# COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION 

In the Matter of:

THE APPLICATION OF )<br>CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS )<br>AND SOUTHERN TOWERS BTS, LP FOR ISSUANCE ) CASE NO. 2023-00337<br>OF A CERTIFICATE OF PUBLIC CONVENIENCE AND )<br>NECESSITY TO CONSTRUCT A WIRELESS )<br>COMMUNICATIONS FACILITY IN THE )<br>COMMONWEALTH OF KENTUCKY IN THE COUNTY )<br>OF CALLOWAY

SITE NAME: KIRKSEY

## APPLICATION FOR <br> CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR CONSTRUCTION OF A WIRELESS COMMUNICATIONS FACILITY

Cellco Partnership, d/b/a Verizon Wireless and Southern Towers BTS, LP ("CoApplicants"), 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, Co-Applicants respectfully provide and state the following information:

1. The complete name and address of the Co-Applicants:
a. Cellco Partnership, d/b/a Verizon Wireless, having a local address of 2902 Ring Road, Elizabethtown, KY, 42701.
b. Southern Towers BTS, LP, having a local address of 250 Signal Mountain Road, Suite B, Chattanooga, TN 37405
2. Co-Applicants:
a. Cellco Partnership, $\mathrm{d} / \mathrm{b} / \mathrm{a}$ Verizon Wireless is a Delaware general partnership and a copy of the Statement of Good Standing from Delaware, and the Certificate of Assumed Name is on file with the Secretary of State of Commonwealth of Kentucky and included as part of Exhibit A.
b. Southern Towers, BTS, LP is a Delaware limited partnership and a copy of the formulation document and the Statement of Good Standing from Delaware, and the Certificate of Authorization, which is on file with the Secretary of State of Commonwealth of Kentucky, are included as part of Exhibit A.
3. Co-Applicants propose 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 Co-Applicant operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of the Co-Applicant's FCC Registration and Licenses with Authorization 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 Co-Applicant's services to an area currently not served or not adequately served by the Co-Applicants by increasing coverage or
capacity and thereby enhancing the public's access to innovative and competitive wireless communications services. A statement from Co-Applicant's RF Design Engineer outlining said need is attached as Exhibit R along with Propagation Maps attached as Exhibit R-a. 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, Co-Applicants propose to construct a WCF on east side of Fire Station Drive, Kirksey, KY 42054. (North Latitude: ( $36^{\circ} 40^{\prime} 52.46$, West Longitude $88^{\circ} 23^{\prime} 53.22^{\prime \prime}$ ), 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 Robert Crick and Jimmie Louise Crick pursuant to a Deed recorded at Deed Book 809, Page 695 in the office of the County Clerk. The proposed WCF will consist of a 265 -foot tall tower, with an approximately 5 -foot tall lightning arrestor attached at the top, for a total height of 270 -feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of the Co-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. Co-Applicants have 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, Co-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. A statement from Co-Applicant, Cellco Partnership, d/b/a Verizon Wireless's RF Design Engineer outlining exploration of co-location opportunities is attached as Exhibit R.
11. A copy of the Application for Federal Aviation Administration's ("FAA") and the FAA Determination of No Hazard Extension are attached as Exhibit F.
12. A copy of the Kentucky Airport Zoning Commission ("KAZC") Application and the KAZC Approval to construct the tower are attached as Exhibit G.
13. A geotechnical engineering report was performed at the WCF site by GPD Group, Inc., 520 S. Main Street, Suite 2531, Akron, Ohio 44311, dated December 8, 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 H and Exhibit S.
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 or an abbreviated agreement recorded with the County Clerk 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. The identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained in Exhibit $\mathbf{S}$.
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 S.
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 21035C0100C, Dated September 29, 2010.
19. Exhibit K 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, every owner of real estate within 200 feet of the access road including intersection with the public street system and all abutting property owners (according to the records maintained by the County Property Valuation Administrator). Attached as Exhibit L is the Notification List with screen
shots of the PVA records verified and updated using the Calloway County PVA on October 5, 2023. Exhibit K also identifies 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.
20. Co-Applicants have sent certified notices 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 informed of his or her right to request intervention. A list of the notified property owners, verified on October 5, 2023, using the Calloway County Kentucky Property Valuation Administration records and a copy of the form of the notice sent by certified mail to each landowner on October 5, 2023, are attached as Exhibit L and Exhibit M, respectively. Twentythree (23) notices were sent to surrounding property owners; to date eighteen (18) notice green cards have been returned. USPS tracking indicates that 5 notices are still moving through the system. Copies of the mailed envelopes, returned green cards and USPS tracking are included in

## Exhibit M.

21. Co-Applicants have 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 along with a copy of the mailed envelope and returned green card is attached as Exhibit $\mathbf{N}$.
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 $\mathbf{O}$.
23. 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 $\mathbf{P}$.
24. The area of the proposed facility is in the unincorporated area of Calloway County, Kentucky. The site is approximately 1.4 miles south of Kirksey, KY. The area is buffered by a tree row to the north and west. The area is predominated tilled, with areas of woods, rural in nature, with a scattering of residential properties. The terrain in this area is fairly flat. There is no zoning or Plan Commission in Calloway County. The general area where the proposed facility is proposed is open area and, removed a significant distance from any residential structures. The nearest residential structure is 444 feet from the proposed tower site.
25. The process that was used by the Co-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. CoApplicant'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 Co-Applicant when searching for sites for its antennas that would provide the coverage deemed necessary by the Co-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 Q.
26. 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 Engineer's Statement of Need and Propagation Maps attached as Exhibit R and Exhibit Ra, respectively. The proposed tower will expand and improve voice and data service for Verizon Wireless customers.
27. Attached hereto as Exhibit T please find an Affidavit of Certification for all information contained in this application.
28. All Exhibits to this Application are hereby incorporated by reference as if fully set out as part of the Application.
29. All responses and requests associated with this Application may be directed to:

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

WHEREFORE, Co-Applicants respectfully request that the PSC accept the foregoing Application for filing and, having met the requirements of KRS §§278.020(1), 278.650, and 278 .665 and all applicable rules and regulations of the PSC, grant a Certificate of Public Convenience and Necessity to construct and operate the WCF at the location set forth herein.

Respectfully submitted,


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
Attorney for Cellco Partnership d/b/a Verizon Wireless

## LIST OF EXHIBITS

A Applicant Entity
B FCC Registration and 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 Application
G KAZC Application
H Geotechnical Report
I Directions to WCF Site
J Copy of Real Estate Agreement
K $50{ }^{\prime}$ ' Radius and Abutters Map with Surveyor Certification
L Notification Listing with PVA Verification
M Copy of Property Owner Notification
N Copy of County Judge/Executive notice
O Copy of Posted Notices
P Copy of Newspaper Legal Notice Advertisement
Q Copy of Radio Frequency Design Search Area
R Copy of RF Design Engineer State of Need
$\mathrm{Ra} \quad$ Propagation Maps
S List of Qualified Professionals
T Affidavit of Certification


## Certificate

I, Michael G. Adams, Secretary of State for the Commonwealth of Kentucky, do hereby certify that the foregoing writing has been carefully compared by me with the original thereof, now in my official custody as Secretary of State and remaining on file in my office, and found to be a true and correct copy of

> CERTIFICATE OF ASSUMED NAME OF VERIZON WIRELESS ADOPTED BY GENERAL PARTNERS OF CELLCO PARTNERSHIP FILED JUNE 21, 2006.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 10th day of May, 2023.


Michael G. Adams
Secretary of State
Commonwealth of Kentucky
kdcoleman/0641227 - Certificate ID: 290787

COMMONWEALTH OF KENTUCKY
TREY GRAYSON
SECRETARY OF STATE


## CERTIFICATE OF ASSUMED NAME

This certifies that the assumed name of
Vexizon Wireleas

IName widow with the busheen will bo pondxdeld
has been adopted by See Addendum
which is the "real name" of noumust check onel


The certificate of assumed nama la exactited by


## Addendum

The full name of the Partnership is Cellco Partnership; a Delaware general partnership with its headquarters located One Verizon Way, Basking Ridge NJ 07920-1097.

| General Partners of Cellco Partnership | Address |
| :--- | :--- |
| Bell Atlantic Cellular Holdings, L.P. | One Verizon Way Basking Ridge, NJ 07920 |
| NYNEX PCS Inc. | One Verizon Way Basking Ridge, NJ 07920 |
| PCSCO Partnership | One Verizon Way Basking Ridge, NJ 07920 |
| GTE Wireless Incorporated | One Verizon Way Basking Ridge, NJ 07920 |
| GTE Wireless of Ohio Incorporated | One Verizon Way Basking Ridge, NJ 07920 |
| PCS Nucleus, L.P. | 2999 Oak Road, $7^{\text {th }}$ Floor Walnut Creek, CA 94597 |
| JV PartnerCo, LLC | 2999 Oak Road, $7^{\text {th }}$ Floor Walnut Creek, CA 94597 |

The First State


#### Abstract

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "CELLCO PARTNERSHIP" IS DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND has a legal existence so far as the records of this office show, as OF THE TWENTY-SEVENTH DAY OF APRIL, A.D. 2023.

AND I DO hereby further certify that the annual taxes have been PAID TO DATE.




Authentication: 203227418

# Delaware 

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF LIMITED PARTNERSHIP OF "SOUTHERN TOWERS BTS, LP", FILED IN THIS OFFICE ON THE TWENTY-SEVENTH DAY OF MARCH, A.D. 2020, AT 3:33 O`CLOCK P.M.



## STATE OF DELAWARE CERTIFICATE OF LIMITED PARTNERSHIP

- The Undersigned, desiring to form a limited partnership pursuant to the Delaware Revised Uniform Limited Partnership Act, 6 Delaware Code, Chapter 17, do hereby certify as follows:
- First: The name of the limited partnership is Southern Towers BTS, LP
$\qquad$
- Second: The address of its registered office in the State of Delaware is $\qquad$ 2140 S Dupont

Zip code 19934 in the city of Camden

Paracorp Incorporated

- Third: The name and mailing address of each general partner is as follows:

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Southern Towers BTS, LLLC
250 Signal Mountain Road, Suite B
Chattanooga, TN 37405
```

- In Witness Whereof, the undersigned has executed this Certificate of Limited Partnership as of $27 \quad$ day of March A.D. 2020 . By: Sarnies Trwtres BTS, LLC

Name: SEan G. Caskie
(type or print name)
Signen on Behalf of ir's General Parmerz
Spoof Ostuin

# Commonwealth of Kentucky Michael G. Adams, Secretary of State 

Michael G. Adams
Secretary of State P. O. Box 718

Frankfort, KY 40602-0718 (502) 564-3490
http://www.sos.ky.gov

## Certificate of Authorization

Authentication number: 298787
Visit https://web.sos.ky.gov/ftshow/certvalidate.aspx to authenticate this certificate.
I, Michael G. Adams, Secretary of State of the Commonwealth of Kentucky, do hereby certify that according to the records in the Office of the Secretary of State,

## SOUTHERN TOWERS BTS, LP

, a limited partnership authorized under the laws of the state of Delaware, is authorized to transact business in the Commonwealth of Kentucky, and received the authority to transact business in Kentucky on August 22, 2022.

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

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this $13^{\text {th }}$ day of October, 2023, in the $232^{\text {nd }}$ year of the Commonwealth.


## Suchail It. Adam

## Michael G. Adams

Secretary of State
Commonwealth of Kentucky
298787/1227103

The First State


#### Abstract

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "SOUTHERN TOWERS BTS, LP" IS DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD StANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF tHIS OFFICE SHOW, AS OF THE THIRTEENTH DAY OF OCTOBER, A.D. 2023.

AND I DO HEREBY FURTHER CERTIFY THAT THE SAID "SOUTHERN TOWERS BTS, LP" WAS FORMED ON THE TWENTY-SEVENTH DAY OF MARCH, A.D. 2020.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL TAXES HAVE BEEN PAID TO DATE.




Authentication: 204372990

## Antenna Structure Registration

$\underline{\text { FCC }}>\underline{\text { WTB }}>\underline{\text { ASR }}>\underline{\text { Online Systems }}>$ ASR Search

## ASR Registration Search

## Registration 1318948



Registration Detail

| Reg Number | 1318948 | Status | Granted |
| :--- | :--- | :--- | :--- |
| File Number | A1171418 | Constructed |  |
| EMI | No | Dismantled |  |
| NEPA |  |  |  |

## Antenna Structure

Structure Type LTOWER - Lattice Tower
Location (in NAD83 Coordinates - Convert to NAD27)
Lat/Long $\quad 36-40-52.4 \mathrm{~N}$ 088-23-53.2 W Address Fire Statino $\operatorname{Dr}$ (15287337)
City, State Kirkesy , KY
Center of Position of Tower

AM Array
in Array

## Heights (meters)

Elevation of Site Above Mean Sea Level
172.2

Overall Height Above Mean Sea Level
254.5

Overall Height Above Ground (AGL)
82.3

Overall Height Above Ground w/o Appurtenances 80.7

## Painting and Lighting Specifications

FAA Chapters 4, 8, 15
Paint and Light in Accordance with FAA Circular Number 70/7460-1M

## FAA Notification

FAA Study 2020-ASO-36927-OE FAA Issue Date 02/22/2021
Owner \& Contact Information

FRN $0001836709 \quad$| Owner Entity |
| :--- |
| Type |$\quad$ General Partnership

## Owner

Kentucky RSA No. 1 Partnership
P: (770)797-1070
Attention To: Network Regulatory
5055 North Point Pkwy
F:
NP2NE Network Engineering
Alpharetta, GA 30022

## Contact

| Manager, Regulatory | P: $(770) 797-1070$ |
| :--- | :--- |
| Attention To: Network Regulatory | F: |
| 5055 North Point Pkwy | E: NetworkRegulatory@VerizonWireless.com |

NP2NE Network Engineering
Alpharetta, GA 30022
Last Action Status

| Status | Granted | Received | $04 / 05 / 2021$ |
| :--- | :--- | :--- | :--- |
| Purpose | Amendment | Entered | $04 / 05 / 2021$ |
| Mode | Interactive |  |  |
| Related Applications |  |  |  |
| $04 / 05 / 2021$ | $\underline{A 1171418}$ - Amendment (AM) |  |  |
| Comments |  |  |  |

## Comments

None

## History

## Date

04/12/2022
04/06/2021

## Pleadings

## Pleading Type

None

## Automated Letters

04/12/2022 Construction Reminder, Reference 1165408

## Event

Construction Reminder Letter Sent
Registration Printed

## Date Entered

| ASR Help | ASR License Glossary - FAQ - Online Help- Documentation - Technical Support |
| :--- | :--- |
| ASR Online Systems | TOWAIR- CORES - ASR Online Filing - Application Search - Registration Search |
| About ASR | Privacy Statement - About ASR - ASR Home |
| Registration Search | By Registration Number $v$ |

FCC | Wireless | ULS | CORES
Help | Tech Support

Federal Communications Commission
45 L Street NE
Washington, DC 20554

Phone: 1-877-480-3201
TTY: 1-717-338-2824
Submit Help Request

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

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

| Call Sign <br> KNKQ306 | File Number <br> 0009611390 |
| :---: | :---: |
| Radio Service <br> CL - Cellular |  |
| Market Numer <br> CMA443 | Channel Block <br> B |
| Sub-Market Designator |  |
| 0 |  |

FCC Registration Number (FRN): 0001836709

## Market Name

Kentucky 1 - Fulton

| Grant Date <br> $08-31-2021$ | Effective Date <br> $08-31-2021$ | Expiration Date <br> $10-01-2031$ | Five Yr Build-Out Date | Print Date <br> $08-31-2021$ |
| :---: | :---: | :---: | :---: | :---: |

## Site Information:

| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :--- | :--- | :--- | :--- | :--- |
| 1 | $36-20-59.2 \mathrm{~N}$ | $089-22-12.3 \mathrm{~W}$ | 98.0 |  |

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

## Antenna: 1

| Maximum Transmitting ERP in Watts: 135.800 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 148.000 | 117.000 | 107.000 | 117.000 | 121.000 | 147.000 | 149.000 | 146.000 |
| Transmitting ERP (watts) | 133.300 | 103.500 | 36.500 | 4.500 | 1.500 | 3.900 | 38.800 | 109.600 |

## Conditions:

Pursuant to $\S 309(\mathrm{~h})$ of the Communications Act of 1934 , as amended, 47 U.S.C. $\S 309(\mathrm{~h})$, 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 $\S 706$ of the Communications Act of 1934, as amended. See 47 U.S.C. §606.
Print Date: 08-31-2021

| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :--- | :--- | :--- | :--- | :--- |
| 2 | $36-45-58.0 \mathrm{~N}$ | $088-38-50.0 \mathrm{~W}$ | 143.0 | 147.8 |

Address: 416 Jimtown Road
City: MAYFIELD County: GRAVES State: KY Construction Deadline:

| Antenna: $\mathbf{2}$ |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Maximum Transmitting ERP in Watts: | 140.820 |  |  |  |  |  |  |  |
| Azimuth(from true north) | $\mathbf{0}$ | $\mathbf{4 5}$ | $\mathbf{9 0}$ | $\mathbf{1 3 5}$ | $\mathbf{1 8 0}$ | $\mathbf{2 2 5}$ | $\mathbf{2 7 0}$ | $\mathbf{3 1 5}$ |
| Antenna Height AAT (meters) | 124.300 | 120.000 | 100.800 | 92.100 | 88.300 | 103.100 | 108.600 | 100.800 |
| Transmitting ERP (watts) | 91.200 | 87.100 | 85.110 | 85.110 | 89.130 | 87.100 | 89.130 | 89.130 |


| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :--- | :--- | :--- | :--- | :--- |
| 4 | $36-54-35.5 \mathrm{~N}$ | $089-04-01.6 \mathrm{~W}$ | 110.3 | 121.0 |

Address: (Wickliffe) 353 CR 1307
City: Bardwell County: CARLISLE State: KY Construction Deadline:

| Antenna: 4 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 107.500 | 98.100 | 119.800 | 96.700 | 86.900 | 133.300 | 130.900 | 130.400 |
| Transmitting ERP (watts) | 189.230 | 48.640 | 1.690 | 0.930 | 0.930 | 0.930 | 1.810 | 52.120 |
| Antenna: 5 |  | 8.640 |  |  |  |  |  |  |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 107.500 | 98.100 | 119.800 | 96.700 | 86.900 | 133.300 | 130.900 | 130.400 |
| Transmitting ERP (watts) | 1.710 | 64.860 | 368.980 | 174.580 | 8.750 | 0.930 | 0.930 | 0.930 |
| Antenna: 6 |  |  |  |  |  |  |  |  |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 107.800 | 98.100 | 119.800 | 96.700 | 86.900 | 133.300 | 130.900 | 130.400 |
| Transmitting ERP (watts) | 0.350 | 0.350 | 1.230 | 35.330 | 112.440 | 35.270 | 1.000 | 0.350 |
| Location Latitude Longitude |  | Ground Elevation (meters) |  |  | Structure Hgt to Tip (meters) |  | Antenna Structure Registration No. |  |
| 6 36-31-12.4 N 088-50 | 0-41.5 W |  | 4.2 |  |  |  | 1030665 |  |
| Address: (Fulton) 550 Powell Road |  |  |  |  |  |  |  |  |
| City: Fulton County: HICKMAN | State: KY | Cons | ruction D | adline: |  |  |  |  |
| Antenna: 4 |  |  |  |  |  |  |  |  |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 |  | 270 | 315 |
| Antenna Height AAT (meters) | 128.200 | 122.800 | 123.200 | 135.200 | 147.500 | 157.200 | 143.900 | 141.700 |
| Transmitting ERP (watts) Antenna: 5 | 110.570 | 412.100 | 98.560 | 4.220 | 1.510 | 0.920 | 0.920 | 6.530 |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 128.200 | 122.800 | 123.200 | 135.200 | 147.500 | 157.200 | 143.900 | 141.700 |
| Transmitting ERP (watts) | 0.550 | 0.550 | 0.550 | 0.550 | 1.480 | 16.430 | 11.480 | 0.700 |



| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :--- | :--- | :--- | :--- | :--- |
| 8 | $37-03-51.4 \mathrm{~N}$ | $088-57-23.6 \mathrm{~W}$ | 116.4 | 92.4 |

Address: (La Center) 220 RICHARDSON LN
City: LA CENTER County: BALLARD State: KY Construction Deadline:


| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 11 | $37-02-00.0 \mathrm{~N}$ | $088-22-10.0 \mathrm{~W}$ | 105.5 | 106.7 | 1040303 |

Address: (Calvert City) 641 Jary Johnson Rd.
City: Calvert City County: MARSHALL State: KY Construction Deadline:

| Antenna: 2 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 78.900 | 77.600 | 88.100 | 83.000 | 68.600 | 85.300 | 97.900 | 93.100 |
| Transmitting ERP (watts) | 23.380 | 330.300 | 378.360 | 36.130 | 0.970 | 0.970 | 0.970 | 0.970 |
| Antenna: 3 |  |  |  |  |  |  |  |  |
| Maximum Transmitting ERP in Watts: | 140.820 |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 78.900 | 77.600 | 88.100 | 83.000 | 68.600 | 85.300 | 97.900 | 93.100 |
| Transmitting ERP (watts) | 0.970 | 0.970 | 0.970 | 14.730 | 240.930 | 357.480 | 49.940 | 1.230 |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 78.900 | 77.600 | 88.100 | 83.000 | 68.600 | 85.300 | 97.900 | 93.100 |
| Transmitting ERP (watts) | 63.740 | 2.060 | 0.660 | 0.660 | 0.660 | 4.020 | 107.530 | 274.970 |


| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 12 | $36-34-49.2 \mathrm{~N}$ | $088-31-45.2 \mathrm{~W}$ | 155.5 | 91.4 | 1202399 |

Address: 12201 SR 97
City: TriCity County: GRAVES State: KY Construction Deadline:

| Antenna: 2 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 75.100 | 73.400 | 74.100 | 70.100 | 102.600 | 100.900 | 74.700 | 81.300 |
| Transmitting ERP (watts) | 0.280 | 4.680 | 67.610 | 91.200 | 13.180 | 0.450 | 0.250 | 0.200 |
| Antenna: 3 |  |  |  |  |  |  |  |  |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) |  | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 75.100 | 73.400 | 74.100 | 70.100 | 102.600 | 100.900 | 74.700 | 81.300 |
| Transmitting ERP (watts) | 0.360 | 0.200 | 0.200 | 0.350 | 18.200 | 89.130 | 66.070 | 2.630 |
| Antenna: 4 |  |  |  |  |  |  |  |  |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) |  |  | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 75.100 | 73.400 | 74.100 | 70.100 | 102.600 | 100.900 | 74.700 | 81.300 |
| Transmitting ERP (watts) | 100.000 | 38.020 | 0.200 | 0.380 | 0.200 | 0.200 | 1.260 | 42.660 |


| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 14 |  |  |  | $67-05-47.2 \mathrm{~N}$ | $088-42-35.2 \mathrm{~W}$ |

Address: (Paducah West) 4415 Merredith Rd.
City: Paducah County: MCCRACKEN State: KY Construction Deadline: 07-08-2014

| Antenna: 4 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 59.900 | 55.900 | 65.200 | 50.700 | 38.200 | 34.700 | 42.800 | 64.600 |
| Transmitting ERP (watts) | 24.580 | 50.820 | 50.310 | 19.100 | 0.840 | 0.330 | 0.330 | 1.370 |
| Antenna: 5 |  |  |  |  |  |  |  |  |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 59.900 | 55.900 | 65.200 | 50.700 | 38.200 | 34.700 | 42.800 | 64.600 |
| Transmitting ERP (watts) | 0.440 | 0.440 | 12.210 | 76.570 | 112.800 | 57.980 | 5.460 | 0.440 |
| Antenna: 6 |  |  |  |  |  |  |  |  |
| Maximum Transmitting ERP in Watts: 140.820 |  |  |  |  |  |  |  |  |
| Azimuth(from true north) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
| Antenna Height AAT (meters) | 59.900 | 55.900 | 65.200 | 50.700 | 38.200 | 34.700 | 42.800 | 64.600 |
| Transmitting ERP (watts) | 20.830 | 0.780 | 0.440 | 0.440 | 2.790 | 42.940 | 108.040 | 89.900 |



| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :--- | :--- | :--- | :--- | :--- |
| 16 | $36-34-03.0 \mathrm{~N}$ | $089-10-30.9 \mathrm{~W}$ | 109.4 | 91.4 |

Address: (Hickman site) Holley Street
City: Hickman County: FULTON State: KY Construction Deadline: 05-28-2014


Address: (Monkey's Eyebrow) 4625 Odgen Colvin Circle City: Kevil County: BALLARD State: KY Construction Deadline: 10-24-2014



## Control Points:

Control Pt. No. 3
Address: 500 W. Dove Rd.
City: Southlake County: TARRANT State: TX Telephone Number: (800)264-6620

## Waivers/Conditions:

NONE

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LICENSEE: CELLCO PARTNERSHIP

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

| Call Sign <br> KNLH404 | File Number |
| :---: | :---: |
| Radio Service |  |
| CW - PCS Broadband |  |

FCC Registration Number (FRN): 0003290673


| 1st Build-out Date <br> $04-28-2002$ | 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 $\S 309(\mathrm{~h})$ of the Communications Act of 1934 , as amended, 47 U.S.C. $\S 309(\mathrm{~h})$, 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. $\S 310$ (d). This license is subject in terms to the right of use or control conferred by $\S 706$ 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.

File Number:
Print Date:

700 MHz Relicensed Area Information:

## Market

Market Name
Buildout Deadline
Buildout Notification
Status


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FCC Registration Number (FRN): 0002942159

| Grant Date $06-05-2015$ | Effective Date $05-07-2020$ | Expiration Date $06-23-2025$ | Print Date |
| :---: | :---: | :---: | :---: |
| Market Number MTA026 | Cha |  | Sub-Market Designator 18 |
| Market Name <br> Louisville-Lexington-Evansvill |  |  |  |


| 1st Build-out Date <br> $10-23-2000$ | 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.

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

## Conditions:

Pursuant to $\S 309(\mathrm{~h})$ of the Communications Act of 1934 , as amended, 47 U.S.C. $\S 309$ (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. $\S 310$ (d). This license is subject in terms to the right of use or control conferred by $\S 706$ 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.

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


Call Sign: WQBT313


700 MHz Relicensed Area Information:

## Market

File Number:
Print Date:


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FCC Registration Number (FRN): 0002942159

| Grant Date $06-05-2015$ | Effective Date $05-07-2020$ | Expiration Date 06-23-2025 | Print Date |
| :---: | :---: | :---: | :---: |
| Market Number MTA026 | Cha |  | Sub-Market Designator 16 |
| Market Name <br> Louisville-Lexington-Evansvill |  |  |  |


| 1st Build-out Date <br> $06-23-2000$ | 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.

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

## Conditions:

Pursuant to $\S 309(\mathrm{~h})$ of the Communications Act of 1934 , as amended, 47 U.S.C. $\S 309$ (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. $\S 310$ (d). This license is subject in terms to the right of use or control conferred by $\S 706$ 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.

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


Call Sign: WQBT318


700 MHz Relicensed Area Information:

## Market

File Number:
Print Date:


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FCC Registration Number (FRN): 0003290673

| Grant Date $02-22-2022$ | Effective Date $02-22-2022$ | Expiration Date 11-29-2036 | $\begin{aligned} & \text { Print Date } \\ & 02-23-2022 \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Market Number REA004 | $\mathrm{Cl}$ |  | Sub-Market Designator 15 |
| Market Name Mississippi Valley |  |  |  |
| 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 $1710-1755 \mathrm{MHz}$ band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

## Conditions:

Pursuant to $\S 309(\mathrm{~h})$ of the Communications Act of 1934 , as amended, 47 U.S.C. $\S 309(\mathrm{~h})$, 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. $\S 310$ (d). This license is subject in terms to the right of use or control conferred by $\S 706$ 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.


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| Call Sign <br> WQGA960 | File Number <br> 0009775572 |
| :---: | :---: |
| Radio Service |  |
| AW - AWS (1710-1755 MHz and |  |
| $2110-2155 \mathrm{MHz})$ |  |

FCC Registration Number (FRN): 0003290673

| $\begin{aligned} & \text { Grant Date } \\ & 01-03-2022 \end{aligned}$ | Effective Date 01-03-2022 | Expiration Date 11-29-2036 | Print Date 01-05-2022 |
| :---: | :---: | :---: | :---: |
| Market Number BEA072 | $\mathbf{C}$ |  | Sub-Market Designator 0 |
| Market Name Paducah, KY-IL |  |  |  |
| 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 $1710-1755 \mathrm{MHz}$ band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

## Conditions:

Pursuant to $\S 309(\mathrm{~h})$ of the Communications Act of 1934 , as amended, 47 U.S.C. $\S 309(\mathrm{~h})$, 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. $\S 310$ (d). This license is subject in terms to the right of use or control conferred by $\S 706$ 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.


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| Call Sign <br> WQGD606 | File Number <br> 0009565676 |
| :---: | :---: |
| Radio Service |  |
| AW - AWS (1710-1755 MHz and |  |
| $2110-2155 \mathrm{MHz})$ |  |

FCC Registration Number (FRN): 0003290673

| $\begin{gathered} \text { Grant Date } \\ 12-16-2021 \end{gathered}$ | Effective Date $12-16-2021$ | Expiration Date 12-18-2036 | Print Date 07-09-2022 |
| :---: | :---: | :---: | :---: |
| Market Number BEA072 |  |  | Sub-Market Designator 0 |
| Market Name Paducah, KY-IL |  |  |  |
| 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 $1710-1755 \mathrm{MHz}$ band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Special Condition for AU/name change (6/4/2016): Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

## Conditions:

Pursuant to $\S 309(\mathrm{~h})$ of the Communications Act of 1934 , as amended, 47 U.S.C. $\S 309$ (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. $\S 310$ (d). This license is subject in terms to the right of use or control conferred by $\S 706$ 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.


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LICENSEE: CELLCO PARTNERSHIP

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

| Call Sign <br> WQJQ692 | File Number |
| :---: | :---: |
| Radio Service |  |
| WU -700 MHz Upper Band (Block C) |  |

FCC Registration Number (FRN): 0003290673

| Grant Date 01-10-2020 | Effective Date 02-11-2021 | Expiration Date 06-13-2029 | Print Date |
| :---: | :---: | :---: | :---: |
| Market Number REA004 | $\overline{\mathrm{C}}$ |  | Sub-Market Designator 0 |
| Market Name Mississippi Valley |  |  |  |
| 1st Build-out Date 06-13-2013 | 2nd Build-out Date 06-13-2019 | 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 $\S 309(\mathrm{~h})$ of the Communications Act of 1934, as amended, 47 U.S.C. $\S 309(\mathrm{~h})$, 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. $\S 310$ (d). This license is subject in terms to the right of use or control conferred by $\S 706$ of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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File Number:
Print Date:

700 MHz Relicensed Area Information:

## Market

Market Name
Buildout Deadline
Buildout Notification
Status


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FCC Registration Number (FRN): 0003290673

| Grant Date 10-02-2019 | Effective Date 10-02-2019 | Expiration Date 10-02-2029 | Print Date |
| :---: | :---: | :---: | :---: |
| Market Number C21035 | $\bar{C}$ |  | Sub-Market Designator $0$ |
| Market Name CALLOWAY, KY |  |  |  |
| 1st Build-out Date | 2nd Build-out Date | 3rd Build-out Date | 4th Build-out Date |

## Waivers/Conditions:

## NONE



## Conditions:

Pursuant to $\S 309(\mathrm{~h})$ of the Communications Act of 1934 , as amended, 47 U.S.C. $\S 309(\mathrm{~h})$, 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. $\S 310$ (d). This license is subject in terms to the right of use or control conferred by $\S 706$ 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.

Call Sign: WREF207


700 MHz Relicensed Area Information:

Market
Market Name
Buildout Deadline
Buildout Notification
Status


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.


FCC Registration Number (FRN): 0003290673

| Grant Date 06-04-2020 | Effective Date $11-18-2022$ | Expiration Date 06-04-2030 | Print Date 03-15-2023 |
| :---: | :---: | :---: | :---: |
| Market Number PEA243 | $\overline{C l}$ |  | Sub-Market Designator 0 |
| Market Name Paducah, KY |  |  |  |
| 1st Build-out Date | 2nd Build-out Date | 3rd Build-out Date | 4th Build-out Date |

## Waivers/Conditions:

## NONE



## Conditions:

Pursuant to $\S 309(\mathrm{~h})$ of the Communications Act of 1934 , as amended, 47 U.S.C. $\S 309(\mathrm{~h})$, 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. $\S 310$ (d). This license is subject in terms to the right of use or control conferred by $\S 706$ 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.


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FCC Registration Number (FRN): 0003290673

| Grant Date $06-04-2020$ | Effective Date $11-18-2022$ | Expiration Date 06-04-2030 | Print Date 03-15-2023 |
| :---: | :---: | :---: | :---: |
| Market Number PEA243 | $\overline{C l}$ |  | Sub-Market Designator 0 |
| Market Name Paducah, KY |  |  |  |
| 1st Build-out Date | 2nd Build-out Date | 3rd Build-out Date | 4th Build-out Date |

## Waivers/Conditions:

## NONE



## Conditions:

Pursuant to $\S 309(\mathrm{~h})$ of the Communications Act of 1934 , as amended, 47 U.S.C. $\S 309(\mathrm{~h})$, 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. $\S 310$ (d). This license is subject in terms to the right of use or control conferred by $\S 706$ 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.


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LICENSEE: CELLCO PARTNERSHIP

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

| Call Sign <br> WRNG985 | File Number |
| :---: | :---: |
| Radio Service |  |
| PM - 3.7 GHz Service |  |

FCC Registration Number (FRN): 0003290673

| Grant Date <br> $07-23-2021$ | Effective Date <br> $07-23-2021$ | Expiration Date <br> $07-23-2036$ | Print Date |
| :---: | :---: | :---: | :---: |
| Market Number <br> PEA243 | Channel Block <br> A1 | Sub-Market Designator <br> 0 |  |
| Market Name <br> Paducah, KY |  |  |  |


| 1st Build-out Date <br> $07-23-2029$ | 2nd Build-out Date <br> $07-23-2033$ | 3rd Build-out Date | 4th Build-out Date |
| :---: | :---: | :---: | :---: |

## Waivers/Conditions:

This final license 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 § $27.1412(\mathrm{~g})$.

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:

Pursuant to $\S 309(\mathrm{~h})$ of the Communications Act of 1934 , as amended, 47 U.S.C. $\S 309(\mathrm{~h})$, 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. $\S 310$ (d). This license is subject in terms to the right of use or control conferred by $\S 706$ 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.

File Number:
Print Date:

700 MHz Relicensed Area Information:

Market
Market Name
Buildout Deadline
Buildout Notification
Status


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.


LICENSEE: CELLCO PARTNERSHIP

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

| Call Sign <br> WRNG990 | File Number |
| :---: | :---: |
| Radio Service |  |
| PM - 3.7 GHz Service |  |

FCC Registration Number (FRN): 0003290673

| Grant Date <br> $07-23-2021$ | Effective Date <br> $07-23-2021$ | Expiration Date <br> $07-23-2036$ | Print Date |
| :---: | :---: | :---: | :---: |
| Market Number <br> PEA243 | Channel Block <br> B1 | Sub-Market Designator <br> 0 |  |
| \begin{tabular}{\|c|c|c|}
\hline
\end{tabular} |  |  |  |
| Market Name <br> Paducah, KY |  |  |  |


| 1st Build-out Date <br> $07-23-2029$ | 2nd Build-out Date <br> $07-23-2033$ | 3rd Build-out Date | 4th Build-out Date |
| :---: | :---: | :---: | :---: |

## Waivers/Conditions:

This final license 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 § $27.1412(\mathrm{~g})$.

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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Environmental Services
Company is required to comply fully with all applicable environmental, industrial hygiene, and worker health and safety laws and regulations; Verizon Wireless directions and/or
nstructions contained in this Notice to Contractor. Company shall retain qualified, appropriately specialized (and/or licensed, as required) and adequately insured environmental firms for
the completion of specialized work as applicable. Company shall evaluate whether a Health and Safety Plan (HASP) is warranted. Verizon Wireless shall have the final authority to
approve the selection of such environmental firms performing services on its behalf. The construction bid package shall include qualifications of proposed firms with respect to the
following required services:
Company shall ensure at all times that only appropriately trained qualified, and licensed workers perform the required environmental services.
Site Restrictions
It is the responsibility of Company to adhere to the following restrictions in response to the above environmental conditions.

| Excavation/Construction | Yes |
| :--- | :--- |
| Excavation/Construction Type | Soil Erosion and Sedimentation Controls / Best Management Practices: <br> To prevent any negative impact to the sensitive receptors, sediment and <br> erosion control measures, such as silt fences, straw wattles, and other <br> storm-water best management practices, must be implemented prior to <br> and maintained throughout construction |
| Environmental Covenants | No |
| Diesel/Gasoline Restriction (DR) | No |
| Diesel Sensitive (DS) | Yes |
| NSTD399 Option Chosen | Outdoor Diesel within a Diesel Enhanced Enclosure (DEE) |
| Other Site Restrictions? | No |

PROCEDURE: This signed original is to be returned to VZW Construction and uploaded to FUZE Site Project Management (SPM) Module along with the EES Close-Out








GENERAL SITE CONSTRUCTION NOTES
 2. TOWER OWNER REPRESENTATVE: PROPERTY OWNER REPRESENTATVE:

 e


 5. PREFABRICATED EUUPMENT CANOPY:










































|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |

$\xlongequal[\text { FIBER ROUTING DETALL }]{\text { soun is }}\binom{1}{$ E－10 }



| TOWER OWNER GROUNDING KEYED NOTES |  |
| :---: | :---: |
| (1) BBG: | FURN. \& INST. 1-2/0 AWG INSULATED STRANDED COPPER GND. WIRE FOR BATTERY BAY GROUND (BBG) TO (EER). COIL UP 6' ABOVE GRADE. CONNECTION TO (EER) SHALL BE CADWELD. |
| (2) CEPSG: | FURN. \& INST. 1 - 2 AWG BARE SOLID TINNED COPPER GND. WIRE FOR CEPSG POST TO (EER). COIL UP 6' ABOVE GRADE. CONNECTION (EER) SHALL BE CADWELD. |
| (3) cg: | FURN. \& INST. 2-2 AWG BARE SOLID TINNED COPPER GND. WIRE FOR CABINET GROUND (CG) TO (EER). COIL UP 6' ABOVE GRADE CONNECTION (EER) SHAL BE CADWELD. |
| (4) cse: | FURN. \& INST. 1 - 2 AWG BARE SOLID TINNED COPPER GND WIRE FOR ICE BRIDGE CHANNEL TO (EER). COIL UP 15' ABOVE GRADE. CONNECTION (EER) SHALL BE CADWELD. |
| (5) EER: | FURN. \& INST. 2 AWG BARE SOLID TINNED COPPER BURIED EXTERIOR ELECTRODE GROUND RING (EER) AROUND RADIO EQUIPMENT PAD AND TOWER BURIED AT 36" OR 6" BELOW FROST LINE (WHICHEVER IS GREATER). MAINTAIN 24 " FROM EQUIPMENT PAD AND TOWER FOUNDATIONS MINIMUM. |
| (6) FEG: | FURN. \& INST. 1-2 AWG BARE SOLID TINNED COPPER GND. WIRE FOR FIBER ENTRANCE GROUND (FEG) TO (TGE). COIL UP 10' ABOVE GRADE. CONNECTION TO (EER) SHALL BE CADWELD. |
| (7) FG: | FURN. \& INST. 1-2 AWG BARE SOLID TINNED COPPER GND WIRE FROM NEW FENCING TO GROUND RING (EER). CONNECTION TO FENCING SHALL BE AT THE BASE OF FENCE POST USING CADWELD AND WEAVE GND. WIRE THRU FABRIC AND ATTACH TO TOP RAIL WITH CADWELD. CONNECTION TO (EER) SHALL BE CADWELD. |
| (8) Ftwgl: | FURN. \& INST. FUTURE TOWER WAVEGUIDE GROUND BAR LEADS. CONTRACTOR SHALL COIL UP TEN (10') OF 2 AWG SOLID TINNED COPPER GROUND (TYP.) |
| (9) GEG: | FURN. \& INST. 1-2 AWG BARE SOLID TINNED COPPER GND. WIRE FOR THE GENERATOR ENCLOSURE TO (EER). COIL IP 6' ABOVE FRADE. CONNECTION (EER) SHALL BE CADWELD. *GENERATOR SERVICE GROUND WHERE REQUIRED BY JURISDICTION HAVING AUTHORITY |
| (10) GG: | FURN. \& INST. 1-2 AWG BARE SOLID TINNED COPPER GND WIRE AT EACH GATE POST AND PROVIDE GROUND WIRE TO BONDING JUMPER FROM GATE POST TO FENCE POST. |
| (11) GR | FURN. \& INST. GROUND RODS TO 36" BELOW FINISH GRADE (OR 6" BELOW FROST LINE, WHICHEVER IS GREATER) AT A MINIMUM SPACING OF 10'0" AT RADIO EQUIPMENT PAD, TOWER AND SITE EXTERIOR GROUND SYSTEM. CONNECTION TO (EER) SHALL BE CADWELD. REFER TO DETAIL 5 ON SHEET G-4. |
| (12) IBSG: | FURN. \& INST. 1 - 2 AWG BARE SOLID TINNED COPPER GND. WIRE FROM ICE BRIDGE SUPPORT POST TO (EER). COIL UP 6' ABOVE GRADE. CONNECTION (EER) SHALL BE CADWELD. SEE SHEET S-1 FOR ICE BRIDGE POST LOCATIONS. |
| (13) PEG: | FURN. \& INST. 1-2 AWG BARE SOLID TINNED COPPER GND. WIRE FOR THE 'ILC' GROUND BAR TO (EER). COIL UP 6' ABOVE GRADE. CONNECTION (EER) SHALL BE CADWELD. |
| (14) | FURN. \& INST. 1-2 AWG BARE SOLID TINNED COPPER GND. WIRE FOR THE PAD CANOPY SUPPORT BASE TO (EER). COIL UP 6' ABOVE GRADE. CONNECTION (EER) SHALL BE CADWELD. |
| (15) TBG: | FURN. \& INST. 1-2 AWG BARE SOLID TINNED COPPER GND. WIRE FROM TOWER LEG BASE PLATE TO (EER). CONNECTION TO TOWER LEG BASE PLATE SHALL BE CADWELD OR MECHANICAL TO LEG AND (EER) SHALL BE CADWELD. |
| (16) TwG: | by vzwe.c. |
| (17) UG: | FURN. \& INST. 1-2 AWG BARE SOLID TINNED COPPER GND. WIRE (UFER GROUND) FOR PAD FOUNDATION REINFORCEMENT STEEL CONNECTION TO (EER) SHALL BE CADWELD. PROVIDE HEAT SHRINK TUBING OR ELECTRICAL TAPE PROTECTION FOR CONDUCTOR AT TRANSITION BETWEEN CONCRETE AND SOIL. |
| (18) OGA: | brvzwe.c. |
| 19 OGL: | BYvzwe.c. |
| 20) OHG: | FURN. \& INST. 2-2 AWG BARE SOLID TINNED COPPER GND. WIRE FOR THE 'OVP' H-FRAME TO (EER). COIL UP 6' ABOVE GRADE (TYP OF 2) CONNECTION (EER) SHALL BE CADWELD. |
| (21) GPSG: | Byvzwe.c. |











|  |  |  |
| :---: | :---: | :---: |
|  |  |  |



DATE: JANUARY 20, 2023
PURCHASER: SOUTHERN TOWERS, LP

PROJECT: 265FT RTL SELF SUPPORT TOWER KIRKSEY, KY

FILE NUMBER:242258

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





TSTower - v 6.0.4 Tower Analysis Program
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(c) 1997-2022 TowerSoft www.TSTower.com

Peoria, IL
File: <br>rohnfs2\PeoEng\Jobs \2023\242258\ENGINEERING\242258.out
Contract: 242258
Project: 265 FT RTL TOWER
Date and Time: $1 / 20 / 2023$ 11:38:32 AM

Revision: 0
Site: KIRKSEY- KY
Engineer: AS

ENGINEERING
CHECKED BY: SY 01/20/2023

| Project Title: | 265 FT RTL TOWER |
| :--- | :--- |
| Customer Name: | SOUTHERN TOWERS- LP |
| Site: | KIRKSEY- KY |
| Contract No.: | 242258 |
| Revision: | 0 |
| Engineer: | AS |
| Date: | Jan 20 2023 |
| Time: | $11: 32: 11$ AM |
|  |  |
| Design Standard: | ANSI/TIA-222-H-2017 |

GENERAL DESIGN CONDITIONS

| Start wind direction: | 0.00 (Deg) |
| :---: | :---: |
| End wind direction: | 330.00 (Deg) |
| Increment wind direction: | 30.00 (Deg) |
| Elevation above ground: | 0.00 (ft) |
| Mean elevation of base of structure above s | $\begin{aligned} & \text { sea level } \mathrm{Zs}: \\ & 562.00 \text { (ft) } \end{aligned}$ |
| Rooftop wind speed-up factor Ks: | 1.00 |
| Gust Response Factor Gh: | 0.85 |
| Risk category: | II |
| Exposure category: | C |
| Topographic category: | 1 |
| Material Density: | $490.1\left(\mathrm{lbs} / \mathrm{ft}^{\wedge} 3\right)$ |
| Young's Modulus: | 29000.0(ksi) |
| Poisson Ratio: | 0.30 |
| Weight Multiplier: | 1.25 |
| Minimum Bracing Resistance as per 4.4.1 |  |
| WIND ONLY CONDITIONS: |  |
| Basic Wind Speed (No Ice): | 106.00 (mph) |
| Directionality Factor Kd: | 0.85 |
| Importance Factor I: | 1.00 |
| Wind Load Factor: | 1.00 |
| Dead Load Factor: | 1.20 |
| Dead Load Factor for Uplift: | 0.90 |
| WIND AND ICE CONDITIONS: |  |
| Basic Wind Speed (With Ice): | 30.00 (mph) |
| Directionality Factor Kd: | 0.85 |
| Wind Load Importance Factor Iw: | 1.00 |
| Ice Thickness Importance Factor Ii: | 1.00 |
| Ice Thickness: | 1.50 (in) |
| Ice Density: | 56.19 (lbs/ft^3) |
| Wind Load Factor: | 1.00 |
| Dead Load Factor: | 1.20 |
| Ice Load Factor: | 1.00 |
| WIND ONLY SERVICEABILITY CONDITIONS: |  |
| Serviceability Wind Speed: | 60.00 (mph) |
| Directionality Factor Kd: | 0.85 |
| Importance Factor I: | 1.00 |
| Wind Load Factor: | 1.00 |
| Dead Load Factor: | 1.00 |
| PATTERN LOADING (IF APPLICABLE) CONDITIONS: |  |
| Basic Wind Speed (No Ice): | 106.00 (mph) |
| Directionality Factor Kd: | 0.85 |
| Importance Factor I: | 1.00 |
| Wind Load Fa | 1.00 |

TSTower - v 6.0.4 Tower Analysis Program
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File: <br>rohnfs2\PeoEng\Jobs\2023\242258\ENGINEERING\242258.out Contract: 242258
Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM

Revision: 0
Site: KIRKSEY- KY
Engineer: AS

| Dead Load Factor: | 1.20 |
| :--- | :--- |
| Dead Load Factor for Uplift: | 0.90 |
|  |  |
| EARTHQUAKE CONDITIONS: | D |
| Site class definition: | 0.826 |
| Spectral response acceleration Ss: | 0.283 |
| Spectral response acceleration S1: | 12.000 |
| Long-period transition period TL: | 1.170 |
| Accelaration-based site coefficient Fa: | 2.034 |
| Velocity-based site coefficient Fv: | 0.644 |
| Design spectral response acceleration Sds: | 0.384 |
| Design spectral response acceleration Sd1: | 0.3 |
| Seismic analysis method: | 1 |
| Fundamental frequency of structure f1: | 0.745 |
| Total seismic shear Vs (Kips) : | 7.44 |
|  |  |
| Analysis performed using: TowerSoft Finite Element Analysis Program |  |

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TSTower - v 6.0.4 Tower Analysis Program
Peoria, IL

| File: |  |
| :--- | :--- |
| rohnfs2\PeoEng\Jobs\2023\242258\ENGINEERING $\backslash 242258$. out |  |
| Contract: 242258 | Revision: 0 |
| Project: 265 FT RTL TOWER | Site: KIRKSEY- KY |
| Date and Time: 1/20/2023 11:38:32 AM | Engineer: AS |

## Section B: STRUCTURE GEOMETRY

TOWER GEOMETRY

| Cross-Section | Height <br> $(\mathrm{ft})$ | Tot Height <br> $(\mathrm{ft})$ | $\#$ of Section | Bot Width <br> (in) | Top Width <br> (in) |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Triangular | 265.00 | 325.00 | 12 | 349.97 | 56.99 |

SECTION GEOMETRY

| Sec | Sec. Name | Elevation |  | Widths |  | Masses |  |  |  |  |  | Brcg. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \# |  | $\begin{aligned} & \text { Bottom } \\ & \text { (ft) } \end{aligned}$ | Top (ft) | $\begin{aligned} & \text { Bottom } \\ & \text { (in) } \end{aligned}$ | Top (in) | Legs <br> (lbs) | Brcg. <br> (lbs) | $\begin{gathered} \text { Sec.Brc } \\ \text { (lbs) } \end{gathered}$ | $\begin{gathered} \text { Int.Brc } \\ \text { (lbs) } \end{gathered}$ | sect. <br> (lbs) | $\begin{gathered} \text { Database } \\ \text { (lbs) } \end{gathered}$ | Clear. <br> (in) |
| 12 | RLS04 | 260.00 | 265.00 | 58 | 57 | 110 | 112 | 0 | 0 | 221 | 0 | 0.787 |
| 11 | RLS04 | 240.00 | 260.00 | 58 | 58 | 572 | 448 | 0 | 0 | 1020 | 0 | 0.787 |
| 10 | RLT06 | 220.00 | 240.00 | 83 | 58 | 814 | 524 | 0 | 0 | 1338 | 0 | 0.787 |
| 9 | RLT08 | 200.00 | 220.00 | 107 | 83 | 1565 | 747 | 0 | 0 | 2312 | 0 | 0.787 |
| 8 | RLT10 | 180.00 | 200.00 | 132 | 107 | 1565 | 828 | 0 | 0 | 2393 | 0 | 0.787 |
| 7 | RLT12 | 160.00 | 180.00 | 156 | 132 | 1717 | 948 | 0 | 0 | 2665 | 0 | 0.787 |
| 6 | RLT14* | 140.00 | 160.00 | 182 | 156 | 2154 | 1422 | 0 | 0 | 3575 | 0 | 0.787 |
| 5 | RLT16* | 120.00 | 140.00 | 206 | 182 | 2484 | 1058 | 0 | 0 | 3542 | 0 | 0.787 |
| 4 | RLT19* | 90.00 | 120.00 | 242 | 206 | 4896 | 2334 | 0 | 0 | 7231 | 0 | 0.787 |
| 3 | RLT22* | 60.00 | 90.00 | 278 | 242 | 4896 | 3089 | 0 | 0 | 7985 | 0 | 0.787 |
| 2 | RLT25* | 30.00 | 60.00 | 314 | 278 | 4896 | 3956 | 0 | 0 | 8852 | 0 | 0.787 |
| 1 | RLT28* | 0.00 | 30.00 | 350 | 314 | 4895 | 3692 | 1411 | 581 | 10579 | 0 | 0.787 |
| Tota | Mass: |  |  |  |  | 30566 | 19157 | 1411 | 581 | 51714 | 0 |  |

PANEL GEOMETRY

| Sec\# | Pnl\# | Type | SecBrcg | Mid. Horiz Continuous | Horiz | Height (ft) | Bottom Width <br> (in) | Top Width <br> (in) | Plan Bracing | Hip <br> Bracing | Gusset <br> Plate <br> Area <br> (ft^2) | Gusset <br> Plate <br> Weight <br> (lbs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 | 1 | X | (None) |  | Yes | 5.0 | 57.5 | 57.0 | (None) | (None) | 0.300 | 0.30 |
| 11 | 3 | X | (None) |  | None | 6.7 | 57.8 | 57.5 | (None) | (None) | 0.300 | 0.30 |
| 11 | 2 | X | (None) |  | None | 6.7 | 58.1 | 57.8 | (None) | (None) | 0.300 | 0.30 |
| 11 | 1 | X | (None) |  | None | 6.7 | 58.4 | 58.1 | (None) | (None) | 0.300 | 0.30 |
| 10 | 3 | X | (None) |  | Yes | 6.7 | 66.7 | 58.4 | (None) | (None) | 0.300 | 0.30 |
| 10 | 2 | X | (None) |  | None | 6.7 | 75.0 | 66.7 | (None) | (None) | 0.300 | 0.30 |
| 10 | 1 | X | (None) |  | None | 6.7 | 83.3 | 75.0 | (None) | (None) | 0.300 | 0.30 |
| 9 | 3 | X | (None) |  | None | 6.7 | 91.3 | 83.3 | (None) | (None) | 0.300 | 0.30 |
| 9 | 2 | X | (None) |  | None | 6.7 | 99.3 | 91.3 | (None) | (None) | 0.300 | 0.30 |
| 9 | 1 | X | (None) |  | None | 6.7 | 107.3 | 99.3 | (None) | (None) | 0.300 | 0.30 |
| 8 | 3 | X | (None) |  | None | 6.7 | 115.6 | 107.3 | (None) | (None) | 0.300 | 0.30 |
| 8 | 2 | X | (None) |  | None | 6.7 | 123.9 | 115.6 | (None) | (None) | 0.300 | 0.30 |
| 8 | 1 | X | (None) |  | None | 6.7 | 132.2 | 123.9 | (None) | (None) | 0.300 | 0.30 |
| 7 | 3 | X | (None) |  | None | 6.7 | 140.2 | 132.2 | (None) | (None) | 0.300 | 0.30 |
| 7 | 2 | X | (None) |  | None | 6.7 | 148.2 | 140.2 | (None) | (None) | 0.300 | 0.30 |
| 7 | 1 | X | (None) |  | None | 6.7 | 156.2 | 148.2 | (None) | (None) | 0.300 | 0.30 |
| 6 | 3 | X | (None) |  | None | 6.7 | 164.8 | 156.2 | (None) | (None) | 0.300 | 0.30 |
| 6 | 2 | X | (None) |  | None | 6.7 | 173.4 | 164.8 | (None) | (None) | 0.300 | 0.30 |
| 6 | 1 | X | (None) |  | None | 6.7 | 182.0 | 173.4 | (None) | (None) | 0.300 | 0.30 |
| 5 | 2 | X | (None) |  | None | 10.0 | 194.0 | 182.0 | (None) | (None) | 0.300 | 0.30 |
| 5 | 1 | X | (None) |  | None | 10.0 | 206.0 | 194.0 | (None) | (None) | 0.300 | 0.30 |
| 4 | 3 | X | (None) |  | None | 10.0 | 218.0 | 206.0 | (None) | (None) | 0.300 | 0.30 |
| 4 | 2 | X | (None) |  | None | 10.0 | 230.0 | 218.0 | (None) | (None) | 0.300 | 0.30 |
| 4 | 1 | X | (None) |  | None | 10.0 | 242.0 | 230.0 | (None) | (None) | 0.300 | 0.30 |
| 3 | 3 | X | (None) |  | None | 10.0 | 254.0 | 242.0 | (None) | (None) | 0.300 | 0.30 |
| 3 | 2 | X | (None) |  | None | 10.0 | 266.0 | 254.0 | (None) | (None) | 0.300 | 0.30 |
| 3 | 1 | X | (None) |  | None | 10.0 | 278.0 | 266.0 | (None) | (None) | 0.300 | 0.30 |
| 2 | 3 | X | (None) |  | None | 10.0 | 290.0 | 278.0 | (None) | (None) | 0.300 | 0.30 |
| 2 | 2 | X | (None) |  | None | 10.0 | 302.0 | 290.0 | (None) | (None) | 0.300 | 0.30 |
| 2 | 1 | X | (None) |  | None | 10.0 | 314.0 | 302.0 | (None) | (None) | 0.300 | 0.30 |
| 1 | 2 | K | 2-Subdiv. |  | Yes | 15.0 | 332.0 | 314.0 | 2-Subdiv. | (None) | 0.300 | 0.30 |
| 1 | 1 | K | 2-Subdiv. |  | Yes | 15.0 | 350.0 | 332.0 | 2-Subdiv. | (None) | 0.300 | 0.30 |

Page B 1

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File: <br>rohnfs2\PeoEng\Jobs $\backslash 2023 \backslash 242258 \backslash E N G I N E E R I N G \backslash 242258$. out
Contract: 242258
Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM

Revision: 0
Site: KIRKSEY- KY
Engineer: AS
MEMBER PROPERTIES

| Sec/ <br> Memb | Type | Description | Steel | Conn. | Bolt | Bolt | End | Edge | Gusset | Gusse | Bolt | Dble |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pnl <br> Spacing |  |  | Grade | Type | \#-Size | Grade | Dist. | Dist. | Thick. | Grade | Space |  |
| Stitch |  |  |  |  |  |  |  |  |  |  |  |  |
| Bolt |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | (in) |  | (in) | (in) | (in) |  | (in) | (in) |
| (ft) |  |  |  |  |  |  |  |  |  |  |  |  |
| 12/1 | Leg | PIPE $2.875 \times 0.203$ | A500 9 | gr.CSTension | 4-0.750 | A325X |  |  |  |  |  |  |
| 12/1 | Diag | L1 3/4x1 3/4x1/8 | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 0.875 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 12/1 | Horiz | L1 3/4x1 3/4x3/16 | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 0.875 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 11/3 | Leg | PIPE 3.500x0.216 | A500 9 | gr.CSTension | 4-0.750 | A325X |  |  |  |  |  |  |
| 11/3 | Diag | L2x2x3/16 | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.000 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 11/2 | Leg | PIPE 3.500x0.216 | A500 9 | gr.CSTension | 4-0.750 | A325X |  |  |  |  |  |  |
| 11/2 | Diag | L2x2x $3 / 16$ | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.000 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 11/1 | Leg | PIPE 3.500x0.216 | A500 9 | gr.CSTension | 4-0.750 | A325X |  |  |  |  |  |  |
| 11/1 | Diag | L2x2x3/16 | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.000 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 10/3 | Leg | PIPE 4.500x0.237 | A500 9 | gr.CSTension | 5-1.000 | A325X |  |  |  |  |  |  |
| 10/3 | Diag | L2x2x3/16 | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.000 | 0.250 | $\text { A5 } 72$ | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 10/3 | Horiz | L1 3/4x1 3/4x3/16 | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 0.875 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 10/2 | Leg | PIPE 4.500x0.237 | A500 9 | gr.CSTension | 5-1.000 | A325X |  |  |  |  |  |  |
| 10/2 | Diag | L2x2x3/16 | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.000 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 10/1 | Leg | PIPE 4.500x0.237 | A500 9 | gr.CSTension | 5-1.000 | A325X |  |  |  |  |  |  |
| 10/1 | Diag | L2x2x3/16 | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.000 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 9/3 | Leg | PIPE 5.563x0.375 | A500 9 | gr.CSTension | 5-1.000 | A325X |  |  |  |  |  |  |
| 9/3 | Diag | L $2 \times 2 \times 1 / 4$ | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.000 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 9/2 | Leg | PIPE 5.563x0.375 | A500 9 | gr.CSTension | 5-1.000 | A325X |  |  |  |  |  |  |
| 9/2 | Diag | L2x2x1/4 | A529 g | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.000 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 9/1 | Leg | PIPE 5.563x0.375 | A500 9 | gr.CSTension | 5-1.000 | A325X |  |  |  |  |  |  |
| 9/1 | Diag | L $2 \times 2 \times 1 / 4$ | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.000 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 8/3 | Leg | PIPE 5.563x0.375 | A500 9 | gr.CSTension | 6-1.000 | A325X |  |  |  |  |  |  |
| 8/3 | Diag | L2 1/2x2 1/2x3/16 | A529 g | gr.50Bolted | 1-0.625 | A325X | 1.500 | 0.875 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 8/2 | Leg | PIPE 5.563x0.375 | A500 9 | gr.CSTension | 6-1.000 | A325X |  |  |  |  |  |  |
| 8/2 | Diag | L2 1/2x2 1/2x3/16 | A529 g | gr.50Bolted | 1-0.625 | A325X | 1.500 | 0.875 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 8/1 | Leg | PIPE 5.563x0.375 | A500 9 | gr.CSTension | 6-1.000 | A325X |  |  |  |  |  |  |
| 8/1 | Diag | L2 1/2x2 1/2x3/16 | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 0.875 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |  |
| 7/3 | Leg | PIPE 6.625x0.340 | A500 9 | gr.CSTension | 6-1.000 | A325x |  |  |  |  |  |  |
| 7/3 | Diag | L2 1/2x2 1/2x3/16 | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 0.875 | 0.250 | A572 | $\begin{aligned} & g r .50 \\ & 2.000 \end{aligned}$ |  |
| 7/2 | Leg | PIPE 6.625x0.340 | A500 9 | gr.CSTension | 6-1.000 | A325X |  |  |  |  |  |  |
| 7/2 | Diag | L2 1/2x2 1/2x3/16 | A529 9 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 0.875 | 0.250 | A572 | gr. 50 |  |
|  |  |  |  |  |  |  |  |  |  |  | 2.000 |  |

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File: <br>rohnfs2\PeoEng\Jobs\2023\242258\ENGINEERING\242258.out Contract: 242258
Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM

Revision: 0
Site: KIRKSEY- KY
Engineer: AS

| 7/1 | Leg | PIPE $6.625 \times 0.340$ | A500 | gr.CSTension | 6-1.000 | A325X |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/1 | Diag | L2 1/2x2 1/2x3/16 | A529 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 0.875 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 6/3 | Leg | PIPE 6.625x0.432 | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 6/3 | Diag | L2 1/2x2 1/2x1/4 | A529 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.250 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 6/2 | Leg | PIPE $6.625 \times 0.432$ | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 6/2 | Diag | L2 1/2x2 1/2x1/4 | A529 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.250 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 6/1 | Leg | PIPE $6.625 \times 0.432$ | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 6/1 | Diag | L2 1/2x2 1/2x1/4 | A529 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.250 | 0.250 | A572 | $\begin{aligned} & \text { gr. } 50 \\ & 2.000 \end{aligned}$ |
| 5/2 | Leg | PIPE 8.625x0.375 | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 5/2 | Diag | L $3 \times 3 \times 3 / 16$ | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 1.500 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 5/1 | Leg | PIPE 8.625x0.375 | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 5/1 | Diag | L3x3x3/16 | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 1.500 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 4/3 | Leg | PIPE 8.625x0.500 | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 4/3 | Diag | L $3 \times 3 \times 1 / 4$ | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 1.500 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 4/2 | Leg | PIPE 8.625x0.500 | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 4/2 | Diag | L3x $3 \times 1 / 4$ | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 1.500 | 0.375 | A572 | $\begin{aligned} & \text { gr. } 50 \\ & 2.000 \end{aligned}$ |
| 4/1 | Leg | PIPE 8.625x0.500 | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 4/1 | Diag | L3x $3 \times 1 / 4$ | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 1.500 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 3/3 | Leg | PIPE 8.625x0.500 | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 3/3 | Diag | L3 1/2x3 1/2x1/4 | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 0.875 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 3/2 | Leg | PIPE $8.625 \times 0.500$ | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 3/2 | Diag | L3 1/2x3 1/2x1/4 | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 0.875 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 3/1 | Leg | PIPE $8.625 \times 0.500$ | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 3/1 | Diag | L3 1/2x3 1/2x1/4 | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 1.750 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| $2 / 3$ | Leg | PIPE $8.625 \times 0.500$ | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 2/3 | Diag | L $4 \times 4 \times 1 / 4$ | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 2.000 | 0.375 | A572 | $\begin{aligned} & g r .50 \\ & 2.000 \end{aligned}$ |
| $2 / 2$ | Leg | PIPE $8.625 \times 0.500$ | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 2/2 | Diag | L $4 \mathrm{x} 4 \mathrm{x} 1 / 4$ | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 2.000 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 2/1 | Leg | PIPE 8.625x0.500 | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 2/1 | Diag | L $4 \times 4 \times 1 / 4$ | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 2.000 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 1/2 | Leg | PIPE $8.625 \times 0.500$ | A500 | gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| 1/2 | Diag | L4x4x5/16 | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 2.000 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 1/2 | Horiz | L3 1/2x3 1/2x1/4 | A529 | gr.50Bolted | 2-0.625 | A325X | 1.125 | 1.750 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 1/2 | SecD1 | L3 $3 \times 1 / 4$ | A529 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.500 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 1/2 | SecH1 | L3 3 3x1/4 | A529 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.500 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 1/2 | PlanH1 | L3 1/2×3 1/2x1/4 | A529 | gr.50Bolted | 1-0.625 | A325X | 1.500 | 1.750 | 0.250 | A572 | gr. 50 |

Page B 3

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Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM

Revision: 0
Site: KIRKSEY- KY
Engineer: AS

| 1/1 | Leg | PIPE 8.625x0.500 | A500 gr.CSTension | 6-1.500 | A325X |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1/1 | Diag | L4x4x5/16 | A529 gr.50Bolted | 2-0.625 | A325X | 1.125 | 2.000 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 1/1 | Horiz | L3 1/2x3 1/2x1/4 | A529 gr. 50 Bolted | 2-0.625 | A325X | 1.125 | 1.750 | 0.375 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 1/1 | SecD1 | L $3 \times 3 \times 1 / 4$ | A529 gr. 50 Bolted | 1-0.625 | A325X | 1.500 | 1.500 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 1/1 | SecH1 | L $3 \times 3 \times 1 / 4$ | A529 gr. 50 Bolted | 1-0.625 | A325X | 1.500 | 1.500 | 0.250 | A572 | $\begin{aligned} & \mathrm{gr} .50 \\ & 2.000 \end{aligned}$ |
| 1/1 | PlanH1 | L3 1/2x3 1/2x1/4 | A529 gr. 50 Bolted | 1-0.625 | A325X | 1.500 | 1.750 | 0.250 | A572 | gr. 50 |

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Revision: 0
Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM

## Section D: TRANSMISSION LINE DATA

Transmission Lines Position

| No. | Bot El <br> (ft) | Top El <br> (ft) |  | Radius <br> $(f t)$ | Az. | Orient. | No. | No. of <br> Rows | Vert. Antenna |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Transmission Lines Details

| No. | Desc. | Width (in) | $\begin{aligned} & \text { Depth } \\ & \text { (in) } \end{aligned}$ | Unit Mass (lb/ft) | Line Spacing (in) | $\begin{gathered} \text { Row Spacing } \\ \text { (in) } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 3/8 CABLE | 0.38 | 0.38 | 1.00 | 2.750 | 2.750 |
| 2 | RC0.75-Cnd | 1.05 | 1.05 | 1.09 | 2.750 | 2.750 |
| 3 | TX Ladder | 4.70 | 1.50 | 4.00 | 2.750 | 2.750 |
| 4 | LDF7P-50A | 2.01 | 2.01 | 0.92 | 2.250 | 2.750 |
| 5 | TX Ladder | 4.70 | 1.50 | 4.00 | 2.750 | 2.750 |
| 6 | LDF7P-50A | 2.01 | 2.01 | 0.92 | 2.250 | 2.750 |
| 7 | LDF7P-50A | 2.01 | 2.01 | 0.92 | 2.250 | 2.750 |
| 8 | LDF7P-50A | 2.01 | 2.01 | 0.92 | 2.250 | 2.750 |

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Contract: 242258
Revision: 0
Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM

## Section F: POINT LOAD DATA

Structure Azimuth from North: 0.00
POINT LOADS


POINT LOADS WIND AREAS AND WEIGHTS

| No. | Description |  |  |  | Frontal <br> Bare Area <br> (ft^2) | Lateral <br> Bare Area <br> (ft^2) | Frontal <br> Iced Area <br> (ft^2) | Lateral <br> Iced Area <br> (ft^2) | Weight Bare (Kips) | Weight <br> Iced (Kips) | Gh |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | BEACON | \& LR |  |  | 5.00 | 5.00 | 10.00 | 10.00 | 0.25 | 0.50 | 0.85 |
| 2 | 40,000 | SQ-IN | MAX | EPA | 278.00 | 278.00 | 556.00 | 556.00 | 4.00 | 8.00 | 0.85 |
| 3 | 30,000 | SQ-IN | MAX | EPA | 209.00 | 209.00 | 418.00 | 418.00 | 3.00 | 6.00 | 0.85 |
| 4 | 30,000 | SQ-IN | MAX | EPA | 209.00 | 209.00 | 418.00 | 418.00 | 3.00 | 6.00 | 0.85 |
| 5 | 30,000 | SQ-IN | MAX | EPA | 209.00 | 209.00 | 418.00 | 418.00 | 3.00 | 6.00 | 0.85 |

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Peoria, IL
File: <br>rohnfs2\PeoEng\Jobs\2023\242258\ENGINEERING\242258.out Contract: 242258
Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM

Revision: 0
Site: KIRKSEY- KY
Engineer: AS

Section H: STRUCTURE DISPLACEMENT DATA
Load Combination
Wind Only - Serviceability

Wind Direction Maximum displacements

| Node | Elev. <br> (ft) | N-S Disp <br> (in) | W-E Disp <br> (in) | Vert. Disp <br> (in) | N-S Rot <br> (Deg) | W-E Rot <br> (Deg) | Twist <br> (Deg) |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |
| 105 | 265.0 | 15.2 | 14.5 | -0.1 | 0.62 | 0.61 | 0.01 |
| 102 | 260.0 | 14.5 | 13.9 | -0.1 | 0.64 | 0.62 | 0.02 |
| 99 | 253.3 | 13.6 | 13.0 | -0.1 | 0.62 | 0.61 | 0.01 |
| 96 | 246.7 | 12.7 | 12.2 | -0.1 | 0.61 | 0.59 | 0.00 |
| 93 | 240.0 | 11.9 | 11.4 | -0.1 | 0.58 | 0.56 | -0.01 |
| 90 | 233.3 | 11.1 | 10.6 | -0.1 | 0.54 | 0.52 | 0.02 |
| 87 | 226.7 | 10.3 | 9.8 | -0.1 | 0.53 | 0.51 | 0.01 |
| 84 | 220.0 | 9.6 | 9.1 | -0.1 | 0.47 | 0.45 | -0.03 |
| 81 | 213.3 | 8.9 | 8.5 | -0.1 | 0.48 | 0.47 | -0.03 |
| 78 | 206.7 | 8.3 | 7.8 | -0.1 | 0.42 | 0.41 | -0.03 |
| 75 | 200.0 | 7.7 | 7.3 | -0.1 | 0.44 | 0.42 | -0.02 |
| 72 | 193.3 | 7.1 | 6.7 | -0.1 | 0.38 | 0.36 | -0.03 |
| 69 | 186.7 | 6.5 | 6.2 | -0.1 | 0.39 | 0.38 | -0.02 |
| 66 | 180.0 | 6.0 | 5.6 | -0.1 | 0.33 | 0.32 | -0.02 |
| 63 | 173.3 | 5.5 | 5.2 | -0.1 | 0.35 | 0.34 | -0.02 |
| 60 | 166.7 | 5.0 | 4.7 | -0.1 | 0.29 | 0.28 | -0.02 |
| 57 | 160.0 | 4.6 | 4.4 | -0.1 | 0.31 | 0.29 | -0.02 |
| 54 | 153.3 | 4.2 | 3.9 | -0.1 | 0.25 | 0.24 | -0.02 |
| 51 | 146.7 | 3.9 | 3.6 | -0.1 | 0.27 | 0.26 | -0.01 |
| 48 | 140.0 | 3.5 | 3.3 | -0.1 | 0.22 | 0.21 | -0.01 |
| 45 | 130.0 | 3.0 | 2.8 | -0.1 | 0.22 | 0.21 | 0.01 |
| 42 | 120.0 | 2.5 | 2.4 | -0.1 | 0.18 | 0.17 | -0.01 |
| 39 | 110.0 | 2.2 | 2.0 | -0.1 | 0.18 | 0.17 | -0.01 |
| 36 | 100.0 | 1.8 | 1.7 | -0.1 | 0.15 | 0.14 | -0.01 |
| 33 | 90.0 | 1.5 | 1.4 | -0.1 | 0.15 | 0.14 | -0.01 |
| 30 | 80.0 | 1.1 | 1.1 | -0.1 | 0.12 | 0.11 | -0.01 |
| 27 | 70.0 | 0.9 | 0.8 | 0.0 | 0.12 | 0.11 | 0.00 |
| 24 | 60.0 | 0.6 | 0.6 | 0.0 | 0.09 | 0.08 | 0.00 |
| 21 | 50.0 | 0.5 | 0.4 | 0.0 | 0.08 | 0.08 | 0.00 |
| 18 | 40.0 | 0.3 | 0.3 | 0.0 | 0.06 | 0.06 | 0.00 |
| 14 | 30.0 | 0.2 | -0.1 | 0.0 | 0.04 | 0.03 | 0.00 |
| 8 | 15.0 | 0.0 | 0.0 | 0.0 | 0.01 | -0.01 | 0.00 |
| 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |

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Revision: 0
Project: 265 FT RTL TOWER
Site: KIRKSEY- KY
Date and Time: 1/20/2023 11:38:32 AM
Engineer: AS

Section L: STRENGTH ASSESSMENT SORTED DATA

Load Combination
Wind Direction

Max Envelope Maximum

Sec Pnl Elev. MType
Desc.
$\left.\begin{array}{lllllll}\text { Len } & \text { kl/r } & \text { Gov. } & \text { Gov. } & \text { Max } & \text { Max } & \text { Asses. } \\ & & \text { comp. } & \text { tens. } & \text { Compr. } & \text { Tens. } & \text { Ratio } \\ \text { (ft) } & & \text { cap. } & \text { (Kips) } & \text { (Kips) } & \text { (Kips) } & \text { (Kips) }\end{array}\right]$

Page L 1

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File: <br>rohnfs2\PeoEng\Jobs\2023\242258\ENGINEERING\242258.out Contract: 242258
Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM
Revision: 0
Site: KIRKSEY- KY
Engineer: AS

| 4 | 2 | 100.00 | Diag | L3 3 3x1/4 | 21.18 | 185.5 | 12.0 | 28.1 | 9.9 | 9.8 | 0.83 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | 1 | 90.00 | Diag | L $3 \times 3 \times 1 / 4$ | 22.06 | 192.5 | 11.1 | 28.1 | 10.0 | 10.0 | 0.90 |
| 3 | 3 | 80.00 | Diag | L3 1/2x3 1/2x1/4 | 22.96 | 174.6 | 15.9 | 20.4 | 10.3 | 10.1 | 0.65 |
| 3 | 2 | 70.00 | Diag | L3 1/2x3 1/2x1/4 | 23.86 | 180.6 | 14.8 | 20.4 | 10.4 | 10.5 | 0.70 |
| 3 | 1 | 60.00 | Diag | L3 1/2x3 1/2x1/4 | 24.77 | 186.8 | 13.9 | 31.1 | 10.8 | 10.6 | 0.78 |
| 2 | 3 | 50.00 | Diag | L $4 \times 4 \times 1 / 4$ | 25.69 | 170.2 | 19.2 | 34.1 | 10.9 | 11.0 | 0.57 |
| 2 | 2 | 40.00 | Diag | L $4 \times 4 \times 1 / 4$ | 26.62 | 175.5 | 18.0 | 34.1 | 11.3 | 11.1 | 0.63 |
| 2 | 1 | 30.00 | Diag | L $4 \times 4 \times 1 / 4$ | 27.55 | 180.9 | 17.0 | 34.1 | 11.4 | 11.5 | 0.67 |
| 1 | 2 | 15.00 | Diag | L $4 \times 4 \times 5 / 16$ | 20.41 | 181.7 | 20.8 | 34.5 | 16.7 | 16.7 | 0.80 |
| 1 | 1 | 0.00 | Diag | L $4 \times 4 \times 5 / 16$ | 20.92 | 186.8 | 19.7 | 34.5 | 16.7 | 16.7 | 0.85 |
| 12 | 1 | 260.00 | Horiz | L1 3/4x1 3/4×3/16 | 4.75 | 145.7 | 8.4 | 10.7 | 1.1 | 1.0 | 0.13 |
| 10 | 3 | 233.33 | Horiz | L1 $3 / 4 \times 13 / 4 \times 3 / 16$ | 4.87 | 145.1 | 8.4 | 10.7 | 0.2 | 0.1 | 0.02 |
| 1 | 2 | 15.00 | Horiz | L3 $1 / 2 \times 31 / 2 \times 1 / 4$ | 13.08 | 179.7 | 15.0 | 31.1 | 11.4 | 11.3 | 0.76 |
| 1 | 1 | 0.00 | Horiz | L3 1/2x3 1/2x1/4 | 13.83 | 187.7 | 13.7 | 31.1 | 11.7 | 11.6 | 0.85 |
| 1 | 2 | 15.00 | Sech1 | L $3 \times 3 \times 1 / 4$ | 6.54 | 133.0 | 17.2 | 17.2 | 8.7 | 8.7 | 0.51 |
| 1 | 2 | 15.00 | SecD1 | L $3 \times 3 \times 1 / 4$ | 9.71 | 197.5 | 10.6 | 17.2 | 6.9 | 6.9 | 0.65 |
| 1 | 2 | 15.00 | PlanH1 | L3 1/2x3 1/2x1/4 | 13.08 | 227.5 | 9.3 | 17.2 | 0.1 | 0.1 | 0.01 |
| 1 | 1 | 0.00 | Sech1 | L $3 \times 3 \times 1 / 4$ | 6.92 | 140.7 | 17.2 | 17.2 | 9.2 | 9.2 | 0.53 |
| 1 | 1 | 0.00 | SecD1 | L $3 \times 3 \times 1 / 4$ | 9.95 | 202.5 | 10.1 | 17.2 | 7.0 | 7.0 | 0.69 |
| 1 | 1 | 0.00 | PlanH1 | L3 1/2x3 1/2x1/4 | 13.83 | 240.6 | 8.4 | 17.2 | 0.1 | 0.1 | 0.01 |

Page L 2

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Contract: 242258
Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM

Revision: 0
Site: KIRKSEY- KY
Engineer: AS

Section M: SECTION PROPERTIES DATA

| Sec | Pan | Memb. <br> Type | Steel <br> Grade |  | Conn. <br> Type | Bolts Bolts | Bolt Size (in) | Bolt <br> Grade | End Dist. (in) | Gusset Thick. (in) | kl/r | Comp Cap. (Kips) | Tens Cap. (Kips) | Bolt Cap. (Kips) |  | Block Shear (Kips |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 | 1 | Leg | A500 | gr.cS | Tension | 4 | 0.750 | A325X | 1.800 | N/A | 63.4 | 57.1 | 76.5 | 121.7T | N/A | N/A |
| 12 | 1 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 107.1 | 10.5 | 11.9 | 17.2S | 9.8 | 7.1 |
| 12 | 1 | Horiz | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 145.7 | 8.4 | 17.4 | 17.2S | 14.7 | 10.7 |
| 11 | 3 | Leg | A500 | gr.cs | Tension |  | 0.750 | A325X | 1.800 | N/A | 69.0 | 70.9 | 100.4 | 121.7 T | N/A | N/A |
| 11 | 3 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 111.1 | 16.4 | 20.7 | 17.2S | 14.7 | 11.8 |
| 11 | 2 | Leg | A500 | gr.cS | Tension | , | 0.750 | A325X | 1.800 | N/A | 69.0 | 70.9 | 100.4 | 121.7T | N/A | N/A |
| 11 | 2 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 111.3 | 16.4 | 20.7 | 17.2S | 14.7 | 11.8 |
| 11 | 1 | Leg | A500 | gr.cS | Tension | 4 | 0.750 | A325X | 1.800 | N/A | 69.0 | 70.9 | 100.4 | 121.7 T | N/A | N/A |
| 11 | 1 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 111.5 | 16.3 | 20.7 | 17.2S | 14.7 | 11.8 |
| 10 | 3 | Leg | A500 | gr.cs | Tension | 5 | 1.000 | A325X | 2.400 | N/A | 53.1 | 116.1 | 142.6 | 275.3 T | N/A | N/A |
| 10 | 3 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 118.4 | 14.5 | 20.7 | 17.2S | 14.7 | 11.8 |
| 10 | 3 | Horiz | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 145.1 | 8.4 | 17.4 | 17.2S | 14.7 | 10.7 |
| 10 | 2 | Leg | A500 | gr.CS | Tension | 5 | 1.000 | A325X | 2.400 | N/A | 53.1 | 116.1 | 142.6 | 275.3T | N/A | N/A |
| 10 | 2 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 125.5 | 12.9 | 20.7 | 17.2S | 14.7 | 11.8 |
| 10 | 1 | Leg | A500 | gr.CS | Tension | 5 | 1.000 | A325X | 2.400 | N/A | 53.1 | 116.1 | 142.6 | 275.3T | N/A | N/A |
| 10 | 1 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 133.5 | 11.4 | 20.7 | 17.2S | 14.7 | 11.8 |
| 9 | 3 | Leg | A500 | gr.cS | Tension | 5 | 1.000 | A325X | 2.400 | N/A | 43.6 | 239.4 | 275.0 | 275.3T | N/A | N/A |
| 9 | 3 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 139.3 | 13.8 | 27.3 | 17.2 S | 19.5 | 15.7 |
| 9 | 2 | Leg | A500 | gr.cS | Tension | 5 | 1.000 | A325X | 2.400 | N/A | 43.6 | 239.4 | 275.0 | 275.3T | N/A | N/A |
| 9 | 2 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 147.6 | 12.3 | 27.3 | 17.2S | 19.5 | 15.7 |
| 9 | 1 | Leg | A500 | gr.cS | Tension | 5 | 1.000 | A325X | 2.400 | N/A | 43.6 | 239.4 | 275.0 | 275.3T | N/A | N/A |
| 9 | 1 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 155.9 | 11.1 | 27.3 | 17.2 S | 19.5 | 15.7 |
| 8 | 3 | Leg | A500 | gr.cS | Tension | 6 | 1.000 | A325X | 2.400 | N/A | 43.6 | 239.3 | 275.0 | 330.3 T | N/A | N/A |
| 8 | 3 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 130.8 | 15.1 | 27.7 | 17.2S | 14.7 | 10.7 |
| 8 | 2 | Leg | A500 | gr.CS | Tension | 6 | 1.000 | A325X | 2.400 | N/A | 43.6 | 239.3 | 275.0 | 330.3 T | N/A | N/A |
| 8 | 2 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 138.0 | 13.5 | 27.7 | 17.2S | 14.7 | 10.7 |
| 8 | 1 | Leg | A500 | gr.cS | Tension | 6 | 1.000 | A325X | 2.400 | N/A | 43.6 | 239.3 | 275.0 | 330.3 T | N/A | N/A |
| 8 | 1 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 145.4 | 12.2 | 27.7 | 17.2S | 14.7 | 10.7 |
| 7 | 3 | Leg | A500 | gr.CS | Tension | 6 | 1.000 | A325X | 2.400 | N/A | 36.0 | 274.8 | 302.1 | 330.3 T | N/A | N/A |
| 7 | 3 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 151.2 | 11.3 | 27.7 | 17.2 S | 14.7 | 10.7 |
| 7 | 2 | Leg | A500 | gr.cS | Tension | 6 | 1.000 | A325X | 2.400 | N/A | 36.0 | 274.8 | 302.1 | 330.3 T | N/A | N/A |
| 7 | 2 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 158.5 | 10.3 | 27.7 | 17.2S | 14.7 | 10.7 |
| 7 | 1 | Leg | A500 | gr.CS | Tension | 6 | 1.000 | A325X | 2.400 | N/A | 36.0 | 274.8 | 302.1 | 330.3 T | N/A | N/A |
| 7 | 1 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 165.8 | 9.4 | 27.7 | 17.2 S | 14.7 | 10.7 |
| 6 | 3 | Leg | A500 | gr.cS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 36.4 | 343.5 | 378.5 | 765.3 T | N/A | N/A |
| 6 | 3 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 173.8 | 11.3 | 36.5 | 17.2S | 19.5 | 18.7 |
| 6 | 2 | Leg | A500 | gr.cS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 36.4 | 343.5 | 378.5 | 765.3 T | N/A | N/A |
| 6 | 2 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 181.8 | 10.3 | 36.5 | 17.2S | 19.5 | 18.7 |
| 6 | 1 | Leg | A500 | gr.cS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 36.4 | 343.5 | 378.5 | 765.3 T | N/A | N/A |
| 6 | 1 | Diag | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 189.9 | 9.5 | 36.5 | 17.2 S | 19.5 | 18.7 |
| 5 | 2 | Leg | A500 | gr.cS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 41.2 | 386.4 | 437.4 | 765.3 T | N/A | N/A |
| 5 | 2 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 165.0 | 11.5 | 34.6 | 34.5 S | 25.7 | 21.1 |
| 5 | 1 | Leg | A500 | gr.CS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 41.2 | 386.4 | 437.4 | 765.3 T | N/A | N/A |
| 5 | 1 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 171.8 | 10.6 | 34.6 | 34.5 S | 25.7 | 21.1 |
| 4 | 3 | Leg | A500 | gr.cs | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 41.7 | 505.5 | 574.2 | 765.3 T | N/A | N/A |
| 4 | 3 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 178.6 | 12.9 | 45.6 | 34.5 S | 34.1 | 28.1 |
| 4 | 2 | Leg | A500 | gr.cS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 41.7 | 505.5 | 574.2 | 765.3 T | N/A | N/A |
| 4 | 2 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 185.5 | 12.0 | 45.6 | 34.5 S | 34.1 | 28.1 |
| 4 | 1 | Leg | A500 | gr.cS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 41.7 | 505.5 | 574.2 | 765.3T | N/A | N/A |
| 4 | 1 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 192.5 | 11.1 | 45.6 | 34.5S | 34.1 | 28.1 |

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Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM

Revision: 0
Site: KIRKSEY- KY
Engineer: AS

| 3 | 3 | Leg | A500 | gr.CS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 41.7 | 505.5 | 574.2 | 765.3T | N/A | N/A |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 3 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 174.6 | 15.9 | 54.8 | 34.5S | 34.1 | 20.4 |
| 3 | 2 | Leg | A500 | gr.cS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 41.7 | 505.5 | 574.2 | 765.3 T | N/A | N/A |
| 3 | 2 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 180.6 | 14.8 | 54.8 | 34.5 S | 34.1 | 20.4 |
| 3 | 1 | Leg | A500 | gr.CS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 41.7 | 505.5 | 574.2 | 765.3 T | N/A | N/A |
| 3 | 1 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 186.8 | 13.9 | 54.8 | 34.5 S | 34.1 | 31.1 |
| 2 | 3 | Leg | A500 | gr.cs | Tension | 6 | 1.500 | A 325 X | 3.600 | N/A | 41.7 | 505.5 | 574.2 | 765.3T | N/A | N/A |
| 2 | 3 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 170.2 | 19.2 | 63.9 | 34.5 S | 34.1 | 34.2 |
| 2 | 2 | Leg | A500 | gr.CS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 41.7 | 505.5 | 574.2 | 765.3 T | N/A | N/A |
| 2 | 2 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 175.5 | 18.0 | 63.9 | 34.5 S | 34.1 | 34.2 |
| 2 | 1 | Leg | A500 | gr.CS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 41.7 | 505.5 | 574.2 | 765.3 T | N/A | N/A |
| 2 | 1 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 180.9 | 17.0 | 63.9 | 34.5 S | 34.1 | 34.2 |
| 1 | 2 | Leg | A500 | gr.CS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 31.3 | 534.5 | 574.2 | 765.3T | N/A | N/A |
| 1 | 2 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 181.7 | 20.8 | 79.0 | 34.5 S | 42.7 | 42.8 |
| 1 | 2 | Horiz | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 179.7 | 15.0 | 54.8 | 34.5 S | 34.1 | 31.1 |
| 1 | 2 | Sech1 | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 133.0 | 23.3 | 45.6 | 17.2S | 19.5 | 21.8 |
| 1 | 2 | SecD1 | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 197.5 | 10.6 | 45.6 | 17.2S | 19.5 | 21.8 |
| 1 | 2 | PlanH1 | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 227.5 | 9.3 | 54.8 | 17.2 S | 19.5 | 24.8 |
| 1 | 1 | Leg | A500 | gr.CS | Tension | 6 | 1.500 | A325X | 3.600 | N/A | 31.3 | 534.5 | 574.2 | 765.3 T | N/A | N/A |
| 1 | 1 | Diag | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 186.8 | 19.7 | 79.0 | 34.5 S | 42.7 | 42.8 |
| 1 | 1 | Horiz | A529 | gr. 50 | Bolted | 2 | 0.625 | A325X | 1.125 | 0.375 | 187.7 | 13.7 | 54.8 | 34.5 S | 34.1 | 31.1 |
| 1 | 1 | Sech1 | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 140.7 | 20.8 | 45.6 | 17.2S | 19.5 | 21.8 |
| 1 | 1 | SecD1 | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 202.5 | 10.1 | 45.6 | 17.2S | 19.5 | 21.8 |
| 1 | 1 | PlanH1 | A529 | gr. 50 | Bolted | 1 | 0.625 | A325X | 1.500 | 0.250 | 240.6 | 8.4 | 54.8 | 17.2S | 19.5 | 24.8 |

TSTower - v 6.0.4 Tower Analysis Program
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File: <br>rohnfs2\PeoEng\Jobs\2023\242258\ENGINEERING\242258.out Contract: 242258
Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM Peoria, IL

## Section N: LEG REACTION DATA

Load Combination
Wind Direction

| Force-Y <br> Download <br> (Kips) | Force-Y <br> Uplift <br> (Kips) | Shear-X | Shear-Z | Max Shear |
| :--- | :---: | :---: | :---: | :---: |
| 552.17 | 480.60 |  | (Kips) | (Kips) | (Kips)

## ndrection

Revision: 0
Site: KIRKSEY- KY
Engineer: AS

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Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM
Revision: 0
Site: KIRKSEY- KY
Engineer: AS

Section O: TOWER FOUNDATION DATA
Load Combination
Wind Direction

| Axial <br> Load <br> (Kips) | Shear <br> Load-X <br> (Kips) | Shear <br> Load-Z <br> (Kips) | Total <br> Shear <br> (Kips) | Moment-X | Moment-Y | Moment-Z | Total Moment |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  | (Kipsft) | (Kipsft) | (Kipsft) |

RTHN
TSTower - v 6.0.4 Tower Analysis Program
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File: <br>rohnfs2\PeoEng\Jobs\2023\242258\ENGINEERING\242258.out Contract: 242258
Project: 265 FT RTL TOWER
Date and Time: 1/20/2023 11:38:32 AM

Revision: 0
Site: KIRKSEY- KY
Engineer: AS

## DESIGN SPECIFICATION

| Sct. | Length <br> (ft) | Top <br> (in) | W. |
| :--- | :--- | :--- | :--- | | Bot Width |
| :--- |
| (in) |

## MAXIMUM BASE REACTIONS

| Download (Kips) | 552.2 |
| :--- | :--- |
| Uplift (Kips) | 480.6 |
| Shear (Kips) | 48.8 |



## Mat Foundation

## Design Parameters

|  | Load Case |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Description | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | Service |
| Total Moment, ft-kips | $13,157.22$ | $13,158.46$ | $1,875.62$ | $1,737.69$ | $1,736.41$ | $4,290.10$ |
| Total Shear, kips | 80.29 | 80.31 | 10.59 | 8.69 | 8.69 | 26.25 |
| Total Tower Wt, kips | 93.70 | 70.29 | 243.09 | 93.66 | 70.26 | 78.06 |
| Max. Uplift, kips | 472.85 | 480.60 | .00 | 37.58 | 45.33 | 138.59 |
| Shear, kips | 43.75 | 44.18 | 44.18 | 3.61 | 4.04 | 13.43 |
| Max Download, kips | 552.17 | 544.41 | 154.01 | 99.96 | 92.13 | 195.82 |
| Shear | 48.83 | 48.40 | 10.83 | 7.07 | 6.63 | 16.96 |
| Soil L.F. | 1.20 | 0.90 | 1.20 | 1.20 | 0.90 | 1.00 |
| Concrete L.F. | 1.20 | 0.90 | 1.20 | 1.20 | 0.90 | 1.00 |


| Foundation |  |
| :--- | ---: |
| Ht. AGL, ft | 0.50 |
| Depth, ft . | 5.75 |
| Tower | 29.16 |
| Face Width, ft | 54.00 |
| Offset, in | $\mathrm{N} / \mathrm{A}$ |
| Soil | $\mathrm{N} / \mathrm{A}$ |
| Blow Count | 110.00 |
| Inplace Unit Wt, pcf | 60.00 |
| Submerged Unit Wt, pcf | 30.00 |
| Friction Angle, $\phi$, deg. | $\mathrm{N} / \mathrm{A}$ |
| Cohesion, ksf | 30.00 |
| Uplift Angle, deg. | None |
| Water Depth, ft |  |
|  | 6.00 |
| Ult Bearing Capacity, ksf |  |


| Mat |  |
| :--- | ---: |
| Thickness, ft | 2.00 |
| Width, ft | 36.00 |
| EA, in | 18.00 |
| Batter, in/ft | 0.00 |


| Pier |  |
| :--- | ---: |
| Height, ft | 4.25 |
| Diameter, ft | 3.50 |
| No. Piers | 3 |
| Shape | Round |


| Anchor Bolts |  |
| :--- | ---: |
| Diameter, in | 1.5000 |
| No. | 6 |
| Length, in | 74.00 |
| Bolt Circle, in | 20.00 |
| Projection, in | 9.00 |
| Concrete |  |
| 28 Day Strength, ksi | 4.50 |
| Dry Unit Wt, pcf | 150.00 |
| Wet Unit Wt, pcf | 88.00 |


| Pocket |  |
| :--- | ---: |
| Diameter, in | N/A |
| Thickness, ft | N/A |

## Results

| $\phi \mathrm{M}_{\mathrm{N}}$ - Parallel Axis | $14,270.94$ | $\mathrm{ft}-\mathrm{kips}$ |
| :--- | ---: | :--- |
| $\phi \mathrm{M}_{\mathrm{N}}$ - Diagonal Axis | $14,960.76$ | ft -kips |
| Moment - Interaction Ratio | 0.981 |  |
| $\phi \mathrm{~V}_{\mathrm{N}}$ - Lateral Load | 238.14 | kips |
| Lateral Load - Interaction Ratio | 0.337 |  |

Final Mat Dimension $: 36.00 \times 36.00 \times 2.00 \mathrm{ft}$. thick w/ (3) 3.50 ft . Dia. Piers
Final Pocket Dimension : Pockets not required
Total Volume of Concrete : $100.5 \mathrm{yd}^{3}$

Date: 20 January, 2023 @ 10:49 AM

## Mat Foundation

## OTM Capacity

Controlling Load Case: 2 [Wind w/Min. Dead Load]
Foundation Width $=36.00 \mathrm{ft}$
$\mathrm{M}_{\mathrm{U}}=14,005.9 \mathrm{ft}-\mathrm{kips}$

|  | $\phi \mathrm{M}_{\mathrm{N}}, \mathrm{ft}-$ kips | $\mathrm{x}, \mathrm{ft}$ | N | $\sigma_{\mathrm{ur}}$ |
| ---: | :---: | :---: | :---: | :---: |
| Parallel | $14,270.9$ | 5.743 | 0.160 | 6.00 |
| Diagonal | $14,960.8$ | 14.379 | 0.282 | 6.00 |

$$
\begin{array}{ll}
\phi \mathrm{M}_{\mathrm{N}}=14,270.94 \mathrm{ft} \text {-kips } & \text { IRatio }=0.981 \\
\phi \mathrm{~V}_{\mathrm{N}}=238.14 \text { kips } & \text { IRatio }=0.337
\end{array}
$$

## Mat Design

$$
\gamma_{\mathrm{e}}=123.91 \mathrm{pcf}
$$

|  |  |  |  |  | Moment, ft-kips/ft |  | Shear, kips/ft |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Exterior <br> Slab | $\mathbf{x}, \mathbf{f t}$ | $\mathbf{N}$ | $\boldsymbol{\sigma}_{\mathbf{R}}, \mathbf{k s f}$ | $\mathbf{P}_{\mathbf{s}}$ <br> kips | $\mathbf{P}_{\text {su }}$ <br> $\mathbf{k i p s}$ | DownLoad <br> Side | Uplift <br> Side | Download <br> Side | Uplift <br> Side |
| Parallel | 6.285 | 0.175 | 4.11 | 23.23 | 0.00 | 26.58 | 8.79 | 13.58 | 3.92 |
| Diagonal | 15.897 | 0.312 | 3.68 | 23.23 | 0.00 | 120.02 | 41.95 | 24.15 | 8.78 |


| Interior <br> Slab | Moment, ft-kips/ft |  | Shear, kips/ft |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | DownLoad <br> Side | Uplift <br> Side | Download <br> Side | Uplift <br> Side | Soil Pressure <br> Termination |
|  | 27.47 | 98.81 | 6.54 | 9.98 | 7.40 |


| Punching Shear | Download |  |  | Uplift |  |  | Description |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Interior | Edge | Corner | Interior | Edge | Corner |  |
| $\mathrm{b}_{\mathrm{o}}, \mathrm{ft}$ | 18.74 | 16.21 | 13.19 | 16.08 | 14.88 | 12.52 | 2-Way Shear |
| Vsu, psi | 143.05 | 173.22 | 223.29 | 144.28 | 162.48 | 204.10 |  |
| $\phi \mathrm{Vc}, \mathrm{psi}$ | 228.08 | 228.08 | 228.08 | 228.08 | 228.08 | 228.08 |  |
| IR | 0.63 | 0.76 | 0.98 | 0.63 | 0.71 | 0.89 |  |
| $\mathrm{M}_{\mathrm{ut}}$, ft-kips | 124.5 |  |  | 112.7 |  |  | Moment transfer to slab |
| $\mathrm{B}_{\mathrm{e}}, \mathrm{ft}$ | 8.2 |  |  | 7.8 |  |  |  |
| $\mathrm{M}_{\mathrm{u}}, \mathrm{ft}$-kips/ft | 15.2 |  |  | 14.5 |  |  |  |
| Edge Distances: $\mathrm{a}=5.66 \mathrm{ft} . \quad \mathrm{b}=3.42 \mathrm{ft} . \quad \mathrm{c}=5.08$ |  |  |  |  |  |  |  |


| Summary | Max. <br> Value | Utilization |
| ---: | :---: | :---: |
| Slab Moment, ft-kips/ft | 120.02 | 0.986 |
| Slab Shear, kips/ft | 24.15 | 0.929 |
| Punching Shear, psi | 223.29 | 0.979 |
| Soil Bearing Required, our, ksf $^{2}$ | 5.48 | 0.913 |


| Mat Reinforcement |  |
| ---: | :---: |
| Min. Steel Area (Strength) | $1.345 \mathrm{in}^{2} / \mathrm{ft}$. |
| Min. Steel Area (Temperature) | $.259 \mathrm{in}^{2} / \mathrm{ft}$. |
| Steel Strain Actual | 0.013 |
| Minimum Steel Strain Required | 0.005 |

82 - \#7 Horizontal bars equally spaced @5.26 in., each way, top and bottom, total of $328, \mathrm{~A}_{\mathrm{s}}=1.370 \mathrm{in}^{2} / \mathrm{ft}$

Designed By: AS
Date: 20 January, 2023 @ 10:49 AM

## Pier Design

Controlling Load Case: 1 [Wind w/Max. Dead Load]

| $\mathrm{C}=552.17 \mathrm{kips}$ | $\mathrm{Vc}=48.83 \mathrm{kips}$ | $\mathrm{Mc}=207.53 \mathrm{ft}-\mathrm{kips}$ |
| :--- | :--- | :--- |
| $\mathrm{T}=472.85 \mathrm{kips}$ | $\mathrm{Vt}=43.75 \mathrm{kips}$ | $\mathrm{Mt}=185.94 \mathrm{ft}-\mathrm{kips}$ |
| $\mathrm{Fy}=60.00 \mathrm{ksi}$ | $\mathrm{Fyt}=60.00 \mathrm{ksi}$ | $\mathrm{L} . \mathrm{F}=1.00$ |
| $\mathrm{H}=42.00 \mathrm{in}$. | $\mathrm{Ds}=33.00 \mathrm{in}$. | $\mathrm{Fc}=4.50 \mathrm{ksi}$ |
| $\mathrm{U}=1.00$ | Irs $=$ Round |  |
|  | $* * *$ NOTE: Pier cross section is Round $* * *$ |  |

## SUMMARY OF ANALYSIS

| Minimum area of steel required | $=13.941 \mathrm{in}^{2}$ |  | $($ Rhomin $=0.0101)$ |
| :--- | :--- | :--- | :--- |
| Area of steel provided. | $=13.991 \mathrm{in}^{2}$ |  | (Rhoactual $=0.0101)$ |
| Maximum steel area limit | $=110.836 \mathrm{in}^{2}$ |  | (Rhomax $=0.0800)$ |

(14) \#9 Vertical Bars equally spaced w/ \#4 Circular Ties @ 3" on center.

## CIRCULAR TIE DATA

| Size | Spacing |
| :--- | :--- |
| 3 | 6.3 |
| 4 | 11.4 |
| 5 | 12.0 |
| 6 | 12.0 |

Use spacing shown or maximum tie spacing specified in ACI 318, Section 7.10.5 for compression reinforcement, whichever is less.

## DEVELOPMENT LENGTH MODIFIERS FOR BAR DEVELOPMENT

