA	ESOF024-ECA03			PHYSICAL	1	ESOF024-ECA03
Shelter/Cabinets	Ground (Outdoor)						Delta	ESOF016-ECH01			PHYSICAL	1	ESOF016-ECH01
Other	Other						Electric Service	220 Single 200 Amp			PHYSICAL	1	
Generator	Ground (Outdoor)						Generic	210 Gallon Fuel Tank			PHYSICAL	1	
Generator	Ground (Outdoor)						Generic	7134-210 30KW Diesel Generator			PHYSICAL	1	
Upconverter	Ground (Outdoor)						JMA	PB-19-SYS-16-BB			PHYSICAL	1	PB-19-SYS-16
Upconverter	Ground (Outdoor)						JMA	PB-PSU-162-BB			PHYSICAL	2	PB-PSU-162-BB
Upconverter	Ground (Outdoor)						JMA	PB-PSU-COV-BB			PHYSICAL	1	PB-PSU-COV-BB
OVP Box	Ground (Outdoor)	LTE	LTE	LTE	LTE		RFS	DB-C1-12C-24AB-0Z			PHYSICAL	1	DB-C1-12C-24AB-0Z
Battery	Ground (Outdoor)						Satt	TelX 180 (5Strings)			PHYSICAL	5	
Alarm	Ground (Outdoor)						Westell	RMX-4000			PHYSICAL	1	RMX-4000

Removed

Equipment Type Location 700 1900 AWS AWS3 L-Sub6 Make Model Cable Length Cable Size Install Type Quantity Item ID

No data available.

Retained

Equipment Type Location 700 1900 AWS AWS3 L-Sub6 Make Model Cable Length Cable Size Install Type Quantity Item ID

No data available.

Service Info

700 MHz LTE

Sector  
Azimuth  
Cell / ENode B ID  
Antenna Model

Antenna Make  
Antenna Centerline(Ft)  
Mechanical Down-Tilt(Deg)  
Electrical Down-Tilt  
Tip Height  
Regulatory Power  
DLEARFCN  
Channel Bandwidth(MHz)  
Total ERP (W)  
TMA Make  
TMA Model  
RRU Make  
RRU Model  
Number of Tx, Rx Lines  
Position  
Transmitter Id  
Source

Sector	Azimuth	Cell / ENode B ID	Antenna Model	Antenna Make	Antenna Centerline(Ft)	Mechanical Down-Tilt(Deg)	Electrical Down-Tilt	Tip Height	Regulatory Power	DLEARFCN	Channel Bandwidth(MHz)	Total ERP (W)	TMA Make	TMA Model	RRU Make	RRU Model	Number of Tx, Rx Lines	Position	Transmitter Id	Source	
01	60	234999	JAHH-65C-R3B-V2	ANDREW	240	0	4	244	84.8	5230	10	763.24	Ericsson	4449	4,4	11519122	ATOLL_API	11519122	ATOLL_API	11519122	ATOLL_API
02	170	234999	JAHH-65C-R3B-V2	ANDREW	240	0	4	244	84.8	5230	10	763.24	Ericsson	4449	4,4	11519123	ATOLL_API	11519123	ATOLL_API	11519123	ATOLL_API
03	270	234999	JAHH-65C-R3B-V2	ANDREW	240	0	4	244	84.8	5230	10	763.24	Ericsson	4449	4,4	11519125	ATOLL_API	11519125	ATOLL_API	11519125	ATOLL_API

Sector  
 Azimuth  
 Cell / ENode B ID  
 Antenna Model  
 Antenna Make  
 Antenna Centerline(Ft)  
 Mechanical Down-Tilt(Deg)  
 Electrical Down-Tilt  
 Tip Height  
 Regulatory Power  
 DLEARFCN  
 Channel Bandwidth(MHz)  
 Total ERP (W)  
 TMA Make  
 TMA Model  
 RRU Make  
 RRU Model  
 Number of Tx, Rx Lines  
 Position  
 Transmitter Id  
 Source

		0002		03	
		01	02	03	
		234999	234999	234999	
		JAHH-65C-R3B-VZ	JAHH-65C-R3B-VZ	JAHH-65C-R3B-VZ	
		ANDREW	ANDREW	ANDREW	
Antenna Centerline(Ft)	240	240	240	240	
Mechanical Down-Tilt(Deg)	0	0	0	0	
Electrical Down-Tilt	3	3	3	3	
Tip Height	244	244	244	244	
Regulatory Power	439.65	439.65	439.65	439.65	
DLEARFCN	925	925	925	925	
Channel Bandwidth(MHz)	5	5	5	5	
Total ERP (W)	1205.93	1205.93	1205.93	1205.93	
TMA Make					
TMA Model					
RRU Make	ERICSSON	ERICSSON	ERICSSON	ERICSSON	
RRU Model	8843	8843	8843	8843	
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	
Position					
Transmitter Id	11520447	11520448	11520449		
Source	ATOLL_API	ATOLL_API	ATOLL_API		



Service Comments

Sector  
Azimuth  
Cell / ENode B ID  
Antenna Model  
Antenna Make  
Antenna Centerline(Ft)  
Mechanical Down-Tilt(Deg.)  
Electrical Down-Tilt  
Top Height  
Regulatory Power  
DLEARRCN  
Channel Bandwidth(MHz)  
Total ERP (W)  
TMA Make  
TMA Model  
RRU Make  
RRU Model  
Number of Tx, Rx Lines  
Position  
Transmitter Id  
Source