```
Modifier for tension development \(\quad=1.000\)
Modifier for compression development \(=0.180\)
REQUIRED Ld \(=\) MODIFIER \(*\) BASIC Ld \(*\) ACI 318 MODIFIERS, ( \(12 \mathrm{in} . \min\).)
```

File no: 242258
Customer: SOUTHERN TOWERS, LP Date 01/20/23
By: AS
Chk: $\qquad$ Description: 265 FT RTL TOWER KIRKSEY, KY

Page 1
Ver. 11/16/01

## FACTORED REACTIONS / LEG

COMPRESSION = UPLIFT = SHEAR =
552.17 k
480.60 k
48.83 k

Tower Type: RT
( 6 ) -1.5 " dia A.B. per leg
$\mathrm{f}_{\mathrm{c}}=$
$\mathrm{f}_{\mathrm{y}}=\quad 4,500 \mathrm{psi}$
$=60,000 \mathrm{psi}$

## SOIL PARAMETERS

A) Depth neglected for skin friction = Top 2.0 ft and Bottom 4.0 ft for download.
B) Average ultimate skin shear for uplift:
2.0 ft to 12.0 ft depth $=350 \mathrm{psf}$, and 12.0 ft to 32.0 ft depth $=725 \mathrm{psf}$, and 32.0 ft to 42.0 ft depth $=1600 \mathrm{psf}$, an 42.0 ft to 47.0 ft depth $=2000 \mathrm{psf}$.
C) Average ultimate skin shear for download:
2.0 ft to 12.0 ft depth $=550 \mathrm{psf}$, and 12.0 ft to 32.0 ft depth $=1100 \mathrm{psf}$, and 32.0 ft to 42.0 ft depth $=2400 \mathrm{psf}$, a 42.0 ft to 43.0 ft depth $=3000 \mathrm{psf}$.
D) Ultimate net end bearing at $47.0 \mathrm{ft}=15.00 \mathrm{ksf}$.
E) Groundwater table at 43.0 ft below ground.

## USE 4'- 0" DIAMETER AND 47'- 0" DEEP DRILLED PIER WITH 0'- 6" CAP

| Perimeter | $=$ | 12.57 ft |  |
| ---: | :--- | ---: | :--- |
| Total Download | $=$ | 552.17 | $+[1.2 \times 0.15-0.75 \times 0.120] \times 47 \times 12.57=$ |
|  | $=$ | 605.9 k |  |

Tension Capacity $=12.57 \times(43.5 \times 0.15+4.0 \times 0.09) \times 0.90+$ $12.57 \times(0.350 \times 10.0+0.725 \times 20.0+1.600 \times 10.0+2.000 \times 5.0) \times 0.75=$

$$
\begin{array}{lll}
77.9 & +\quad 414.8 & = \\
492.7 & >= & 492.7 \mathrm{k} \\
& 480.60 \mathrm{OK}
\end{array}
$$

Comp. Capacity $=12.57 \times 15.00 \times 0.75+$
$12.57 \times(0.550 \times 10.0+1.100 \times 20.0+2.400 \times 10.0+3.000 \times 1.0) \times 0.75=$

$$
\begin{array}{ccc}
513.8 & = & 655.2 \mathrm{k} \\
655.2 & >= & 605.9 \mathrm{OK}
\end{array}
$$

## LATERAL - SEE ATTACHED CALCULATIONS USING WIGGINS METHOD

$$
\text { Max } \mathrm{M}=\quad 529.76 \mathrm{ft}-\mathrm{k} \quad \mathrm{Max} \mathrm{~V}=\quad 48.83 \mathrm{k}
$$

## REINFORCEMENT - SEE ATTACHED SHAFT PROGRAM

USE 16 - \# 10 BARS VERTICAL WITH *
\# 5 TIES AT 6" IN TOP 7.0 FT AND AT
12 " IN REST OF PIER
\{36.0 in Cage Diameter\}

LAP SPLICE LENGTH = 45 IN
CONCRETE VOLUN $12.57 \times 47.5 / 27=$

```
********************
** WIGGINS METHOD **
** DETERMINE MAXIMUM LATERAL SOIL PRESSURE **
** AND MAXIMUM MOMENT IN THE SHAFT FOR **
** A DRILLED PIER FOUNDATION **
*********** Fri Jan 20 10:59:15 2023 ***********
Ver. 2.3 NT
```

FILE NO.- 242258
ENGR. - AS
DESCR.- SOUTHERN TOWERS, LP 265 FT RTL


Diameter of Pier = D = 4.00 ft
Projection Above Grade $=R=.50 \mathrm{ft}$
Embedment Depth $=\mathrm{E}=38.00 \mathrm{ft}$
Depth of Soil Ignored $=G=2.00 \mathrm{ft}$
$\mathrm{K}=.2411$
$Y=13.36 \mathrm{ft}$

MAXIMUM LATERAL SOIL PRESSURES
$\mathrm{S} 1=2.317 \mathrm{ksf} \quad \mathrm{SP} 1=61 \mathrm{psf} / \mathrm{ft}$
$\mathrm{S} 2=1.237 \mathrm{ksf} \quad \mathrm{SP} 2=81 \mathrm{psf} / \mathrm{ft}$

Equivalent Length of Pier $=\mathrm{L}=38.50 \mathrm{ft}$
Length for NO Soil Resistance $=\mathrm{NL}=2.50 \mathrm{ft}$ Applied Moment at Top of Pier $=$ MA $=\quad .00 \mathrm{ft}-\mathrm{k}$ Shear at Top of Pier $=P=48.83 \mathrm{kips}$

MAXIMUM VALUES IN SHAFT

$$
\begin{array}{r}
\mathrm{M}=529.76 \mathrm{ft}-\mathrm{k} \\
\mathrm{~V}=48.83 \mathrm{kips}
\end{array}
$$