	0001	0002	0003
Sector			
Azimuth	60	170	270
Cell / ENode B ID	2347999	2347999	2347999
Antenna Model	AIR6449	AIR6449	AIR6449
Antenna Make	ERICSSON	ERICSSON	ERICSSON
Antenna Centerline(Ft)	240	240	240
Mechanical Down-Tilt(Deg.)	0	0	0
Electrical Down-Tilt	6	6	6
Top Height	241.3	241.3	241.3
Regulatory Power	1244.96	1244.96	1244.96
DLEARRCN	648672	648672	648672
Channel Bandwidth(MHz)	60	60	60
Total ERP (W)	21627.19	21627.19	21627.19
TMA Make			
TMA Model			
RRU Make	Ericsson	Ericsson	Ericsson
RRU Model	AIR6449	AIR6449	AIR6449
Number of Tx, Rx Lines	2,2	2,2	2,2
Position			
Transmitter Id	11520453	11520454	11520455
Source	ATOLL_API	ATOLL_API	ATOLL_API

**Callisigns Per Antenna**

Sector	Antenna Make	Antenna Model	Ant Cl	Tip	Azimuth (TN)	Elec Tilt	Mech Tilt	Gain	Beam Width	Regulatory Power	Callisigns						
			Height AGL	Height							700	850	1900	2100	28 GHz	31 GHz	39 GHz

No data available.



Callisigns

Callisign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHz	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs /sq Mi	Status	Action	Approved for hsvc
WQ/Q692	Mississippi Valley	WU	REA004	C	KY	Todd	Celco Partnership	Yes	.000	.000-.000	.000-.000	.000-.000	.000-.000	84.8	2000	33.27	Active	added	Yes
WPZV472	Nashville	CW	MTR403	B	KY	Todd	Celco Partnership	Yes	10.000	1880.000-1.1950.000-1	.000-.000	.000-.000	.000-.000	439.65	3280	33.27	Active	added	Yes
WQVN764	Nashville, TN-KY	AT	BEA071	H	KY	Todd	Celco Partnership	Yes	10.000	1760.000-1.2150.000-2	.000-.000	.000-.000	.000-.000	223.04	3280	33.27	Active	added	Yes
WQVN765	Nashville, TN-KY	AT	BEA071	I	KY	Todd	Celco Partnership	Yes	10.000	1765.000-1.2165.000-2	.000-.000	.000-.000	.000-.000	223.04	3280	33.27	Active	added	Yes
WRNF682	Bowling Green, KY	PM	PEA112	A1	KY	Todd	Celco Partnership	Yes	20.000	3700.000-2.000-.000	.000-.000	.000-.000	.000-.000	1244.96	1640	33.27	Active	added	No
WRNF683	Bowling Green, KY	PM	PEA112	A2	KY	Todd	Celco Partnership	Yes	20.000	3720.000-2.000-.000	.000-.000	.000-.000	.000-.000	1244.96	1640	33.27	Active	added	No
WRNF684	Bowling Green, KY	PM	PEA112	A3	KY	Todd	Celco Partnership	Yes	20.000	3740.000-2.000-.000	.000-.000	.000-.000	.000-.000	1244.96	1640	33.27	Active	added	No
WQGA959	Nashville, TN-KY	AW	BEA071	B	KY	Todd	Celco Partnership	Yes	.000	.000-.000	.000-.000	.000-.000	.000-.000	223.04	3280	33.27	Active	added	Yes
WQGA718	Mississippi Valley	AW	REA004	F	KY	Todd	Celco Partnership	Yes	.000	.000-.000	.000-.000	.000-.000	.000-.000	223.04	3280	33.27	Active	added	Yes
KMKN867	Kentucky 3 - Meade	CL	CHA445	B	KY	Todd	Celco Partnership	Yes	25.000	835.000-8.880.000-8	846.500-8	891.500-85			800	33.27	Active		Yes
WREV449	Bowling Green, KY	UU	PEA112	A	KY	Todd	Celco Partnership	Yes	100.000	24250.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WREV451	Bowling Green, KY	UU	PEA112	B	KY	Todd	Celco Partnership	Yes	100.000	24350.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WREV453	Bowling Green, KY	UU	PEA112	C	KY	Todd	Celco Partnership	Yes	100.000	24750.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRHF210	Bowling Green, KY	UU	PEA112	M1	KY	Todd	Straight Path Spectrum, LLC	Yes	100.000	37600.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRHF211	Bowling Green, KY	UU	PEA112	M10	KY	Todd	Straight Path Spectrum, LLC	Yes	100.000	38500.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRHF212	Bowling Green, KY	UU	PEA112	M2	KY	Todd	Straight Path Spectrum, LLC	Yes	100.000	37700.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRHF213	Bowling Green, KY	UU	PEA112	M3	KY	Todd	Straight Path Spectrum, LLC	Yes	100.000	37800.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRHF214	Bowling Green, KY	UU	PEA112	M4	KY	Todd	Straight Path Spectrum, LLC	Yes	100.000	37900.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRHF215	Bowling Green, KY	UU	PEA112	M5	KY	Todd	Straight Path Spectrum, LLC	Yes	100.000	38000.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRHF216	Bowling Green, KY	UU	PEA112	M6	KY	Todd	Straight Path Spectrum, LLC	Yes	100.000	38100.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRHF217	Bowling Green, KY	UU	PEA112	M7	KY	Todd	Straight Path Spectrum, LLC	Yes	100.000	38200.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRHF218	Bowling Green, KY	UU	PEA112	M8	KY	Todd	Straight Path Spectrum, LLC	Yes	100.000	38300.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRHF219	Bowling Green, KY	UU	PEA112	M9	KY	Todd	Straight Path Spectrum, LLC	Yes	100.000	38400.000	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRAM746	Bowling Green, KY	WT	PEA112	A	KY	Todd	Celco Partnership	Yes	10.000	617.000-62.663.000-61	.000-.000	.000-.000	.000-.000			33.27	Active		Yes
WRNF685	Bowling Green, KY	PM	PEA112	A4	KY	Todd	Celco Partnership	Yes	20.000	3760.000-2.000-.000	.000-.000	.000-.000	.000-.000			33.27	Active		No
WRNF686	Bowling Green, KY	PM	PEA112	A5	KY	Todd	Celco Partnership	Yes	20.000	3780.000-2.000-.000	.000-.000	.000-.000	.000-.000			33.27	Active		No
WRNF687	Bowling Green, KY	PM	PEA112	B1	KY	Todd	Celco Partnership	Yes	20.000	3800.000-2.000-.000	.000-.000	.000-.000	.000-.000			33.27	Active		No
WRNF688	Bowling Green, KY	PM	PEA112	B2	KY	Todd	Celco Partnership	Yes	20.000	3820.000-2.000-.000	.000-.000	.000-.000	.000-.000			33.27	Active		No
WRNF689	Bowling Green, KY	PM	PEA112	B3	KY	Todd	Celco Partnership	Yes	20.000	3840.000-2.000-.000	.000-.000	.000-.000	.000-.000			33.27	Active		No
WPWU918	Kentucky 3 - Meade	WZ	CHA445	C	KY	Todd	Celco Partnership	Yes	12.000	710.000-71.740.000-72	.000-.000	.000-.000	.000-.000			33.27	Active		Yes