```
\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{4}{|l|}{*****************************} & 242258 \\
\hline ** & & & ** & SOUTHERN TOWERS, \\
\hline ** & COMPARISION & DATA & ** & \\
\hline ** & & & ** & \\
\hline
\end{tabular}
```



```
EIA REV. E NORMAL SOIL --------------------> E \(=13.65 \mathrm{ft}\)
EIA REV. F NORMAL SOIL --------------------> E \(=17.50 \mathrm{ft}\)
```

```
DESIGNED BY: AS
ENG. FILE NO.: 242258
DATE: 01/20/23
CUSTOMER: SOUTHERN TOWERS, LP
DESCRIPTION: 265 FT RTL TOWERKIRKSEY, KY
                    INPUT DATA
                    ===========
C = 552.17 Kips Vc = 48.83 Kips Mc = 529.76 Ft-K
T = 480.60 Kips Vt = 48.83 Kips Mt = 529.76 Ft-K
Fy = 60.00 Ksi Fyt = 60.00 Ksi L.F. = 1.00
H=48.00 In. Ds = 36.00 In. F'' F = 4.50 Ksi
U 1.00 Irs= 1
*** SHAFT CROSS SECTION IS ROUND ***
SUMMARY OF ANALYSIS
    Minimum area of steel req'd. = 18.21 sq.in. (Rhomin = 0.0101)
    Maximum steel area limit = 144.76 sq.in. (Rhomax = 0.0800)
        CIRCULAR TIE DATA
        For No. 3 circular ties, Smax = 5.50 Inches
        For No. 4 circular ties, Smax = 10.00 Inches
        For No. 5 circular ties, Smax = 15.50 Inches
        For No. 6 circular ties, Smax = 17.72 Inches
        DLMT = MODIFIER FOR TENSION DEVELOPMENT = 1.000
        DLMC = MODIFIER FOR COMPRESSION DEVELOPMENT = . 313
        REQUIRED Ld = MODIFIER * BASIC Ld * ACI 318 MODIFIERS (12 in. min.)
        DLMT = MODIFIER FOR TENSION DEVELOPMENT = 1.000
        DLMC = MODIFIER FOR COMPRESSION DEVELOPMENT = . 339
        REQUIRED Ld = MODIFIER * BASIC Ld * ACI 318 MODIFIERS (12 in. min.)
```

* 


broadcast and transmit structure locations DEPICTED ARE ALL KNOWN STRUCTURE SITES THAT HAVE BEEN REGISTERED WITH THE FEDERAL
COMMUNICATIONS COMMISSION IN CALLOWAY COUNTY WITHIN 10 MILES OF THE PROPOSED TOWER LOCATION ON OR BEFORE OCTOBER 25, 2022

SITE \#13: FCC\# 1303887 DIAMOND TOWERS V, LLC N $36^{\circ} 43^{\prime} 13.0^{\prime \prime}$, W88ㅇ14'32.4"
 SITE \#2: FCC\# 1030663 CROWN CASTLE GT COMPANY, LLC N $36^{\circ} 38^{\prime} 26.2^{\prime \prime}$, W88ㅇ16'00.1" SITE \#3: FCC\# 1043903 FOREVER COMMUNICATIONS, INC N $36^{\circ} 38^{\prime} 08.0^{\prime \prime}$, W88¹9'10.0" SITE \#4: FCC\# 1043919 FOREVER COMMUICATIONS, INC N36³ $7^{\prime} 42.0^{\prime \prime}$, W88º18'04.0" SITE \#6: FCC\# 1210819 CROWN CASTLE COMMUNICATIONS, LLC N36³ $38^{\prime} 43.9^{\prime \prime}$, W88ㅇ2 $8^{\prime} 32.2^{\prime \prime}$ SITE \#7: FCC\# 1215626 MURRAY ELECTRIC SYSTEM N $36^{\circ} 37^{\prime} 13.2^{\prime \prime}$, W88ㅇ1 $18^{\prime} 00.1^{\prime \prime}$
KENTUCKY RSA No. 1
PARTNERSHIP d/b/a

## verizonwireless

## \%

## GPD GROUP, INC:

Form 7460-2 for ASN: 2020-ASO-36927-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177
Issued Date: 08/19/2022

Network Regulatory
Kentucky RSA No. 1 Partnership
5055 North Point Pkwy
Alpharetta, GA 30005

> ** Extension **

A Determination was issued by the Federal Aviation Administration (FAA) concerning:

| Structure: | Antenna Tower EV Kirksey - A - (15287337) |
| :--- | :--- |
| Location: | Kirkesy, KY |
| Latitude: | $36-40-52.45 \mathrm{~N}$ NAD 83 |
| Longitude: | $88-23-53.22 \mathrm{~W}$ |
| Heights: | 565 feet site elevation (SE) |
|  | 270 feet above ground level (AGL) <br>  |
|  | 835 feet above mean sea level (AMSL) |

In response to your request for an extension of the effective period of the determination, the FAA has reviewed the aeronautical study in light of current aeronautical operations in the area of the structure and finds that no significant aeronautical changes have occurred which would alter the determination issued for this structure.

Accordingly, pursuant to the authority delegated to me, the effective period of the determination issued under the above cited aeronautical study number is hereby extended and will expire on 02/19/2024 unless otherwise extended, revised, or terminated by this office. You must adhere to all conditions identified in the original determination.

This extension issued in accordance with 49 U.S.C., Section 44718 and, if applicable, Title 14 of the Code of Federal Regulations, part 77, concerns the effect of the structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this extension will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (817) 222-5928, or chris.smith@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2020-ASO-36927OE.

Chris Smith
Specialist
Attachment(s)
Map(s)
cc: FCC


Page 3 of 4


## 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

TC 55-2
KENTUCKY AIRPORT ZONING COMMISSION
Rev. 06/2020
Page 2 of 2

## APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

| APPLICANT (name) Verizon Wireless |  | PHONE ${ }^{\text {773-987-5299 }}$ | FAX | KY AERONAUTICAL STUDY \# |
| :---: | :---: | :---: | :---: | :---: |
| ADDRESS (street) <br> South of 434 Fire Station Drive |  | CITY Kirksey |  | STATE ZIP <br> KY  |
| APPLICANT'S REPRESENTATIVE (name) |  | $\begin{aligned} & \text { PHONE } \\ & 773-987-5299 \end{aligned}$ | FAX |  |
| ADDRESS (street)210 Denell Dr |  | ClTY |  | STATE ZIP <br> IL 60417 |
| APPLICATION FOR $\square$ New Construction $\square$ Alteration $\quad \square$ ExistingDURATION $\quad \square$ Permanent $\quad \square$ Temporary (months $\quad$ days |  |  |  | WORK SCHEDULE |
| $\left.\begin{array}{ll}\hline \text { TYPE } \quad \square \text { Crane } & \square \text { Building } \\ \square & \text { Antenna Tower }\end{array}\right)$ |  | MARKING/PAINTING/LIGHTING PREFERREDRed Lights \& Paint $\quad \square$ White- medium intensity White- high intensityDual- red \& medium intensity white $\square$ Dual- red \& high intensity white$\square$ Other |  |  |
| I ATITIIDF$36^{\circ} 40^{\prime} 52.45^{\prime \prime} \mathrm{N}$ |  | InNGITIIDF$88^{\circ} 23^{\prime} 53.22 "$ MAICalloway |  | DATUM <br> $\square$ Other$\square$ NAD83$\square$ |
| NEAREST KENTUCKY <br> City Calloway |  | NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT Murray-Calloway Co. Airport, 544 Airfield Ln, Murray, KY 42071 |  |  |
| SITE ELEVATION (AMSL, feet)564 |  | TOTAL STRUCTURE HEIGHT (AGL, feet) 270 |  | CURRENT (FAA aeronautical study \#) |
| OVERALL HEIGHT (site elevation plus total structure height, feet) 834 |  |  |  | PREVIOUS (FAA aeronautical study \#) |
| DISTANCE (from nearest Kentucky public use or Military airport to structure) 2 miles |  |  |  | PREVIOUS (KY aeronautical study \#) |
| DIRECTION (from nearest Kentucky public use or Military airport to structure) northwest |  |  |  |  |
| DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.) <br> North of the intersection of Blue Jay Dr and Fire Station Rd |  |  |  |  |
|  |  |  |  |  |
| DESCRIPTION OF PROPOSAL <br> Proposed 265' self support tower with 5' lightning rod |  |  |  |  |
| FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) Yes, when? |  |  |  |  |
| 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.) <br> PENALITIES (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.) |  |  |  |  |
| NAME William Faber | TITLE Mr | SIGNATYME |  |  |
| COMMISSION ACTION | SIGNATURE | $\square$ Chairperson, KAZCAdministrator, KAZC |  | DATE |

# KENTUCKY AIRPORT ZONING COMMISSION 

ANDY BESHEAR
Governor

Department of Aviation, 90 Airport Road
Frankfort, KY 40601 www.transportation.ky.gov 502-564-0151

## APPROVAL OF APPLICATION

February 16, 2023

Verizon Wireless
Attn: Crystal Swanson
5055 North Point Parkway
Alpharetta, GA 3022

## SUBJECT STUDY \#:

## AS-2022-117-CEY

APPLICANTS NAME:
NEAREST CITY:
LATITUDE/LONGITUDE:
HEIGHT (In Feet):
CONSTRUCTION PROPOSED:

## Murray-Calloway County Airport

Verizon Wireless
Kirksey, KY
36º40'52.45"N, 88º 23'53.22"W
270' AGL / 835' AMSL
Antenna Tower

NOTES: This proposed Antenna Tower is approx 1.6 nm NW of Kyle Oakley Field. The tower exceeds the 100:1 Slope by 164', the Horizontal Surface by 109', and the 1.58 Nautical Mile Ring Surface by 59'.
FAA DETERMINATION: FAA Study 2020-ASO-36927-OE (extended on 08/19/2022) had a Determination of No Hazard but with impact to the circling MDA and within the TPA for Cat C/D aircraft. Med/Dual Lighting required.

This letter is to notify you that the Kentucky Airport Zoning Commission approved your permit application for the construction of a Structure at the Location, Coordinates, and Height as indicated above. Also reference FAA OE/AAA Study 2020-ASO-36927-OE.

This permit is valid for a period of 18 Month(s) from its date of issuance. If construction is not completed within said $18-$ Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit.

Contact us with any questions you may have.
Respectfully,

## Anthony Adams

Airport Zoning Administrator
Department of Aviation
AirportZoning@ky.gov 502-564-0151 Office

GPD\# 2019737.57
December 8, 2022

## GEOTECHNICAL REPORT

## Site Name:

EV Kirksey

## Site Data:

Fire Station Drive Kirksey (Calloway County), Kentucky 42054
Latitude $36^{\circ} 40$ ' $52.45^{\prime \prime} \mathrm{N}$, Longitude $88^{\circ} 23^{\prime} 53.22^{\prime \prime}$ W
Proposed 265-ft Self-Support Tower

GPD is pleased to submit this Geotechnical Report for the aforementioned tower. The purpose of the following report is to summarize the soil conditions encountered during the subsurface exploration at this site and provide geotechnical engineering parameters for the proposed tower foundation system.

We at GPD appreciate the opportunity to provide continuing professional services to you. Please feel free to contact us with any questions or if you need additional assistance.

Respectfully Submitted,


Delbert J. Channels, P.E.
GPD Group, Inc.


Attachments: Boring Location Plan
Boring Log
Unified Soil Classification System
General Notes

## GEOTECHNICAL EXPLORATION

Drilling and soil sampling was performed by Chase Environmental Group, Inc. using a truck-mounted CME-75 drill rig with hollow-stem augers and an automatic SPT hammer. One (1) sample boring was drilled near the proposed tower location to a depth of about fifty (50) feet. Representative samples were obtained by the split-barrel sampling procedure in general accordance with appropriate ASTM standards. In the split-barrel sampling procedure, the number of blows required to advance a standard 2-inch O.D. split-barrel sampler the last 12 inches of the typical total 18 -inch penetration by means of a 140 -pound hammer with a free fall of 30 inches, is the standard penetration resistance value (N). Sampling depths and penetration distance, plus the standard penetration resistance values, are shown on the attached boring log. The samples were sealed and mailed to our laboratory for soil classification in general accordance with appropriate ASTM standards.

The subsurface conditions encountered at the boring location are indicated on the attached boring log. The stratification boundaries on the boring log represent the approximate location of changes in soil/rock types; in-situ, the transition between materials may be gradual. The boring log includes visual classifications of the materials encountered during drilling as well as the driller's interpretation of the subsurface conditions between samples.

## LABORATORY TESTING

The samples were classified in the laboratory based on visual observation, texture and plasticity. The descriptions of the soils indicated on the boring log are in accordance with the enclosed General Notes and the Unified Soil Classification System. Estimated group symbols according to the Unified Soil Classification System are given in the tables below. A brief description of this classification system is attached to this report.

The laboratory testing program consisted of performing the following tests:

```
* Natural water content tests (ASTM D-2216)
% Soil Resistivity (ASTM G-187-12A)
% Soil pH Test (ASTM D-4972)
```

Information from these tests was used in conjunction with field penetration test data to evaluate soil strength insitu, volume change potential, and soil classification. Results of these tests are attached and provided on the boring log.

## SOIL RESISTIVITY AND REACTIVITY

Soil resistivity and pH testing was performed as a part of the geotechnical investigation at this site. A composite sample was obtained within the upper $10-\mathrm{ft}$ for laboratory testing. Laboratory resistivity measurements were obtained using a Miller-400A Analog Resistance Meter implementing the 2 -electrode method in conjunction with an electrolyte box in accordance with ASTM G-187-12A. It should be noted that the soil samples were saturated for this testing procedure. Based on the laboratory test results, most of the soil is rated "Corrosive" with resistivity measurements on average of about $\mathbf{3 , 8 0 0} \mathbf{~ o h m} \mathbf{- c m}$ (refer to Table 1 below). Additionally, soil pH tests were conducted in accordance with ASTM D-4972. An average soil pH of $\mathbf{3 . 9}$ was measured at $\mathbf{2 1}^{\circ} \mathbf{C}$ for the surficial soils at the project location.

Table 1: Soil Resistivity Classification System

| Resistivity (Ohm-cm) | Soil Type | Corrosion Rating |
| :---: | :---: | :---: |
| 0 to 1,000 | Moist Clay | Extremely Corrosive |
| 1,000 to 3,000 | Moist Clay | Highly Corrosive |
| 3,000 to 5,000 | Clay | Corrosive |
| 5,000 to 10,000 | Silty Clay/Clayey Silt | Moderately Corrosive |
| 10,000 to 20,000 | Sandy Silt | Mildly Corrosive |
| $>20,000$ | Sand/Gravel/Rock | Non-Corrosive |

## GROUNDWATER

Groundwater was encountered during drilling operations at a depth of about 43 feet below grade as noted on the attached boring log. It should also be noted that fluctuations in the groundwater level can occur and perched water can develop over low permeability soil or rock strata following periods of heavy or prolonged precipitation. Long term monitoring in cased holes or piezometers would be necessary to accurately evaluate the potential range of groundwater conditions on the site.

## SEISMIC CONSIDERATIONS

The International Building Code (IBC) requires a site soil profile determination extending to a depth of 100 feet for seismic site classification. The scope of services for this project required that borings be drilled to a maximum depth of about 50 feet. The noted site classification considers that weathered bedrock exists below the maximum depth of subsurface exploration. Based on the available field and laboratory test results and our knowledge and experience with the local site geology, a Seismic Site Classification "D" should be used for design of the structures according to the "International Building Code and Related Codes, Section 1613.5.2 Site Class Definitions.

## GEOTECHNICAL RECOMMENDATIONS

Based on the results of this study, it is our opinion that either cast-in-place concrete piers or a shallow foundation system would be appropriate for support of a self-support tower at this site. The following net design parameters may be used to design the proposed foundation system. Factors of safety of 2 and 3 should be applied to the ultimate skin friction and bearing pressure values provided below, respectively. The cohesion, internal angle of friction and unit weight parameters along with the vertical modulus of subgrade reaction, horizontal modulus of subgrade reaction, sliding friction coefficient, and strain values given in the following tables are based on the results of the sample boring, lab testing, published values and our past experience with similar soil types. These values should, therefore, be considered approximate.

Table 2: Self-Support Tower - Drilled Pier - Ultimate Design Parameters

| Depth (feet) | USCS | Unit Weight (pcf) | Horizontal Modulus of Subgrade Reaction (pci) | $\varepsilon_{50}$ | Ultimate Skin Friction Compression ${ }^{1}$ (psf) | Ultimate Skin Friction Tension/ Uplift (psf) | Ultimate Bearing Pressure ${ }^{1}$ (psf) | Internal Angle of Friction (Degrees) | Cohesion (psf) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $0-2^{2}$ | CL | 120 | Ignore ${ }^{2}$ | Ignore $^{2}$ | Ignore $^{2}$ | Ignore ${ }^{2}$ | Ignore ${ }^{2}$ | - | - |
| 2-12 | CL | 120 | 80 | 0.007 | 550 | 350 | 6,000 | 0 | 1,000 |
| 12-32 | CL | 125 | 160 | 0.005 | 1,100 | 725 | 12,000 | 0 | 2,000 |
| 32-42 | SP | 115 | 90 | - | 2,400 | 1,600 | 15,000 | 32 | 0 |
| 42-50 | SP | 125/63 ${ }^{3}$ | 180 | - | 3,000 | 2,000 | 21,000 | 38 | 0 |

${ }^{1}$ The side resistance to compression forces within one pier diameter length (1D) from the bottom of the pier should be ignored if end bearing resistance is utilized.
${ }^{2}$ The upper 2-ft or one-half pier diameter length ( $\mathrm{D} / 2$ ), whichever is greater, should be ignored due to potential frost effects and construction disturbance considerations.
${ }^{3}$ Buoyant unit weights should be used below a depth of 43 feet.

Table 3: Self-Support Tower - Shallow Foundation - Ultimate Design Parameters

| Depth <br> (feet) | USCS | Weight <br> (pcf) | Ultimate <br> Bearing <br> Pressure <br> (psf) | Sliding <br> Friction <br> Coefficient <br> $@$ Base | Vertical <br> Modulus of <br> Subgrade <br> Reaction <br> (pci) | Internal <br> Angle of <br> Friction <br> (Degrees) | Cohesion <br> (psf) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $0-2^{1}$ | CL | 120 | Ignore $^{1}$ | Ignore $^{1}$ | Ignore $^{1}$ | - | - |
| $2-12$ | CL | 120 | 6,000 | 0.35 | 100 | 0 | 1,000 |

${ }^{1}$ The upper 2 - ft should be ignored due to potential frost effects and construction disturbance considerations.

The parameters in Table 2 and Table 3 are provided for the design of either cast-in-place concrete piers or a shallow foundation system. In the event that a different foundation or tower type is chosen, these parameters are not considered valid and GPD should be notified immediately to provide appropriate design parameters, as warranted.

## EARTHWORK

Where required, all surfaces cut to subgrade elevation or subgrades to receive fill should be proof-rolled under the direction of an on-site geotechnical engineer or their representative. Proof-rolling should be performed with a minimum 20 ton dump truck. Two (2) passes, (1 forward and 1 backward) should be made at normal walking speed. Any soft, loose, yielding, or obviously contaminated zones should be undercut as directed by the engineer.

All backfill placed adjacent to foundations should be select material, as approved by a qualified geotechnical engineer. For all filling operations, the following should be observed:

1. Prior to use, the approved fill material should be tested as outlined in ASTM D-698 to determine the maximum dry density and optimum moisture content for silty or cohesive soils, or ASTM D-4253 and D-4254 for clean granular soils. For each change in borrow material, additional tests will be required.
2. For all fill or backfill used, the fill material should be placed on the approved subgrade in controlled lifts, with each lift compacted to a stable condition, and to a minimum of $98 \%$ maximum dry density per ASTM D-698 at a moisture content within $1.5 \%$ of optimum for cohesive or silty borrow. Controlled lifts of granular material should be compacted to $80 \%$ relative density per ASTM D-4254.
3. All filling operations should be observed by a qualified soils technician with field density tests made, to assure compaction to specification.

Backfill may consist of mixes of natural soil or crushed aggregate meeting one of the following USCS Classifications: GW, GP, GM, GC, SW, SP, SM, SC, CL, ML, or any dual symbol combinations of the preceding. Backfill material should contain a maximum organic content of 1 percent, and a maximum particle size of 3inches. Excavated site soils are considered acceptable for reuse as structural fill at this project location.

## CONSTRUCTION CONSIDERATIONS

Drilled pier foundations should be designed with a minimum shaft diameter of 36 inches to facilitate clean out of the pier excavation. Temporary casing may be required during the pier excavation in order to control possible groundwater seepage and to support the sides of the excavation in weak soil zones. Care should be taken so that the sides and bottom of the excavations are not disturbed during construction. The bottom of the shaft should be free of loose soil or debris prior to reinforcing steel and concrete placement. It is essential that piers designed using the provided properties are cast against native soil. Overexcavation and forming of piers is not permitted.

A concrete slump of at least 6 inches is recommended to facilitate temporary casing removal. It should be possible to remove the casing 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.

## QUALIFICATIONS

The analysis and recommendations presented in this report are based upon the data obtained from the boring performed at this site and from other information discussed in this report. This report does not reflect variations that may occur across the site or due to the modifying effects of weather.

This report has been prepared for the exclusive use of Verizon Wireless for specific application to the project discussed herein and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either expressed or implied, are intended or made. In the event that changes in the nature or design as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless GPD reviews the changes and either verifies or modifies the conclusions of this report in writing.

The scope of services for this project does not include either specifically or by implication, any environmental assessment of the site or identification of contaminated or hazardous materials or conditions. If the owner is concerned about the potential for such contamination, other studies should be undertaken.


CLIENT Verizon Wireless
PROJECT NUMBER 2019737.57
DATE STARTED November 8, 2022 COMPLETED November 8, 2022
DRILLING CONTRACTOR Chase Environmental Group, Inc.
DRILLING METHOD Hollow Stem Auger with Automatic SPT Hammer
LOGGED BY Ricky Rodriguez
CHECKED BY Dustin Vincent

PROJECT NAME EV Kirksey
PROJECT LOCATION Kirksey, KY
GROUND ELEVATION $\qquad$ HOLE SIZE $\qquad$
GROUND WATER LEVELS:
$\underline{V}$ AT TIME OF DRILLING 43.00 ft

AT END OF DRILLING $\qquad$ -NOTES CME-75 Drill Rig


[^0]Unified Soil Classification System


## GENERAL NOTES

## SAMPLE IDENTIFICATION

The Unified Soil Classification System (USCS), AASHTO 1988 and ASTM designations D2487 and D-2488 are used to identify the encountered materials unless otherwise noted. Coarse-grained soils are defined as having more than $50 \%$ of their dry weight retained on a \#200 sieve $(0.075 \mathrm{~mm})$; they are described as: boulders, cobbles, gravel or sand. Fine-grained soils have less than $50 \%$ of their dry weight retained on a \#200 sieve; they are defined as silts or clay depending on their Atterberg Limit attributes. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size.

## DRILLING AND SAMPLING SYMBOLS

SFA: Solid Flight Auger - typically 4" diameter flights, except where noted.
HSA: Hollow Stem Auger - typically $31 / 4$ "or $41 / 4$ I.D. openings, except where noted.
M.R.: Mud Rotary - Uses a rotary head with Bentonite or Polymer Slurry
R.C.: Diamond Bit Core Sampler
H.A.: Hand Auger
P.A.: Power Auger - Handheld motorized auger

## SOIL PROPERTY SYMBOLS

$\mathrm{N}: ~ S t a n d a r d ~ " \mathrm{~N}$ " penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2 -inch O.D. Split-Spoon.
$\mathrm{N}_{60}$ : A " N " penetration value corrected to an equivalent $60 \%$ hammer energy transfer efficiency (ETR)
$\mathrm{Q}_{\mathrm{u}}$ : Unconfined compressive strength, TSF
$Q_{p}$ : Pocket penetrometer value, unconfined compressive strength, TSF
w\%: Moisture/water content, \%
LL: Liquid Limit, \%
PL: Plastic Limit, \%
PI: Plasticity Index = (LL-PL), \%
DD: Dry unit weight, pcf
Z, ㅁ, 프 Apparent groundwater level at time noted

## RELATIVE DENSITY OF COARSE-GRAINED SOILS ANGULARITY OF COARSE-GRAINED PARTICLES

| Relative Density | N - Blows/foot | Description | Criteria |
| :---: | :---: | :---: | :---: |
| Very Loose | 0-4 | Angular: | Particles have sharp edges and relatively plane sides with unpolished surfaces |
| Loose | 4-10 $10-30$ | Subangular: | Particles are similar to angular description, but have |
| Dense | 30-50 |  | rounded edges |
| Very Dense | 50-80 | Subrounded: | Particles have nearly plane sides, but have |
| Extremely Dense | 80+ | Rounded: | Particles have smoothly curved sides and no edges |

## GRAIN-SIZE TERMINOLOGY

$$
\begin{aligned}
& \text { Component Size Range } \\
& \text { Boulders: Over } 300 \mathrm{~mm} \text { (>12 in.) } \\
& \text { Cobbles: } 75 \mathrm{~mm} \text { to } 300 \mathrm{~mm} \text { ( } 3 \mathrm{in} \text {. to } 12 \mathrm{in} \text {.) } \\
& \text { Coarse-Grained Gravel: } 19 \mathrm{~mm} \text { to } 75 \mathrm{~mm} \text { ( } 3 / 4 \mathrm{in} \text {. to } 3 \mathrm{in} \text {.) } \\
& \text { Fine-Grained Gravel: } 4.75 \mathrm{~mm} \text { to } 19 \mathrm{~mm} \text { (No. } 4 \text { to } 3 / 4 \mathrm{in} \text {.) } \\
& \text { Coarse-Grained Sand: } 2 \mathrm{~mm} \text { to } 4.75 \mathrm{~mm} \text { (No. } 10 \text { to No.4) } \\
& \text { Medium-Grained Sand: } 0.42 \mathrm{~mm} \text { to } 2 \mathrm{~mm} \text { (No. } 40 \text { to No.10) } \\
& \text { Fine-Grained Sand: } 0.075 \mathrm{~mm} \text { to } 0.42 \mathrm{~mm} \text { (No. } 200 \text { to No.40) } \\
& \text { Silt: } 0.005 \mathrm{~mm} \text { to } 0.075 \mathrm{~mm} \\
& \text { Clay: }<0.005 \mathrm{~mm}
\end{aligned}
$$

SS: Split-Spoon-1 3/8" I.D., 2" O.D., except where noted.
ST: Shelby Tube-3" O.D., except where noted.
BS: Bulk Sample
PM: Pressuremeter
CPT-U: Cone Penetrometer Testing with Pore-Pressure Readings

## PARTICLE SHAPE

Description Criteria
Flat: Particles with width/thickness ratio > 3
Elongated: Particles with length/width ratio > 3
Flat \& Elongated: Particles meet criteria for both flat and elongated

RELATIVE PROPORTIONS OF FINES
$\frac{\text { Descriptive Term }}{\text { Trace: } \frac{\text { Dry Weight }}{<5 \%}}$
Trace: <5\%
With: $5 \%$ to $12 \%$
Modifier: >12\%

## GENERAL NOTES

(Continued)

| $\underline{Q}_{\underline{u}}-$ TSF | N - Blows/foot | Consistency |
| :---: | :---: | :---: |
| 0-0.25 | 0-2 | Very Soft |
| 0.25-0.50 | 2-4 | Soft |
| 0.50-1.00 | 4-8 | Firm (Medium Stiff) |
| 1.00-2.00 | 8-15 | Stiff |
| 2.00-4.00 | 15-30 | Very Stiff |
| 4.00-8.00 | 30-50 | Hard |
| 8.00+ | 50+ | Very Hard |

MOISTURE CONDITION DESCRIPTION<br>Description Criteria<br>Dry: Absence of moisture, dusty, dry to the touch<br>Moist: Damp but no visible water<br>Wet: Visible free water, usually soil is below water table