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Site Name:

CK Clifty

RF Engineer:

Gordon Snyder

Phone Number:

502-438-5142

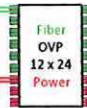
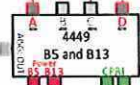
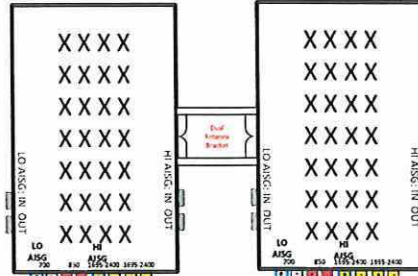
POS A/E/I  
N77

POS B/F/J

POS C/G/K  
700 / 850 / PCS

POS C'/G'/K'  
700 / 850 / AWS-1

POS D/H/L



Hatch Plate



VzW Site Name: CK Clifty  
Location Code 706080  
Atty: Coots Henke & Wheeler, P.C.: Daniel E. Coots

**EXHIBIT "C"**

**SURVEY**

**FLOOD HAZARD STATEMENT:**  
 THIS COMMUNICATIONS SITE (THE SUBJECT SITE AS SHOWN) IS NOT LOCATED WITHIN THE LIMITS OF A DESIGNATED 100 YEAR FLOOD ZONE PER FEMA/FIRM MAP COMMUNITY PANEL NUMBER 21219C D125 C TODD COUNTY, KENTUCKY, EFFECTIVE DATE JULY 22, 2010.

**PROJECT BENCHMARK**   
 TBM ELEVATION DATUM IS BASED UPON OPS SURVEY METHODS AND PROCEDURES.  
 TOP OF "CLIPPED" IRON PIN SET THIS SURVEY  
 ELEVATION = 798.74' N.A.V.D. 88  
 (SEE PLAN FOR LOCATION)

KY SPC (SOUTH ZONE)  
 HAD 83' GRID NORTH



Scale 1" = 80'  
 GRAPHIC SCALE  
 (11" X 17" SHEET SIZE)

CENTERLINE OF PROPOSED  
 LESSEE'S PREMISES  
 LATITUDE = 34° 50' 28.00"  
 LONGITUDE = 87° 00' 44.12"  
 ELEVATION = 798.00' N.A.V.D. 88

**UNDERGROUND UTILITIES**  
 CALL 2 WORKING DAYS  
**BEFORE YOU DIG**  
 KENTUCKY 1-800-752-6007  
 UTILITIES PROTECTION SERVICE  
 NON-MEMBERS MUST CALL DIRECTLY

**SPECIAL NOTE:**

THIS SURVEY PLAN WAS PERFORMED UNDER THE AUTHORITY OF KENTUCKY REVENUE STATUTES (901 KAR 1A.150), AND IS NOT TO BE CONSIDERED A GENERAL PROPERTY BOUNDARY SURVEY AS SET FORTH WITHIN KENTUCKY REVENUE STATUTES. DIMENSIONS (IF SHOWN) ALONG THE PERIMETER OF THE LANDOWNER'S PROPERTY ARE PROVIDED UNDER THE SURVEYOR'S SCOPE OF SERVICES WITH CELLO PARTNERSHIP, AND ARE TO BE CONSIDERED FOR REFERENCE ONLY. THE EXACT LOCATION OF THE LANDOWNER'S PROPERTY MAY DIFFER UPON THE PREPARATION OF A FULL BOUNDARY SURVEY IN ACCORDANCE WITH REQUIREMENTS ESTABLISHED BY THE STATE OF KENTUCKY.

**CENTERLINE DATA - LESSEE'S 30' WIDE JOINT ACCESS & FIBER/UTILITY EASEMENT**

NO.	DELTA/BEARING	RADIUS	LENGTH	TAN	CHORD
[1]	23° 41' 32"	550.00'	227.43'	115.38'	N 10° 05' 55" E/225.61'
[2]	N 21° 56' 41" E	---	53.13'	---	---
[3]	N 00° 58' 19" W	---	52.37'	---	---