```
RELATIVE PROPORTIONS OF SAND AND GRAVEL
    Descriptive Term % Dry Weight
                                    Trace: < 15%
                                With: 15% to 30%
                            Modifier: >30%
```


## STRUCTURE DESCRIPTION



## ROCK QUALITY DESCRIPTION

Rock Mass Description RQD Value

| Excellent | $90-100$ |
| :---: | :---: |
| Good | $75-90$ |
| Fair | $50-75$ |
| Poor | $25-50$ |
| Very Poor | Less than 25 |

## DEGREE OF WEATHERING

Slightly Weathered: Rock generally fresh, joints stained and discoloration extends into rock up to 25 mm ( 1 in ), open joints may contain clay, core rings under hammer impact.

Weathered: Rock mass is decomposed $50 \%$ or less, significant portions of the rock show discoloration and weathering effects, cores cannot be broken by hand or scraped by knife.

Highly Weathered: Rock mass is more than $50 \%$ decomposed, complete discoloration of rock fabric, core may be extremely broken and gives clunk sound when struck by hammer, may be shaved with a knife.

Page 2 of 2

## DIRECTIONS TO SITE FROM COUNTY SEAT

FROM CALLOWAY COUNTY SEAT: HEAD NORTH ON S 5TH STREET, TOWARD MAIN STREET, TURN RIGHT AT THE 1ST CROSS STREET ONTO MAIN ST, TURN LEFT AT THE 1ST CROSS STREET ONTO STATE HWY 2075 / N 4TH ST / US 641 BUSINESS (2.1 MI), TURN RIGHT ONTO US 641 N (. 9 MI ) TURN LEFT ONTO KY 80 W ( 5 M ), TURN RIGHT ONTO KY 299 N ( 2.1 MI ) TURN LEFT ONTO WASHER ROAD (. 1 MI ), TURN LEFT ONTO FIRE STATION DRIVE (. 2 MI ).

GPD GROUP, INC. 330-572-2100

## LAND LEASE AGREEMENT

This Land Lease Agreement (the "Agreement") made this the $18^{\top+H}$ day of January._, 2023, between ROBERT CRICK and KAREN CRICK, with its principal offices located at 235 Norsworthy Road, Kirksey, Kentucky 42054, hereinafter designated LESSOR and Kentucky RSA No. 1 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 communications equipment ("Use") upon the Leased Premises (as hereinafter defined), which are a part of that real property owned, leased or controlled by LESSOR at or near Fire Station drive, Kirksey, Kentucky 42054 (the "Property"). The Property is legally described on EXHIBIT "A" attached hereto and made a part hereof. The Leased Premises are a portion of the Property and are approximately 10,000 square feet and are shown in detail on EXHIBIT " $B$ " attached hereto and made a part hereof LESSEE may survey the Leased Premises at LESSEE's sole cost and expense. Upon completion, the survey shall replace EXHIBIT " $B$ " in its entirety.
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 $1^{\text {st }}$ day of the month following the Commencement Date (as hereinafter defined). The "Commencement Date" shall be the $1^{\text {st }}$ day of the month after LESSEE begins installation of LESSEE's communications equipment on the Leased Premises.
3. EXTENSIONS. This Agreement shall automatically be extended for Four (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. Rental payments shall begin on the Commencement Date and be due at a total annual rental of to be paid in equal monthly installments on the first day of the month, in advance, to LESSOR at 235 Norsworthy Road, Kirksey, KY 42054, or to such other person, firm, or place as LESSOR may, from time to time, designate, in writing, at least thirty (30) days in advance of any rental payment date by Notice given in accordance with Paragraph Twenty (20) below. LESSOR and LESSEE acknowledge and agree that the initial rental payment shall not be
delivered by LESSEE until sixty (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. Rent shall be increased annually upon the Commencement Date by an amount equal to two percent ( $2 \%$ ) of the annual rental payable with respect to the immediately preceding year. 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 (1) a completed, current version of IRS 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.

In consideration for the execution of this Agreement and as a signing bonus contemplating potential delay of the Commencement Date, LESSEE agrees to make a one-time payment to LESSOR in the amount of as additional consideration ("Additional Payment"). The Additional Payment shall be due within sixty ( 60 ) days following the date of full execution of this Agreement and shall be due and payable regardless of whether LESSEE commences the Agreement.
5. ACCESS. LESSEE shall have the non-exclusive right of ingress and egress from a public right-ofway (known as "Fire Station Road"), seven (7) days a week, twenty-four (24) hours a day, over the property to and from the Leased Premises for the purpose of installation, operation and maintenance of LESSEE's communications equipment. The right of ingress and egress easement from the public road (known as "Fire Station Road") is more particularly described as a 30 ' access utility easement described on Exhibit " $B$ " which is attached hereto and incorporated by reference as if fully stated herein. In the event this area cannot be used for crop production by the crop tenant of the LESSOR, the LESSEE agrees to keep this area cleared of debris for the duration of this Lease and all of its extensions and/or renewals. Failure of LESSEE to keep this area free of debris may result in LESSOR hiring a third party to clear the area of ingress and egress and invoice the LESSEE for the reasonable costs of doing so and LESSEE agrees to pay the third party within thirty ( 30 ) days upon receipt of invoice. LESSEE may use the Easement for the installation, operation and maintenance of wires, cables, 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.

LESSOR further recognizes that LESSEE may potentially need an additional easement located on the North property line of LESSORS property (Exhibit " $B$ "). This easement must be approved, in writing, by LESSOR before LESSEE utilizes any part of this potential easement area, which shall not exceed $10^{\prime}$ South from the North property line of LESSORS property, upon approval. The easement may be used for the installation operation and maintenance of LESSEE's underground communications equipment. This right of ingress and egress easement is described as a utility easement.

With regard to any easements (including potential easements) as described herein, in the event LESSEE or any of LESSEE's agents, successors or assigns damage any crops on any of LESSOR's property, whether
on the easement or not, LESSEE agrees to reimburse the crop tenant of LESSOR for all costs of damage for the portion destroyed by LESSEE or LESSEE's agents, successors or assigns.
6. CONDITION OF PROPERTY. LESSOR shall deliver the Leased Premises to LESSEE in an undeveloped condition "AS IS, WHERE IS and with ALL FAULTS". LESSOR represents and warrants to LESSEE that as of the Effective Date, to the best of LESSOR's knowledge and belief, the Leased Premises is in compliance with all local, state and federal laws.
7. IMPROVEMENTS. The communications equipment including, without limitation, the tower structure, antennas, conduits, fencing and other screening and other improvements shall be at LESSEE's sole cost, expense and installation shall be at the discretion and option of LESSEE. LESSEE shall have the right to replace, repair, add or otheiwise modify its communications equipment, tower structure, 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 certificates, permits and other approvals (collectively the "Government Approvals") that may be required by any Federal, State or Local authorittes (collectively, the "Government Entitıs") as well as a satısfactory soil boring test, environmental studies, or any other due diligence LESSEE chooses that will permit LESSEE's Use. LESSOR shall cooperate with LESSEE in its effort to obtain such approvals and shall take no action which would adversely affect the status of the Property with respect to 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 Leased 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 Paragraph 11, each Party shall indemnify and hold the other harmless against any claim of liability or loss from personal injury or property 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 of any claim covered by this indemnificatıon; 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 judgement 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. LESSEE shall, at its own cost and expense, mantain commercial general liability insurance with limits of $\$ 4,000,000$ per occurrence for bodily injury (including death) and for damage or destruction to property. LESSEE agrees to include the LESSOR as an additional insured as their interest may appear under this Agreement.

LESSOR hereby acknowledges that all portions of the Property within three hundred feet (300') of the Premises (heremafter referred to as the "Insurance Buffer") are currently being used solely for agricultural, forestry or non-commercial purposes. In the event that the current use of the insurance Buffer changes during the Term, LESSOR agrees that at such time and in the future, and at its own cost and expense, each will maintain commercial general 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 $\$ 500,000$ for damage or destruction to property in any one occurrence.

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 aganst the other Party.
12. LIMITATION OF LIABILITY. Except for indemnification pursuant to Paragraphs Ten (10) and Twenty-Four (24), a violation of Paragraph Twenty-Nine (29), or a volation 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. LESSEE agrees that LESSEE will not cause interference that is measurable in accordance with industry standards to LESSOR's equipment. L.ESSOR agrees that LESSOR and other occupants of the Property will not cause interference that is measurable in accordance with industry standards to the then existıng equipment of LESSEE. Without limiting any other rights or remedies, if interference occurs and continues for a period in excess of Forty-Eight (48) hours following Notice to the interfering Party via telephone to LESSEE's Network Operations Center (at 800 852-2671 OR 800 621-2622) or to LESSOR (at 270-559-7443), the interfering Party shall or shall require any other user to reduce power or cease operations of the interfering equipment untll the interference is cured. 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 90 days of earlier termination, LESSEE shall remove LESSEE's Communications Equipment for any reason including, but not limited to, all footings (concrete or otherwise) to a depth of $4^{\prime}$ below surface, equipment, electrical lines, etc. and restore the Leased 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 lases. 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 until the removal of the communications equipment is completed. Failure of LESSEE to remove LESSEE's communication equipment (including, but not limited to all footings to a depth of $4^{\prime}$ below surface, equipment, etc.), within six (6) months from termination, may allow LESSOR to enter upon the premises to remove all of LESSEE's communication equipment as described herein and then bill LESSEE for all cost of removal. LESSEE agrees to reimburse LESSOR for all cost of removal, including a reasonable amount for attorney fees, court costs and appellate fees associated with collection of these fees on behalf of LESSEE.
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 rate in effect as of the date of expiration of the Term. In the event 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 and/or 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. LESSSEE 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 Thırty (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 Piemises, 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 shall have a sIx (6) month period of time to conduct due diligence and effectuate a closing of a transaction on substantially equivalent financial terms of the third-party offer. LESSEE may elect to amend this Agreement to effectuate the proposed financial terms of the third party offer rather than acquiring fee simple title or an easement interest in the Premises. 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 (1) 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 nghts hereunder. In the event that LE.ESOR 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 herem, shall peaceably and quetly 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, easement, restrictions or other impediments of title that will adversely affect LESSEE's Use.
19. ASSIGNMENT. Subject to the terms of Paragraph Sixteen (16), without any approval or consent of the other Party, this Agreement may be sold, assigned or transferred by either Party to any other third party. LESSEE may sublet the Premises in LESSEE's sole discretion.
20. NOTICES. Except for Notices permitted via telephone in accordance with Paragraph Thirteen (13), all Notices hereunder must be in writing and shall be deemed validly given if sent by certified mall, retuin 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 Paity to be notified may have designated to the sender by like Notice):

LESSOR: Robert Crick and Karen Crick<br>235 Norsworthy Road<br>Kirksey, KY 42054

LESSEE. Kentucky RSA No. 1 Partnership<br>180 Washington Valley Road<br>Bedminster, NJ 07921

ATTN: Network Real Estate

Notice shall be effective upon actual receipt or refusal as shown on the receipt obtained pursuant to the foregoing.
21. SUBORDINATION \& NON-DISTURBANCE. 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 this 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 dong 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 aganst 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 tıme, 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 and the Failure interferes with LESSEE's Use and LESSOR does not remedy the failure within Five (5) days after written Notice from LESSEE or, if the falure 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 inital written

Notice. The cure periods set forth in this Paragraph Twenty-Two (22) do not extend the period of time in which etther Party has to cure interference pursuant to Paragraph Thirteen (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 nondefaulting 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 therefore. 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 aganst 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 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 or a release of any regulated substance to the environment except to the extent resultıng from the activities of LESSEE. The Parties recognize that LESSEE is only leasing a small portion of LESSOR's property and the 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 facilties to avoid such hazardous substances to a mutually agreeable location, or, if LESSEE desires to remove at its own cost all or some of the hazardous substances or material (such as soll) contaning 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 Leased Property, through no fault of LESSOR, which impars LESSEE's Use, rent shall not be abated to LESSOR. If LESSEE's Use is not restored within 45 days, LESSEE may termınate the Agreement.

26 CONDEMNATION. If a condemnation of any portion of the Leased Premises impairs LESSEE's Use, 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 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, LESSEE shall maintain the Premises in compliance with all applicable laws, EH\&S Laws, rules, regulations, ordinances, directives, covenants, easements, consent decrees, zoning and land use regulations and restrictons of record, permits, building codes and the requirements of any applicable fire insurance underwriter or rating bureau, now in effect 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 bulding 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 Premises, without regard to specific use (including, without limitation, modifications required to enable LESSEE to obtain all necessary building permits).
28. TAXES. LESSOR shall invoice and LESSEE shall pay any applicable transaction tax (including sales, use, gross receipts, or excise tax) imposed on LESSEE and required to be collected by LESSOR based on any service, rental space, or equipment provided by LESSOR to LESSEE. LESSEE shall pay all personal property taxes, fees, assessments, or other taxes and charges imposed by any Government Entity that are imposed on LESSEE and required to be paid by LESSEE that are directly attributable to LESSEE's equipment or LESSEE's use and occupancy of the Premises. LESSEE shall pay their proportionate share of the ad valorem taxes attributed to the increase (if any) in the assessed value of LESSOR's real property as a direct result of improvements made by LESSEE. 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. LESSEE shall pay all ad valorem, personal property, real estate, sales and use taxes, fees, franchise fees, telecommunication tax assessments or other taxes or charges that are attributable to L.ESSEE's Leased Property or any portion thereof imposed by any Government Entity. LESSOR shall pay all taxes on the Leased Property, excluding LESSEE's share that is attributable to this Lease. 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 LESSOR for any taxes preciously paid by LESSEE, LESSOR agrees to promptly reimburse to LESSEE the amount of said reduction, credit or repayment. In the event that L.ESSEE 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. 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.
30. 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.
31. MISCELLANEOUS. This Agreement contains all agreements, promises and understandings between LESSOR and LESSEE regarding this transaction, and no oral agreement, promises or understandings shall be binding upon etther LESSOR or 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 falure 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 wave 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 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.

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

LESSORS:


ROBERT CRICK


## COMMONWEALTH OF KENTUCKY

COUNTY OF GALLOWAY

I, the undersigned Notary Public, do hereby certify that the foregoing instrument was duly subscribed, acknowledged, and sworn to before me by ROBERT CRICK, who is personally known to me for proved to me on the basis of satisfactory evidence) as his free and duly authorized act, on this the $/ \gamma^{\text {/h }}$ day of



NOTARY PUBLIC, STATE AT LARGE
My commission expires: $\qquad$

COMMONWEALTH OF KENTUCKY COUNTY OF GALLOWAY

I, the undersigned Notary Public, do hereby certify that the foregoing instrument was duly subscribed, acknowledged, and sworn to before me by KAREN CRICK, who is personally known to me (or proved to me on the basis of satisfactory evidence) as her free and duly authorized act, on this the $/ 8^{7}$. day of $\qquad$ 2020.

notary public, state at large
My commission expires: $\qquad$

LESSEE:
Kentucky RSA No. 1 Partnership
By Cello Partnership d/b/a Verizon Wireless, Its Managing Partner

) LESSEE ACKNOWLEDGEMENT county of Oaklunel

On Jan, 18 , 2023 before me, Brianne Schepporo, personally appeared $F a M$ aHER_personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity as Dire Ctor - Netwidtof Kentucky RSA No. 1 Partnership, By Cello Partnership d/b/a Verizon Wireless, Its Managing Partner
and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument



Notary Public

My Commission Expires:
6110126

EXXHBI " $\wedge^{\prime \prime}$
DESCRIPTION OF PROPERTY
hiv Kirksey
LEASE ARE DESCRIPTION
A PARI＇OF SECTION 35，TOWNSHIP 3，RANGE 3 FAST，CALLAW／AY COUNTY，KENTUCKY AND MORE PARTICULARIY DESCRIBED AS FOLLOWS．

COMMENCING AT＇JHE SOUTHEAST CORNER OF THE SOUTHEAST QUARTER OF SAID SECTION 35；＇HHENCE ON AND ALONG THE EASI＇QUARTER SECTION LINE NORTH 0I DFGRRELS 52 MINUTES 52 SLECONDS EAST 1859.25 FEET；TIIENCE NORTH 88 DEGREES 27 MINUTES 50 SECONDS WEST 652．45［EEET，THENCE SOUTH 01 DEGREES 33 MINUTES 29 SECONDS EAS＇「 1213 FEET TO TIE TRUE PLACE OF BEGINNING；THHNCE CONIINUING SOU＇TI 01 DLGREES 33 MINUTES 29 SECONDS WEST 10000 FEET；THENCE NORTH 88 DEGREES 26 MINUTES 31 SECONDS WEST 100.00 FEET；THIUNCE NORIH 01 DEGREES 33 MINUTES 29 SECONDS EAS＇ 100.00 FEET＇，＇THENCE SOUTH 88 DEGREES 26 MINUTES 31 SECONDS EAST 10000 FEET TO THE TRUE PLACE OF BEGINNING AND CONIAINING 10,000 SQUARE FEET，（ 0.23 八CRES），MORE OR LESS．

30＇$\Lambda$ CCESS \＆UTILITY EASEMENT DESCRIPTION
A PART OF SECIION 35，TOWNSHIP 3，RANGE 3 EAST，CALLAWAY COUNTY，KENTUCKY AND MORE PARIICULARLY DESCRIBED AS FOLLOWS：

COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHEAST QUARTER OF SAID SECTION 35；＇IHENCE ON AND ALONG＇THE EAST QUARTER SECTION LINE NORTH 01 DEGREES 52 MINUTES 52 SECONDS EAS厂 1859.25 FEET；＇THENCE NORTH 88 DEGREES 27 MINUTES 50 SECONDS WEST 65245 HEET；THENCE SOUTH 01 DEGREES 33 MINUTES 29 SECONDS EAST 12.13 FEET；THENCE CONTINUING SOUTH 01 DEGREES 33 MINUTES 29 SECONDS WFST 10000 FEETF；THENCE NORTH 88 DEGREES 26 MINUTES 31 SECONDS WEST 100.00 FEET TO THE TRUE PLACE OI BLGINNING；THENCE CONTINUING NORTH 88 DEGREES 26 MINUTES 31 SECONDS WEST 30.00 FEET；＇THENCE NORTH 01 DEGREES 33 MINUTES 29 SLCONDS EAST 35.00 FEET；THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS WIES＇ 2389 FEET TO THE CENTER OFFIRE SI＇ATION ROAD；＇HENCE ALONG SAID CENTER OF ROAD NORTH 04 DEGREES 26 MINUTES 25 SECONDS EASI 30.09 FEET；THENCE NORTH 90 DEGREES 00 MINUTLS 00 SECONDS EAST 22.38 FEET；THENCE NORTH 01 DEGREES 33 MINUTES 29 SIBCONDS EAST 35.00 FEET，THENCE SOUTH 88 DEGREES 26 MINUTES 31 SECONDS EAS1 30,00 FEET；THENCE SOUTH 01 DEGREES 33 MINUTES 29 SECONDS WESI＇ 100.00 FEET＇TO THE TRUE PLACE OF BEGINNING AND CONTAINING 3694 SQUARE ILLET＇，（0 08 ACRES），MORE OR LESS

PARENT PARCEL DESCRIPTION
ALL THAT PARCEL OF LAND IN THE IN THE COUNTY OF CALLOWAY AND COMAIONIVEALTH OF
KENTUCKY AS MORE FULLY DESCRIBED IN DEED AND BOOK 809 PAGE 695 AND PARCEL \＃ 021－0－0048－1E，
BEING KNOXVN AND DESIGNATED AS．

PARCLL I：
BIEING A PORTION OF SECIION 35，T．3，R．3，EASI＇，DESCRIBED AS BEGINNING AT THE SOU＇HIESI＇CORNER OF THE SOUTHEASI＇QUARTER OF SAID SECTOIN；THENCE NORTH WITHTM IE QR．SEC．LINE AND WITII THE MURRAY－KIRKSEY ROAD 12666 POLES TO A ROCK；

THENCE IVEST 39.09 POIESTO A STAKE; THENCE NORTH 14.12 POLES TO A STAKE; THENCE WEST' 9 POLES TO A STAKE; 'IHENCE SOUTH 14.12 POLES TO A STAKE; THENCE SOUTH 4 DEGRIESS WIESI 84.06 POLES TO A STAKE; THENCE SOUTH 6 DEGREES EAST 42.42 POLES TO A STAKE IN THE SOUTH LINE OF SAID SEC. 35; THENCE EASI' WITH SEC. LINE 4634 POILS TO THE BEGINNING, CONTAINING 39 ACRES AND 123 POLES, EXCEPT $81 / 2$ ACRES SOLD OIF OF TIIE NORTH END HO ZOLLIE NORSWORTHY.

ASO LXCEPT: ONE ACRE LOCATLD IN THE SOUTHEAST CORNER OF THE ABOVE DESCRIBED TRACT, SAID ONE, ACRE BEING 180 FEET NORTH AND SOUTH ALONG THE WEST SIDE OF SAID HIGHW/Y AND BEING 242 FEET EAST AND WPST.
ALSO LESS AND EXCEPT:
(1) 'IHAT TRACT' OF LAND CONVEYED TO GERALD STONE, ET UX., BY DEED DATED OCTOBER 7, 1961, OF RFCORD IN DEED BOOK 114, PAGE 243.
(2) THAT'IRACI'OFI AND CONVEYED TO CECIL BAKER, ET UX., BY DEED DATED OCTOBER 7, 1961, OF RECORD IN DEED BOOK 114, PAGE 24.
(3) THNT TRACT OF LAND CONVEYED TO HOMER CRASS, ET UX., BY DEED DATED OCTOBER 7, 1061 OF RECORD IN DEED BOOK 114, PAGE 245.

PARCELII.
BEING A PORTION OF SECTION 35, T. 3., R. 3, EAST: BEGINNING AT A POINT OF THE WEST SIDE OF THE MURRAY' \& KIRKSEY STATE IIIGHWAY NO 299, WHICH BEGINNING POINT OF 126.66 POLES NORTH OF THE S.E. CORNER OF THE SE QR OF S 35, T. 3 R 3 EAS'T; THENCE WEST WITH CLOY'S NORTH IINE 39.09
POLES TO A STAKE; 'THENCE NORTH 14.12 POLES TO A STAKE; THENCE WEST' 9 POLES TO A STAKE; THENCE SOUTH 14.12 POLES TO A STAKE; THENCE CONTINUING SOUTH \& DEGREES WEST FAR ENOUGH TO MAKE (81/2) EIGHT AND ONE HALF ACRES HEREIN CONVEYED; THENCE EAS' PARALLEL WITH NORTH
LINE HEREOF ABOUT' 46 POLES TO THE WEST SIDE OF SAID MURRAY \& KIRKSBY SIATE HIGHWAX; THENCE NORTH WITH SAID HIGHWAY TO THE POINT OF BEGINNING, CONTAINING $81 / 2$ ACRES

LESS AND EXCEP'I: '1HAT TRACT OF LAND CONVEYED TO JUDY L. USHER, A SINGLE PERSON,BY DEED DATED JULY 9, 1973, OF RECORD IN BOOK I52, PAGE 1985 IN THE OFFICE OFTHE CALLOWAY COUNTY CLERK
PARCEL NUMBER 021-0-0048-E
BEING TIIE SAME PROPERTY ACQUIRED BY ROBERT CRICK, A ONTE-HALF INTEREST, AND KAREN CRICK, A ONE-HALF INTEREST' BY DERD OF CLAYBORN CRICK AND WIFE JIMMIE LOUISE CRICK, DATLD
$11 / 05 / 2009$ AND RECORDED 11/05/2009 IN BOOK / PAGE $\cdot 809$ / 695

EXHIBIT "B"
APPROVED SITE PLAN OF THE PRFMISES

|  |
| :---: |
|  |




## Notification Listing

Parcel \#0214-0-0048-E
CRICK ROBERT \& KAREN
235 NORSWORTHY ROAD
KIRKSEY, KY 42054
AqPublic.net" Calloway County, KY PVA $\quad$ Elisabehtwilians $v$ serent seach c


Parcel \#021-0-0048-G
SMITH TAMMY \& ET AL
195 DOGWOOD LANE
KIRKSEY, KY 42054
A) qPublic.net ${ }^{\text {™ }}$ Calloway County, KY PVA a Elizbeth williams $\sim$ search $\mid$ search


Parcel \#021-0-0048-H
DESHIELDS MINDY D \& SCOTT A
2851 KIRKSEY ROAD
MURRAY, KY 42071
Parcel ID -021-0-0048-H
Alt Id - 203776
Address - 2851 KIRKSEY
ROAD
Owner - DESHIELDS MINDY
D\&SCOTTA
Acres-3.264
View: Report | Google Maps

AqPublic.net ${ }^{\text {™ }}$ Calloway County, KY PVA
2 Elizabeth Willams $\sim$ Search search. c


Parcel \#021-0-0048

## TURNER JUDY

1503 DUDLEY
MURRAY, KY 42071
aqPublic_net ${ }^{\text {mi" }}$ Calloway County, KY PVA


Parcel 021-0-0049-A
DESHIELDS MINDY D \& SCOTT A
2851 KIRKSEY ROAD
MURRAY, KY 42071
Parcel ID-021-0-0049-A
Alt Id - 203778
Address - * $21-48 \mathrm{H}$
Owner - DESHIELDS MINDY
D\&SCOTTA
View: Report I Google Maps


Parcel \# 021-0-0049
LESLIE DEWEY V
2907 KIRKSEY ROAD
MURRAY, KY 42071
A) qPublic.net ${ }^{\text {tw }}$ Calloway County, KY PVA a Elizbeth williams $\sim$ Search search. a


Parcel \#021-0-0048-F
CALLOWAY COUNTY FIRE RESCUE \#5
PO BOX 612
MURRAY, KY 42071



Parcel \#021-0-0045
LESLIE AILEEN \& DANNY M
249 WASHER ROAD
KIRKSEY, KY 42054
AqPublic.net ${ }^{\text {™ }}$ Calloway County, KY PVA $\quad$ Elizobethwiliens $\sim$ Search search


Parcel \# 021-0-0046-A
DOWNEY MARILYNN K
129 FIRE STATION ROAD
KIRKSEY, KY 42054

Parcel \#021-0-0046
CRICK KAREN \& CRICK ROBERT ALAN
235 NORSWORTHY ROAD
KIRKSEY, KY 42054



Parcel \#021-0-0056-A



Parcel \# 021-0-0056-B
JOHNSTON DARREN W 105 NORSWORTHY ROAD KIRKSEY, KY 42054


Parcel \#021-0-0057-C
RANSEY CARLOS D \& NORAA U
2397 KIRKSEY ROAD
MURRAY, KY 42071

```
Parcel ID-021-0-0057-C
Alt Id - 203804
Address - 21-57
Owner - RANSEY CARLOS D &
NORAAU
View:Report | Google Maps
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©qPublic.net Calloway Countr, KY PVA


Parcel \# 021-0-0047
COCHRAN STEVE
2453 KIRKSEY ROAD
MURRAY, KY 42071
A qPublic.net ${ }^{\text {miw }}$ Calloway County, KY PVA

[^1]



Parcel \#021-0-0048-B
ENGLAND VALARIE
1751 HALE ROAD
MURRAY, KY 42071
A qPublicanet ${ }^{\text {u }}$ Calloway County, KY PVA a Elizabeth williams $\sim$ search search_ c


Parcel \# 021-0-0048-C
PEARSALL JOHN FREDRIC \& JORDAN MARIE
2551 KIRKSEY RD
MURRAY, KY 42071


Parcel \#021-0-0065
LAX ANTHONY NEIL \& LAX APRIL LEIGH
2546 KIRKSEY ROAD
MURRAY, KY 42071
© qPublic.net ${ }^{\text {" }}$ Calloway County, KY PVA


Parcel \#021-0-0081
CAPPS JACKIE L \& CAPPS CHARLES E
2632 KIRKSEY ROAD
MURRAY, KY 42071
© ${ }^{\text {a }}$ qPublic.net ${ }^{\text {" Calloway County, KY PVA }}$
a Elizabeth Williams $\sim$ Search search 0


Parcel \#021-0-0050-D
SMITH WILLIAM DALE
2458 KIRKSEY ROAD
MURRAY, KY 42071
AqPublic.net ${ }^{\text {an }}$ Calloway County, KY PVA a Elizbethwilliams $\sim$ seerch search a




Parcel \#021-0-0066
WORKMAN CHARLES \& PATRICIA
2786 KIRKSEY ROAD
MURRAY, KY 42071
©qPublic.net ${ }^{\text {T }}$ Calloway County, KY PVA
a Elizzbeth Williams $\sim$ Search search ,


Parcel \#021-0-0048-D
GRUBBS AMY JEAN
2807 KIRKSEY ROAD
MURRAY, KY 42071
A) qPublic』net ${ }^{\text {Tw }}$ Calloway County, KY PVA a Elizabeth williams $v$ search search e c