**UTILITY NOTE:**

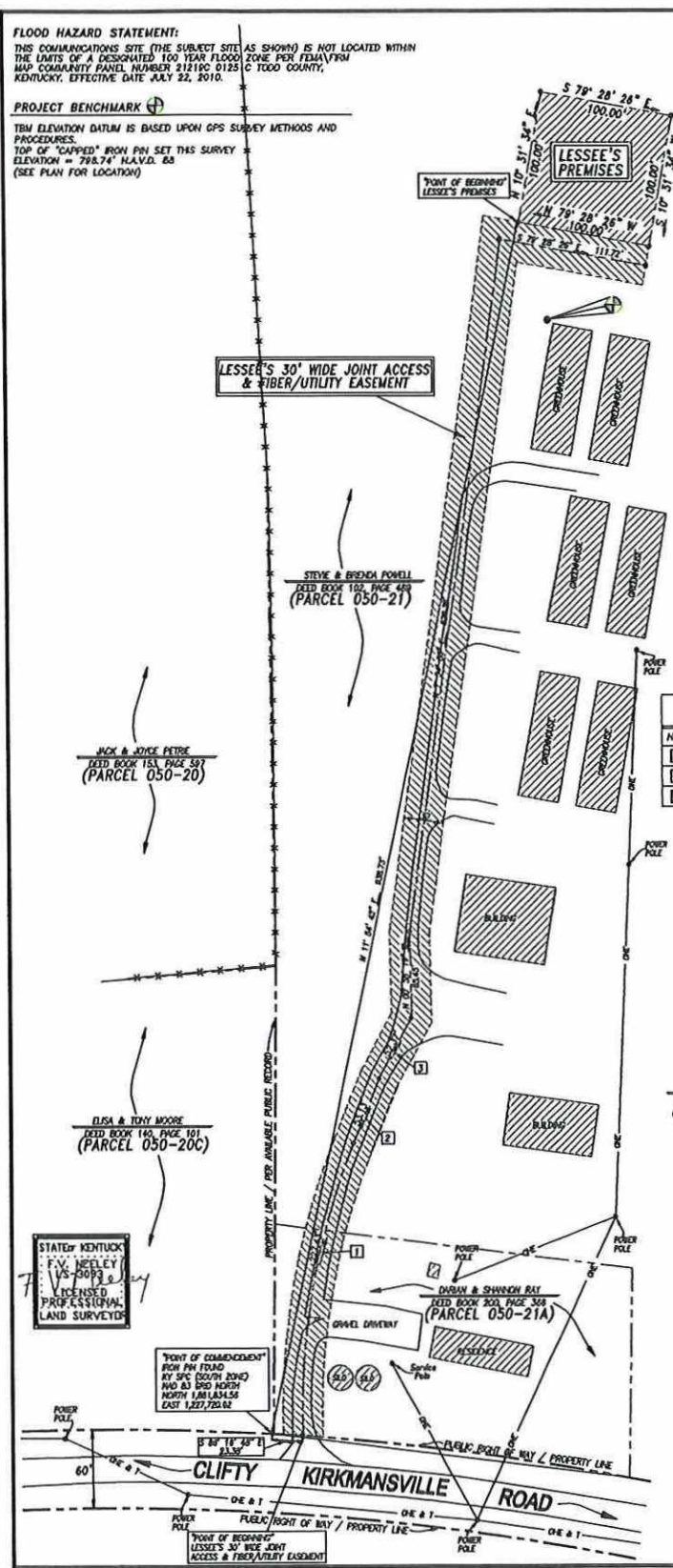
THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS AND/OR MAPS PREPARED BY OTHERS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPREHEND ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY.

**LEGENDS:**

- IRON PIN SET THIS SURVEY
- IRON PIN FOUND
- RIGHT-OF-WAY/PROPERTY LINE
- 560 INDEX CONTOURS
- 1' INTERVAL
- O-E & T OVERHEAD ELECTRIC & TELEPHONE LINES
- O-E OVERHEAD ELECTRIC
- x - x - x FENCELINE

**GENERAL NOTES:**

- I HEREBY CERTIFY THAT THE SURVEY DEPICTED BY THIS PLAN WAS PREPARED BY PERSONS UNDER MY DIRECT SUPERVISION BY THE METHOD OF RANDOM PROSELY WITH SIZE SHOTS. THE UNQUALIFIED PRECISION OF THE TRIANGLE AIDS WAS 1:33,548, AND HAS NOT ADJUSTED. THE SURVEY AS SHOWN HEREON IS AN UPRIGHT SURVEY, AND THE ACCURACY AND PRECISION OF SAID SURVEY MEETS ALL THE SPECIFICATIONS OF THIS CLASS.  
 J. V. Nealey DATE JANUARY 3, 2022  
 (PROF. E. REG. NO. 3051)
- PARCEL NUMBERS SHOWN (TAX ID), REFER TO TAX MAP NO. 60, OF THE PROPERTY VALUATION OFFICE OF TODD COUNTY, KENTUCKY.
- BEARINGS SHOWN ARE REFERENCED FROM GLOBALLY POSITIONED SATELLITE MONUMENTS AS ESTABLISHED FOR THIS SURVEY.
- PROPERTY OWNERS:  
 STEVE & BRENDA POWELL  
 12160 GREENVILLE ROAD  
 ELATON, KY 42220
- IRON PINS SET ARE 18" MINIMUM LENGTH REINFORCING STEEL BARS WITH A PLASTIC CAPPED ENDS "BY PLS #0003", UNLESS ROCK OR OTHER LIKE MATERIAL IS ENCOUNTERED.
- DATE OF FIELD SURVEY: TUESDAY, DECEMBER 28, 2021.
- NOT VALID WITHOUT THE ORIGINAL SIGNATURE OF THE PROFESSIONAL LICENSED SURVEYOR.



PROJECT NUMBER:  
 221-108-20

SHEET NUMBER:  
 1 OF 2

CELLCO PARTNERSHIP SITE SURVEY: KENTUCKY  
 D/B/A/ VERIZON WIRELESS  
 "CK CLIFTY" TOWER SITE  
 LOCATED IN: CLIFTY, TODD COUNTY, KENTUCKY  
 TOWER PREMISES AREA SURVEY  
 CELLCO PARTNERSHIP LOCATION CODE: 706080

SHARONDALE  
 SURVEYING  
 INC.  
 161 MARTIN ROAD  
 BON AQUA, TN 37025  
 (615) 513-0032  
 E-Mail: Sharonda@bellsouth.net



PLOT DATE: FEBRUARY 16, 2022

**LESSEE'S PREMISES AREA DESCRIPTION**

Commencing at an iron pin found in the north margin of City Kirkmanville Road located at Kentucky State Plane (South Zone) NAD 83 Grid Coordinates North 1,681,834.56, East 1,227,720.02;

Thence, North 11 degrees 54 minutes 42 seconds East, 838.73 feet to a capped "KY PLS #3093" iron pin set at the southeast corner of Lessee's Premises, said iron pin being the point of beginning of the following described Lessee's Premises;

Thence, North 10 degrees 31 minutes 34 seconds East, 100.00 feet to a capped "Sharondale Nashville" iron pin set at the northwest corner of Lessee's Premises;

Thence, South 79 degrees 28 minutes 26 seconds East, 100.00 feet to a capped "Sharondale Nashville" iron pin set at the northeast corner of Lessee's Premises;

Thence, South 10 degrees 31 minutes 34 seconds West, 100.00 feet to a capped "Sharondale Nashville" iron pin set at the southwest corner of Lessee's Premises;

Thence, North 79 degrees 28 minutes 26 seconds West, 100.00 feet to the point of beginning, containing 10,000 square feet, (0.230 acres).

Being a portion of the property conveyed to Stavis Powell and wife, Brandis Powell, of record in Deed Book 102, Page 489, of the Court Clerk's Office of Todd County, Kentucky.

**LESSEE'S 30' WIDE JOINT ACCESS & FIBER/UTILITY EASEMENT AREA DESCRIPTION**

Commencing at an iron pin found in the north margin of City Kirkmanville Road located at Kentucky State Plane (South Zone) NAD 83 Grid Coordinates North 1,681,834.56, East 1,227,720.02;

Being a thirty foot wide joint access and fiber/utility easement extending from the north margin of City Kirkmanville Road to the south margin of Lessee's Premises, at all times being fifteen feet wide each side of and parallel with the following described centerline:

Commencing at an iron pin found in the north margin of City Kirkmanville Road located at Kentucky State Plane (South Zone) NAD 83 Grid Coordinates North 1,681,834.56, East 1,227,720.02;

Thence, South 85 degrees 16 minutes 48 seconds East, 23.38 feet to a survey spike set in the north margin of City Kirkmanville Road, said survey nail being of the point of beginning of the following described thirty foot wide joint access and fiber/utility easement:

Thence, leaving the north margin of City Kirkmanville Road, along a curve to the left with a central angle of 23 degrees 41 minutes 32 seconds, a radius of 550.00 feet, and a chord bearing of North 10 degrees 05 minutes 55 seconds East, 225.81 feet, a total distance of 227.43 feet to a point;

Thence, North 21 degrees 56 minutes 41 seconds East, 53.13 feet to a point;

Thence, North 28 degrees 24 minutes 57 seconds East, 52.37 feet to a point;

Thence, North 00 degrees 58 minutes 19 seconds West, 85.45 feet to a point;

Thence, North 7 degrees 54 minutes 55 seconds East, 529.38 feet to a point;

Thence, South 79 degrees 28 minutes 26 seconds East, 111.72 feet to a capped "KY PLS #3093" iron pin set at the point of termination of this easement, containing 31,184 square feet, (0.716 acres).

Being a portion of the property conveyed to Stavis Powell and wife, Brandis Powell, of record in Deed Book 102, Page 489, of the Court Clerk's Office of Todd County, Kentucky.

**UNDERLYING LANDOWNER'S PROPERTY AREA DESCRIPTION**

A certain tract of land in Todd County, Kentucky, located on the North side of KY Hwy. No. 107 approximately 105 miles Southwest of City, and further described from a survey by E. T. Rife, Land Surveyor, KY Reg. No. 128 on April 11, 1978, as follows:

Beginning of a stake in the North right of way line of Hwy. 107, a corner with Gilbert Francis; thence with Francis' line, passing just East of a well house, N 2 degrees 51' W - 14.71 chains to a rock, a corner with same; thence with Francis' line N 14 degrees 34' W - 6.71 chains to a stake in the center of an old road; thence with Francis' line leaving the old road N 57 degrees 02' W - 8.51 chains crossing the branch to a beech on the West side thereof, a corner with Francis and the Petite Hair; thence with the line of the Petite Hair 12 colls along a bluff crossing the branch N 20 degrees 30' E - 5.71 chains to a point of the bluff, N 38 degrees 04' E - 8.37 chains, S 28 degrees 51' E - 8.37 chains, S 28 degrees 51' E - 2.80 chains, East - 2.00 chains, S 52 degrees 53' W - 4.64 chains, S 11 degrees 19' E - 8.87 chains, S 30 degrees 15' W - 1.38 chains, S 84 degrees 11' E - 3.01 chains to a waterfall, a corner with the Petite Hair and William Conner; thence up the branch with Conner's line S 8 degrees 20' W - 8.06 chains and South 11 degrees 35' W - 2.78 chains to a point in the fork of the branch; thence with the Southwest fork along Conner's line S 31 degrees 22' W - 4.80 chains and S 9 degrees 03' E - 5.12 chains to oak tree near the head of the branch, a corner with Conner; thence with the line of Conner and Harold Sherman S 9 degrees 27' W - 4.63 chains to a rock on the East side of a gravel drive, said rock being 31 feet North of the North right of way line of KY Hwy. 107; thence along the North side of the old road N 85 degrees 36' W - 5.59 chains to an oak tree in the North right of way line of Hwy. 107 at the junction with the North side of the old road; thence with the said right of way line N 83 degrees 15' W - 3.82 chains and N 85 degrees 51' W - 2.55 chains to the beginning point, containing 63,805 acres.