ClarkQuinn

Russell L. Brown<br>Attorney at Law<br>rbrown@clarkquinnlaw.com

320 N. Meridian St., Ste. 1100
Indianapolis, IN 46204
(317) 637-1321 main
(317) 687-2344 fax

October 5, 2023

## Notice of Proposed Construction of Wireless Communications Facility Site Name: Kirksey

Southern Towers and Cello Partnership, $\mathrm{d} / \mathrm{b} / \mathrm{a}$ Verizon Wireless are filing an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located on the east side of Fire Station Drive, Kirksey, KY 42054. (North Latitude: ( $36^{\circ}$ $40^{\prime} 52.46$, West Longitude $88^{\circ} 23^{\prime} 53.22^{\prime \prime}$ ). The proposed facility will include a 265 -foot tall antenna tower, plus a 5 -foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

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 2023-00337 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/mnw
enclosure

Location Map


ClarkQuinn

Russell L. Brown<br>Attorney at Law<br>rbrown@clarkquinnlaw.com

320 N. Meridian St., Ste. 1100
Indianapolis, IN 46204
(317) 637-1321 main
(317) 687-2344 fax

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Sincerely,
Russell L. Brown


Attorney for Applicant
RLB/mnw
enclosure

Location Map


## JlarkQuinn lark，Quinn，Moses，Scott \＆Grahn，LLP <br> 9589 ロア1ロ 527ロ 1403 3632 18

CRICK ROBERT \＆KAREN 235 NORSWORTHY ROAD KIRKSEY，KY 42054


SMITH TAMMY \＆ET AL 195 DOGWOOD LANE KIRKSEY，KY 42054


DESHIELDS MINDY D \＆SCOTT A
2851 KIRKSEY ROAD
MURRAY，KY 42071

TURNER JUDY
1503 DUDLEY
MURRAY，KY 42071

## ClarkQuinn Zlark，Quinn，Moses，Scott \＆Grahn，LLP

DESHIELDS MINDY D \＆SCOTT A 2851 KIRKSEY ROAD
MURRAY，KY 42071

## ClarkQuinn Zlark，Quinn，Moses，Scott \＆Grahn，LLP

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MURRAY，KY 42071

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CALLOWAY COUNTY
FIRE RESCUE \＃5
PO BOX 612
MURRAY，KY 42071


LESLIE AILEEN \＆DANNY M
249 WASHER ROAD
KIRKSEY，KY 42054


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CRICK KAREN \＆ CRICK ROBERT ALAN 235 NORSWORTHY ROAD KIRKSEY，KY 42054

## ClarkQuinn Zlark，Quinn，Moses，Scott \＆Grahn，LLP



JOHNSTON DARREN W 105 NORSWORTHY ROAD KIRKSEY，KY 42054

# CERTIIIED MAIL <br> ClarkQuinn <br> ：lark，Quinn，Moses，Scott \＆Grahn，LLP <br>  <br> 9589 ロ710 527ロ 140ヨ 3626 



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COCHRAN STEVE
2453 KIRKSEY ROAD
MURRAY，KY 42071

## JlarkQuinn lark，Quinn，Moses，Scott \＆Grahn，LLP



EDMONSON RANDALL \＆CHRISTY
2487 KIRKSEY ROAD
MURRAY，KY 42071


ENGLAND VALARIE
1751 HALE ROAD
MURRAY，KY 42071


US POSTAGE mpitney sowes $42=1$


PEARSALL JOHN FREDRIC \& JORDAN MARIE
2551 KIRKSEY RD
MURRAY, KY 42071


LAX ANTHONY NEIL \& LAX APRIL LEIGH
2546 KIRKSEY ROAD
MURRAY, KY 42071



SMITH WILLIAM DALE 2458 KIRKSEY ROAD MURRAY, KY 42071

## JlarkQuinn <br> lark, Quinn, Moses, Scott \& Grahn, LLF <br> 

SMITH WILLIAM H JR \& SMITH SHIRLEY
TRUST
2458 KIRKSEY ROAD
MURRAY, KY 42071


ZlarkQuinn<br>:lark, Quinn, Moses, Scott \& Grahn, LLP



US POSTAGE MPITNEY BOWES (1) $2=1$ ZIP 46204 027 H $\$ 008.53^{\circ}$

BRYANT BOBBIE S TRUST
17750 LONG RUN HILL PLACE LOUISVILLE, KY 40245

WORKMAN CHARLES \& PATRICIA
2786 KIRKSEY ROAD
MURRAY, KY 42071

ClarkQuinn
:lark, Quinn, Moses, Scott \& Grahn, LLP


GRUBBS AMY JEAN
2807 KIRKSEY ROAD
MURRAY, KY 42071

## SENDER：COMPIETE THIS SECTION

－Complete items 1 ，2，and 3 ．
－Print your name and address on the reverse so that we can return the card to you．
－Attach this card to the back of the mailpiece， or on the front if space permits．
1．Article Addressed to：

## ENGLAND VAEA

1751 HALE ROAD
MURRAY，KY 42071

9590940285383186256782

2．Article Number（Transfer from service label）

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B．Received by（Printed Name）C．Date of Delive

D．Is delivery address different from item 1？$\square$ Yes If YES，enter delivery address below：

3．Service Type $\square$ Priority Mail Express® $\square$ Adult Signature 4．Certified Mail® $\square$ Collect on Delivery
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－Adult Signature Restricted Delivery
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PS Form 3811，July 2020 PSN 7530－02－000－9053
Domestic Return Receip


## SENDER：COMPLETE THIS SECTION

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－Print your name and address on the reverse so that we can return the card to you．
－Attach this card to the back of the mailpiece， or on the front if space permits．
1．Article Addressed to：

## COCHRAN SJE

2453 KIRKSEY ROAD
MURRAY，KY 42 2071


COMPLETE THIS SECTION ON DELIVERY

D．Is delivery address different from item 1 ？$\square$ Yes If YES，enter delivery address below：


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## SENDER：COMPLETE THIS SECTION

－Complete items 1,2 ，and 3.
－Print your name and address on the reverse so that we can return the card to you．
－Attach this card to the back of the mailpiece， or on the front if space permits．
1．Article Addressed to：
LESLIE DEWEY V
2907 KIRKSEY ROAD
MURRAY，KY 42071


9590940285383186256874
2．Article Number（Transfer from service label）

## COMPLETE THIS SECTION ON DELIVERY



D．Is delivery address different from item 1？$\square$ Yes If YES，enter delivery address below：
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| －Complete items 1,2 ，in <br> －Print your name and address on the reverse so that we can return the card to you． |  |  |  | $\begin{aligned} & \square \text { Agent } \\ & \square \text { Address } \end{aligned}$ |
| －Attach this card to the back of the mailpiece， or on the front if space permits． |  | 3．Received by（Printed Name） |  | Date of Delive， |
| 1．Article Addressed to： | D．Is delivery address different from item 1？$\square$ Yes If YES，enter delivery address below：$\quad$ No |  |  |  |
| SMITH IUMM DALE 2458 KIRTSEY ROAD MURRAY，KY 42071 |  |  |  |  |
|  | 3．Service Type <br> $\square$ Adult Signature <br> Adult Signature Restricted Delivery <br> －Certied Maile <br> Collect on Delivery <br> －Collect on Delivery <br> Collect on Delivery Restricted Delivery |  |  |  |
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| －Complete items 1，2，and 3. <br> －Print your name and address on the reverse so that we can return the card to you． | $\times$ A．signature MAMC ロAgent |  |  |  |
| Attach this card to the back of the mailpiece， or on the front if space permits． | B．Redevived by（Printed Name） |  | C．Date of Deliver |  |
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| PEARSAILIOHN FREDRIC \＆JORDAN MARIE 2551 KIRKSEY R ${ }^{\text {R }}$ MURRAY，KY 22071 |  |  |  |  |  |  |
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| SENDER：COMPLETE THIS SECTION | COMPLETE THIS SECTION ON DELIVERY |  |  |  |
| －Complete items 1，2，and 3 ． <br> －Print your name and address on the reverse so that we can return the card to you． <br> －Attach this card to the back of the mailpiece， or on the front if space permits． | x. Seec Signature |  |  |  |
|  | B．Received by（Printed Name） C．Date of Deliver |  |  |  |
| 1．Article Addressed to： | D．Is delivery address different from item 1？Yes If YES，enter delivery address below：$\square$ No |  |  |  |
| GRUBBS．AMY JEAN 2807 KIRKSEY ROAD |  |  |  |  |  |  |
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## SENDER：COMPLETE THIS SECTION

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－Print your name and address on the reverse so that we can return the card to you．
－Attach this card to the back of the mailpiece， or on the front if space permits．
1．Article Addressed to：

CAPPS | MCKIE L \＆CAPPS CHARLES E |
| :---: | 2632 KiRKSEY ROAD MURRAY，KY 42071



COMPLETE THIS SECTION ON DELIVERY


D．Is delivery address different from item 1？


If YES，enter delivery address below：No

3．Service Type －Adult Signature $\square$ Adult Signature Restricted Delivery Ecertified Maile
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PS Form 3811，July 2020 PSN 7530－02－000－9053
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## SENDER：COMPLETE THIS SECTION

－Complete items 1,2 ，and 3.
－Print your name and address on the reverse so that we can return the card to you．
－Attach this card to the back of the mailpiece， or on the front if space permits．
1．Article Addressed to：

## CALLOWAY COUNTY fire rescue \＃5 PO BOKG12 



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COMPLETE THIS SECTION ON DELIVERY


D．Is delivery address different from item 1？$\square$ Yes If YES，enter delivery address below：No

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SENDER：COMPLETE THIS SECTION
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－Attach this card to the back of the mailpiece， or on the front if space permits．
1．Article Addressed to：
DOWNEY MivityN K
129 FIRE STA
KIRKSEY，KY \＃2054

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## PS Form 3811，July 2020 PSN 7530－02－000－9053

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1．Article Addressed to：
CRICK KAIN \＆
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235 NORSWORTHY ROAD
KIRKSEY；KY 42054


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A．Signature


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PS Form 3811，July 2020 PSN 7530－02－000－9053

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1．Article Addressed to：
．CRICK ROBERT \＆KAREN 235 NORSWORTHY ROAD KIRKSEEKY 42054


9590940285383186256928
2．Article Number（Transfer from service label）

COMPLETE THIS SECTION ON DELIVERY
A．Signature
 B．Received by（Printed Name） C．Date of Deliver Karen Crick 10－8－23
D．Is delivery address different from item 1？$\square$ Yes If YES，enter delivery address below：No
＊Shared information with Lir ＊Robert is out of town una． mid November．

[^2]－Priority Mail Express ®
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## SENDER：COMPLETE THIS SECTION

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1．Article Addressed to：

## SMITH TAMMY \＆ETAL 195 DOGWNOD LANE

 KIRKSEYKY 42054

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1．Article Addressed to：

WORKMAN CHARLES \＆PATRICIA 2786 KIRKSEY ROAD MURRAY，KY 42071


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1．Article Addressed to：

BRYANT BOBBIE S TRUST
17750 LONG RUN HILL PLACE
LOUISVILLE，KY 40245


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## COMPLETE THIS SECTION ON DELIVERY

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 Bobbe S．Bryant
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SMITH WILLIAM H JR \＆SMITH SHIRLEY＊ずRUST 2458 KIRKSEY ROAD MURRAY，KY 42071


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PS Form 3811，July 2020 PSN 7530－02－000－9053

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DESHIELDS MINDY D \＆SCOTTA 2851 KIRKSEY ROAD MURRAY；KY 42071


COMPLETE THIS SECTION ON DELIVERY
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MURRAY，KY 42071


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FAQs >

Tracking Number:

## 9589071052701403362594

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

## Latest Update

Your package is moving within the USPS network and is on track to be delivered to its final destination. It is currently in transit to the next facility.

## Get More Out of USPS Tracking:

 USPS Tracking Plus ${ }^{\circledR}$Delivered

Out for Delivery

Preparing for Delivery

## Moving Through Network

In Transit to Next Facility
October 10, 2023

## Departed USPS Regional Facility

EVANSVILLE IN DISTRIBUTION CENTER
October 6, 2023, 4:09 pm

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

## Text \& Email Updates

## Product Information

## See Less

Track Another Package
Enter tracking or barcode numbers

## Need More Help?

Contact USPS Tracking support for further assistance.

## FAQs

Tracking Number:

## 9589071052701403362563

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

## Latest Update

Your package is moving within the USPS network and is on track to be delivered to its final destination. It is currently in transit to the next facility.

## Get More Out of USPS Tracking:

 USPS Tracking Plus ${ }^{\circledR}$Delivered

Out for Delivery

Preparing for Delivery

## Moving Through Network

In Transit to Next Facility
October 10, 2023

## Departed USPS Regional Facility

EVANSVILLE IN DISTRIBUTION CENTER
October 6, 2023, 3:17 pm

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

## Text \& Email Updates

## Product Information

## See Less

Track Another Package
Enter tracking or barcode numbers

## Need More Help?

Contact USPS Tracking support for further assistance.

## FAQs

Tracking Number:

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

## Latest Update

This is a reminder to arrange for redelivery of your item or your item will be returned to sender.

## Get More Out of USPS Tracking:

USPS Tracking Plus ${ }^{\circledR}$

## Delivery Attempt

. Reminder to Schedule Redelivery of your item
October 12, 2023

Notice Left (No Authorized Recipient Available)
MURRAY, KY 42071
October 7, 2023, 1:08 pm

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

## Text \& Email Updates

## USPS Tracking Plus®

# Need More Help? 

Contact USPS Tracking support for further assistance.

## FAQs

Tracking Number:

## 9589071052701403362655

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

## Latest Update

This is a reminder to arrange for redelivery of your item or your item will be returned to sender.

## Get More Out of USPS Tracking:

USPS Tracking Plus ${ }^{\circledR}$

## Delivery Attempt

. Reminder to Schedule Redelivery of your item
October 12, 2023

Notice Left (No Authorized Recipient Available)
MURRAY, KY 42071
October 7, 2023, 1:05 pm

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

## Text \& Email Updates

## USPS Tracking Plus®

# Need More Help? 

Contact USPS Tracking support for further assistance.

## FAQs

Tracking Number:

## 9589071052701403362600

Copy Add to Informed Delivery (https://informeddelivery.usps.com/)

## Latest Update

This is a reminder to arrange for redelivery of your item or your item will be returned to sender.

## Get More Out of USPS Tracking:

USPS Tracking Plus ${ }^{\circledR}$

## Delivery Attempt

. Reminder to Schedule Redelivery of your item
October 12, 2023

Notice Left (No Authorized Recipient Available)
MURRAY, KY 42071
October 7, 2023, 1:20 pm

See All Tracking History

What Do USPS Tracking Statuses Mean? (https://faq.usps.com/s/article/Where-is-my-package)

## Text \& Email Updates

## USPS Tracking Plus®

# Need More Help? 

Contact USPS Tracking support for further assistance.

## FAQs

ClarkQuinn

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

October 5, 2023
Via Certified Mail, Return Receipt Requested

Hon. Kenny Imes
Calloway County Judge Executive
201 South 4th Street
Murray, KY 42071

RE: Notice of Proposal to Construct Wireless Communications Facility
Kentucky Public Service Commission Docket No. 2023-00337
Site Name: Kirksey
Dear Judge Imes:
Southern Towers and Cellco Partnership, $\mathrm{d} / \mathrm{b} / \mathrm{a}$ Verizon Wireless is filing an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located on the east side of Fire Station Drive, Kirksey, KY 42054. (North Latitude: ( $36^{\circ} 40^{\prime} 52.46$, West Longitude $88^{\circ} 23^{\prime} 53.22^{\prime \prime}$ ). The proposed facility will include a $265-$ foot tall antenna tower, plus a 5 -foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

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 202300337 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


Location Map



Hon. Kenny Imes
Calloway County Judge Executive
201 South 4th Street
Murray, KY 42071

| SENDER：COMPLETE THIS SECTION | COMPLETE THIS SECTION ON DELIVERY |  |  |
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| 雪Ho <br> Calloway County Judge Executive <br> 201 South 4th Street <br> Murray，KY 42071 |  |  |  |
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## SITE NAME: KIRKSEY 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.

Southern Towers and Cellco Partnership, d/b/a Verizon Wireless proposes 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 2023-00337 in your correspondence.

Southern Towers and Cellco Partnership, d/b/a Verizon Wireless proposes 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 2023-00337 in your correspondence.

Murray Legar \& Times
1001 Whitnell Ave.
*Also admitted in Montana
Murray, KY 42071

RE: Legal Notice Advertisement
Site Name: Kirksey
To Whom It May Concern,
Please publish the following legal notice advertisement in the next available edition of The Murray Ledger \& Times Publication:

## NOTICE

Cellco Partnership, d/b/a Verizon Wireless and Southern Towers are filing an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located on the east side of Fire Station Drive, Kirksey, KY 42054. (North Latitude: ( $36^{\circ} 40^{\prime} 52.46$, West Longitude $88^{\circ} 23 ' 53.22^{\prime \prime}$ ). The proposed facility will include a 265 -foot tall antenna tower, plus a 5-foot lightning arrestor and related ground facilities. 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 2023-00337 in any correspondence sent in connection with this matter.

After this advertisement has been published, please forward a tearsheet copy, affidavit of publication, and invoice to Clark, Quinn, Moses, Scott \& Grahn, LLC, 320 N. Meridian Street, Indianapolis, IN 46204 or by email to ebw@clarkquinnlaw.com. Please call me on my cell with any questions at 317-902-2187 if you have any questions. Thank you for your assistance.

Sincerely,

Elizabeth Bentz Williams, AICP


## verizon $\sqrt{ }$

Tuesday, October 25, 2022.
RE: Proposed Verizon Wireless Communications Facility
Site Name: EV Kirksey.
Type of Tower: 270' self-support Tower. Location: FIRE STATION DRIVE KIRKSEY, KY 42054.

To Whom It May Concern:

As a radio frequency engineer for Verizon Wireless, I am providing this letter to state the need for a Verizon Wireless site called EV Kirksey.

The EV Kirksey site is proposed with the below objectives:

1. Offload 4 G traffic from busy site to the northwest.
2. Offload 4 G traffic from busy site to the northeast.
3. Offload 4G traffic from busy site to the South.
4. Improve 4 G throughput to existing heavy data users.
5. Improve 4 G network reliability by increasing the amount of time our customers operate on 4G instead of 3G.

Currently the area is experiencing high demand for wireless high-speed data. Growth forecasts have triggered the need for an additional site in the area. The tower is needed to provide all Verizon customers in the area with the best experience on their 4 G wireless devices.

Raw Land - Design plans for a new tower would provide tower height of 270'. The new structure height was decided upon to best cover the offload area and interact with the existing Verizon sites. If we are limited to building a structure less than the proposed height, another tower would be needed in the vicinity in the near future. In addition, building a structure that is too short can cause existing taller sites to shoot over the proposed site and building a site that is too tall can cause the proposed site to shoot over existing sites. Both situations create a poor experience from a user perspective. The new structure will be placed near the center of the area with high traffic demand and offload the surrounding sites greatly. The new tower design meets stated objectives.

Verizon Wireless cares about the communities as well as the environment and prefers to collocate on existing structures when available. It can be noticed from any map that Verizon Wireless is currently collocated on many existing structures in the area. We prefer collocation due to reduced construction costs, faster deployment, and environment protection. However, Verizon Wireless was unable to find a suitable structure within the center of demand area to collocate the proposed EV Kirksey site.

## verizon ${ }^{\checkmark}$

Verizon Wireless design engineers establish search area criteria in order to effectively meet coverage objectives as well as offload existing Verizon cell sites. When met, the criterion also reduces the need for a new site to cover the area in the immediate future. Each cellular site covers a limited area, depending on site configuration and the surrounding terrain. Cell sites are built in an interconnected network; which means each cell site must be located so that their respective coverage areas are contiguous. This provides uninterrupted communications throughout the coverage area.

Since collocation is generally the most cost-effective means for prompt deployment of new facilities, Verizon Wireless makes every effort to investigate the feasibility for using existing towers or other tall structures for collocation when designing a new site or system expansion. However, collocation on an existing tower or tall structure is not always feasible due to location of existing cell sites. Cell sites are placed in a way so they provide smooth hand off to each other and are placed at some distance from each other to eliminate too much overlap. Too much overlap may result in a waste of resources and raise a system capacity overload concern.

This cell site has been designed, and shall 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.

Sincerely,
Michael Fahim.

RF Engineer, Verizon Wireless

verizon ${ }^{/}$

STATE OF INDIANA
county of fArmllToN1
subscribed and sworn to before me this $2 s^{7 \pi}$ day of CeTO BN\& 2022.

Notary Public



County of Residence flA ms LTONP
My Commission expires:


## verizon ${ }^{\checkmark}$

Tuesday, October 25, 2022.

RE: CALLOWAY County Zoning Plots
Site Name: EV Kirksey.

To Whom It May Concern:

This map is not a guarantee of coverage and may contain areas with no service. This map reflects a depiction of predicted and approximate wireless coverage of the network and is intended to provide a relative comparison of coverage. The depictions of coverage do not guarantee service availability as there are many factors that can influence coverage and service availability. These factors vary from location to location and change over time. The coverage areas may include locations with limited or no coverage. Even within a coverage area shown, there are many factors, including but not limited to, usage volumes, service, outage, and customer's equipment, and terrain, proximity to buildings, foliage, and weather that may impact service.

The proposed site is needed to offload capacity from existing sites. This map reflects the predicted coverage area that will be offloaded from existing sites and transferred to the proposed site.

Michael Fahim.

RF Engineer, Verizon Wireless

## verizon ${ }^{\checkmark}$



## Legend:

Existing Verizon Sites


Proposed Verizon Site

Future Verizon Site

County Border

## verizon

## EV Kirksey Post



| Legend: |  |
| :--- | :--- |
| Existing Verizon Sites |  |
| Proposed Verizon Site |  |
| Future Verizon Site |  |
| County Border |  |

## verizon ${ }^{\checkmark}$



Ralph M. Wallem<br>Professional Land Surveyor<br>Kentucky License 2195<br>Benchmark Services, Inc.<br>318 North Main Street<br>Huntingburg, IN 47542<br>Christopher J. Scheks<br>Professional Engineer<br>Kentucky License 29760<br>GPD Group, Inc.<br>520 South Min Street, Suite 2531<br>Akron, OH 44311<br>Dennis Daniels Abel<br>Professional Engineer<br>Kentucky License 22516<br>FDH Infrastructure Services<br>6521 Meridien Drive<br>Raleigh, NC 27616<br>Stephen Yeo<br>Professional Engineer<br>Kentucky License 22748<br>ROHN<br>1 Fairholm Avenue<br>Peoria, IL 61603<br>Larry Rhoads<br>Construction Manager<br>Verizon Wireless<br>2421 Holloway Road<br>Louisville, KY 40299<br>Steven Belcher<br>RF Engineer<br>Verizon Wireless<br>2421 Holloway Road<br>Louisville, KY 40299

STATE OF INDIANA )
) SS:
COUNTY OF MARION )

# AFFIDAVIT OF CERTIFICATION COMMONWEALTH OF KENTUCKY PUBLIC SERVICE COMMISSION 

I Russell L. Brown, attorney for Cellco Partnership, d/b/a Verizon Wireless do hereby certify that as the person supervising the preparation of this application that the all statements and information contained herein are true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry for all information within this application.


Russell L. Brown
Attorney, for Cellco Partnership, d/b/a Verizon Wireless
STATE OF INDIANA, COUNTY OF MARION, SS:
Subscribed and sworn to before me this $23^{\text {rd }}$ day of October, 2023.


My commission expires: November 18, 2028
My County of Residence: Marion
Commission \#: $\underline{0639620}$


[^0]:    Boring terminated at 50.0 feet

[^1]:    2 Elizabeth Williams $\sim$ Search search_

[^2]:    3．Service Type
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    －Adult Signature Restricted Delivery
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    $\square$ Certified Mail Restricted Delivery
    $\square$ Collect on Delivery
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