EXCEPT: There is excepted from the foregoing described property a certain tract conveyed thereto by Huston McGehee, widower, to Morris B. McGehee and wife by Deed dated August 5, 1958, and recorded in Deed Book 85, Page 694, records of the Todd County Court Clerk's Office, and more fully described as follows:

Beginning of a stake in the North right of way line of KY Hwy. No. 107, 182 feet West of the Southwest corner of the Huston McGehee property, a new corner with said McGehee; thence on a new line with said McGehee N 9 degrees E 190.4 feet to a stake, thence on a new line with McGehee N 78 degrees W 132.0 feet to a stake; thence on a new line with McGehee S 9 degrees W 197.8 feet to a stake in the North right of way line of KY Hwy. No. 107, a new corner with McGehee; thence with the North right of way line of said Hwy. S 81 degrees E 133.5 feet, to the point of beginning, containing .59 acres.

The above description is according to a survey made by V. Glenn Hughes, Surveyor on August 3, 1966.

LESS AND EXCEPT that portion of property conveyed to Darin Michael Roy and Shannon Darlene Powell Roy from Stavis A. Powell and Brandis L. Powell by Deed of Conveyance dated February 22, 2016, and recorded February 23, 2016, in Deed Book 200, Page 354.

AND BEING the same property conveyed to Stavis A. Powell and Brandis L. Powell from Eleanor Frezler, George Frezler, Uels Adams, Arthur Ambrose, Patricia McGehee, Roy Frezler, Ross Frezler, by Doris McGehee and Morris McGehee, their joint attorney in fact, Doris McGehee, Karlene McGehee, Morris McGehee, Louisa Mc Gehee, Wilma McGehee and Yarna McGehee by Deed of Conveyance dated July 25, 1978, and recorded July 25, 1978, in Deed Book 102, Page 489.

Tax Parcel No. 060-21.

**SURVEYOR'S REVIEW OF "SPECIAL EXCEPTIONS"**

- NOTES CORRESPONDING TO FIDELITY NATIONAL TITLE INSURANCE COMPANY'S "REPORT OF TITLE" - ORDER NO. 36483453, ISSUED FEBRUARY 8, 2022.
- ② - THE LOCATION OF THE RIGHT OF WAY EASEMENT IN FAVOR OF TODD COUNTY WATER DISTRICT, OF RECORD IN DEED BOOK 102, PAGE 216, OF THE COURT CLERK'S OFFICE OF TODD COUNTY, KENTUCKY, IS NOT PROPERLY DEPICED PER INFORMATION PROVIDED, AND IS NOT ABLE TO BE SHOWN UPON THE FACE OF THIS SURVEY.
  - ③ - RIGHT OF WAY EASEMENT IN FAVOR OF PENNSYLVIA RURAL ELECTRIC COOPERATIVE CORPORATION OF HOPKINSVILLE, KENTUCKY, A KENTUCKY CORPORATION OF RECORD IN DEED BOOK 106, PAGE 472, OF THE COURT CLERK'S OFFICE OF TODD COUNTY, KENTUCKY IS BLANKET IN NATURE, AND DOES NOT AFFECT CELLO Partnership's LESSEE PREMISES, AND EASEMENT AREA INTERESTS.
  - ④ - RIGHT OF WAY EASEMENT IN FAVOR OF PENNSYLVIA RURAL ELECTRIC COOPERATIVE CORPORATION OF HOPKINSVILLE, KENTUCKY, A KENTUCKY CORPORATION OF RECORD IN DEED BOOK 146, PAGE 10164, OF THE COURT CLERK'S OFFICE OF TODD COUNTY, KENTUCKY IS BLANKET IN NATURE, AND DOES NOT AFFECT CELLO Partnership's LESSEE PREMISES, AND EASEMENT AREA INTERESTS.
  - ⑤ - RIGHT OF WAY EASEMENT IN FAVOR OF PENNSYLVIA RURAL ELECTRIC COOPERATIVE CORPORATION OF HOPKINSVILLE, KENTUCKY, A KENTUCKY CORPORATION OF RECORD IN DEED BOOK 155, PAGE 393, OF THE COURT CLERK'S OFFICE OF TODD COUNTY, KENTUCKY IS BLANKET IN NATURE, AND DOES NOT AFFECT CELLO Partnership's LESSEE PREMISES, AND EASEMENT AREA INTERESTS.



PLOT DATE: FEBRUARY 16, 2022

PROJECT NUMBER: 221-108-20  
SHEET NUMBER: 2 OF 2

CELLCO PARTNERSHIP SITE SURVEY: KENTUCKY D/B/A/ VERIZON WIRELESS  
"CK CLIFTY" TOWER SITE  
LOCATED IN: CLIFTY, TODD COUNTY, KENTUCKY  
TOWER PREMISES AREA SURVEY  
CELLCO PARTNERSHIP LOCATION CODE: 706080

SHARONDALE SURVEYING INC.  
161 MARTIN ROAD  
BOHN AQUA, TN 37025  
(615) 513-0032  
E-Mail: Sharonda@bellsouth.net



## **Notification Listing**

Stevie and Brenda Powell  
12160 Greenville Road  
Elkton KY 42220

Jack and Joyce Petrie  
714 Clifty Kirkmansville Road  
Elton KY 42220

Thomas C Strader  
102 Dunnheath Drive  
Elton KY 42220

Travis and Terri Keeling  
340 Clifty Kirkmansville Road  
Elton KY 42220

Darian and Shannon Ray 450  
Clifty Kirkmansville Road  
Elton KY 42220

Jewel Cumbee, III  
PO Box 396  
Clifty KY 42216

Elisa and Tony Moore  
PO Box 194  
Clifty KY 42216  
Garry and Linda Mallory  
PO Box 21  
Clifty KY 42216

Keith and Lisa Settle  
PO Box 215  
Elkton KY 42220



Russell L. Brown  
Attorney at Law  
rbrown@clarkquinnlaw.com

320 N. Meridian St., Ste. 1100  
Indianapolis, IN 46204  
(317) 637-1321 main  
(317) 687-2344 fax

July 29, 2022

**Notice of Proposed Construction of  
Wireless Communications Facility  
Site Name: Clifty**

Cellco Partnership, d/b/a Verizon Wireless has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 462 Clifty-Kirkmansville Road, Elkton, 42220 (North Latitude: (36° 59' 26.09", West Longitude 87° 09' 44.12"). The proposed facility will include a 250-foot tall antenna tower, plus a 5-foot lightning arrestor, for a total height of 255 feet with related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

This notice is being sent to you because the County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site 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 2022-00230 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. Applicant's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the area. Please feel free to contact us at 317-637-1321 if you have any comments or questions about this proposal.

Sincerely,  
Russell L. Brown

Attorney for Applicant  
RLB/jdj  
enclosure



www.clarkquinnlaw.com

**Russell L. Brown**  
Attorney at Law  
rbrown@clarkquinnlaw.com

**320 N. Meridian St., Ste. 1100**  
**Indianapolis, IN 46204**  
**(317) 637-1321 main**  
**(317) 687-2344 fax**

July 29, 2022

Via Certified Mail, Return Receipt Requested

Hon. Todd Mansfield  
P.O. Box 355  
Elkton, KY 42220

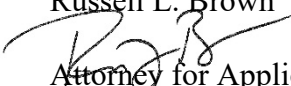
RE: Notice of Proposal to Construct Wireless Communications Facility  
Kentucky Public Service Commission Docket No. 2022-00230  
Site Name: Tompkinsville

Dear Judge Mansfield:

Cellco Partnership, d/b/a Verizon Wireless has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located 462 Clifty-Kirkmansville Road, Elkton, 42220 (North Latitude: (36° 59' 26.09", West Longitude 87° 09' 44.12"). The proposed facility will include a 250-foot tall antenna tower, plus a 5-foot lightning arrestor, for a total height of 255 feet with related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2022-0030 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,  
Russell L. Brown  


Attorney for Applicant  
RLB/mnw  
enclosure



## SITE NAME: Clifty 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.

Cellco Partnership, d/b/a Verizon Wireless propose to construct a telecommunications **tower** on this site. If you have questions, please contact Clark, Quinn, Moses, Scott & Grahn, LLP, 320 N. Meridian Street, Indianapolis, IN 46204; 317-637-1321, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2022-00230 in your correspondence.

Cellco Partnership, d/b/a Verizon Wireless propose to construct a telecommunications **tower** on this site. If you have questions, please contact Clark, Quinn, Moses, Scott & Grahn, LLP, 320 N. Meridian Street, Indianapolis, IN 46204; 317-637-1321, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2022-00230 in your correspondence.



Robert B. Scott  
Charles R. Grahn  
Frank D. Otte\*  
John "Bart" Herriman  
William W. Gooden\*\*  
Michael P. Maxwell  
Russell L. Brown\*\*†  
Jennifer F. Perry  
Keith L. Beall  
N. Davey Neal  
Travis W. Cohron  
Maggie L. Sadler  
Kristin A. McIlwain  
Olivia A. Hess

VIA EMAIL: [classifieds@newsdemocratleader.com](mailto:classifieds@newsdemocratleader.com)

News Democrat & Leader  
120 SW Park Sq.  
Russellville, KY 42276

Land Use Consultant  
Elizabeth Bentz Williams, AICP

July 28, 2022

RE: Legal Notice Advertisement  
Site Name: Clifty

\*Also admitted in Montana  
†Also admitted in Kentucky  
\*\*Registered Civil Mediator

To Whom it May Concern:

Please publish the following legal notice advertisement in the next available edition of the *News Democrat Leader*:

#### NOTICE

**Cellco Partnership, d/b/a Verizon Wireless has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 462 Clifty-Kirkmansville Road, Elkton, KY 42220 (North Latitude: (36° 59' 26.09", West Longitude 87° 09' 44.12"). 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 2022-00230 in any correspondence sent in connection with this matter.**

Please let me know how you would like to handle payment. We are happy to pay by credit card, once you have calculated the cost. After this advertisement has been published, please forward a tearsheet copy, affidavit of publication, and invoice to Clark, Quinn, Moses, Scott & Grahn, LLC, 320 N. Meridian Street, Indianapolis, IN 46204 or by email to [ebw@clarkquinnlaw.com](mailto:ebw@clarkquinnlaw.com). Please call me at (317) 637-1321 if you have any questions. Thank you for your assistance.

Sincerely

A handwritten signature in cursive script that reads 'Elizabeth Bentz Williams'.

Elizabeth Bentz Williams  
Clark, Quinn, Moses, Scott & Grahn, LLC

**Search Area Map of Proposed Site(s)**





March 15, 2022

RE: Proposed Verizon Wireless Communications Facility  
Site Name: CK Clifty

To Whom It May Concern:

As a radio frequency engineer for Verizon Wireless, I am providing this letter to state the need for the Verizon Wireless site called Clifty and its compliance to RF emission standards as set by FCC. The Clifty cell site is necessary to achieve coverage and capacity needs in the Clifty area, along Clifty-Kirkamansville Rd, Greenville Rd and to the surrounding residential areas. This site is necessary to provide this coverage and capacity that cannot be established in any other manner. This new tower is required as there is no other means of providing this service in this area.

Whenever possible, Verizon Wireless seeks out colocation opportunities. Colocation allows Verizon Wireless to increase capacity, coverage and services in a targeted area in a more timely manner and at less cost than building a new raw land site.

The height for the Clifty site was determined through in-depth terrain modeling as well as signal propagation modeling. Due to the rising and falling terrain combine with the dense wooded area, it was determined that a centerline height of 240 feet was necessary to provide adequate coverage in the area. A lower height would greatly reduce coverage and result in the inability of the Clifty site to operate properly in the Verizon Network.

The site will provide the quality coverage our customers expect and rely on; Customers will experience access to mobile voice and wireless data services previously unavailable, and support Homeland Security through enhanced 911 services.

This cell site has been designed, and will be constructed and operated in a manner that satisfies regulations and requirements of all applicable governmental agencies that have been charged with regulating tower specifications, operation, construction, and placement, including the FAA and FCC.

RF emission readings at this site in the accessible areas would be well below the applicable limits for FCC Uncontrolled/General Population and FCC Controlled/Occupational environments as outlined in 47 CFR 1.1301 through 1.1319. The site would carry appropriate RF emission signage to the public entering the site area.

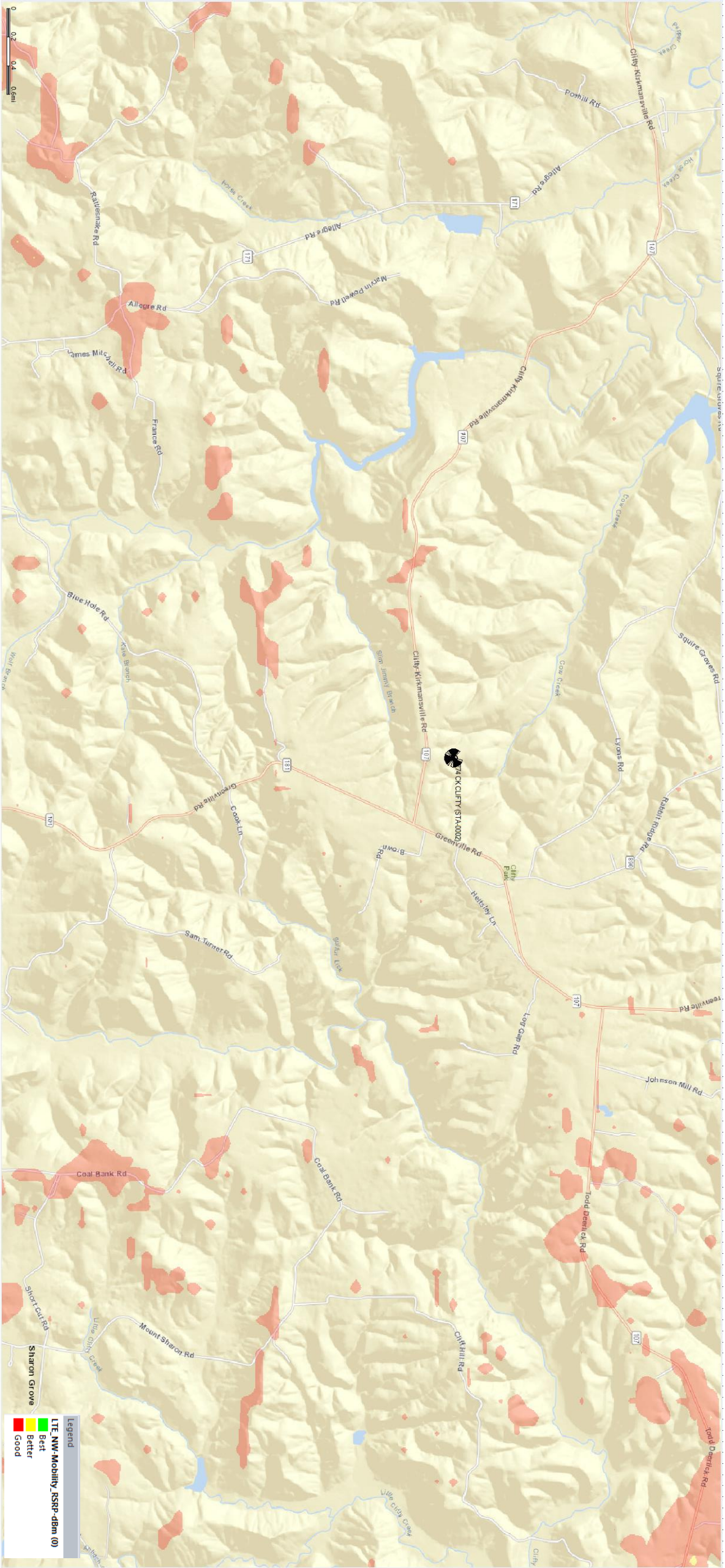
This site would transit frequencies within the licensed frequency bands and the power limitations set by FCC regulatory authority. The site would go through the complete rigorous regulatory process before it comes on-air to provide service to our customers.

Sincerely,

A handwritten signature in black ink, appearing to read "Gordon Snyder". The signature is written in a cursive style with a long horizontal tail stroke extending to the right.

Gordon Snyder  
RF Engineer, Verizon Wireless

# Coverage Without CK Clifty





**Exhibit R**  
**List and Identity and Qualifications of Professionals**

F. V. Neeley  
Professional Land Surveyor  
Kentucky License 3093  
Sharondale Surveying, Inc.  
161 Martin Road  
Bon Aqua, TN 37025

Jeffrey Lashbrook  
Professional Engineer  
Kentucky License 35042  
BTM Engineering, Inc.  
3001 Taylor Springs Road  
Louisville, KY 40220

J. Samuel Vance  
Professional Engineer  
Geotechnical Manager  
Kentucky License 31722  
Collier Engineering Co, Inc.  
2949 Nolensville Pike  
Nashville, TN 37211

Joseph P. Jacobs  
Professional Engineer  
Kentucky License 22177  
Saber Communications Corporation  
1545 Pidco Dr.  
Plymouth, IN 46563

Larry Rhoads  
Construction Manager  
Verizon Wireless  
2421 Holloway Road  
Louisville, KY 40299

Gordan Snyder  
RF Engineer  
Verizon Wireless  
2421 Holloway Road Louisville, KY 40299