COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

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

RECEIVED
FEB 162018
PUBLIC SERVICE COMMISSION

## APPLICATION FOR

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

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

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

1. The complete name and address of the Applicant: New Cingular Wireless PCS, LLC, a Delaware Limited Liability Company, d/b/a AT\&T Mobility, having a local address of Meidinger Tower, 462 S. $4^{\text {th }}$ Street, Suite 2400, Louisville, KY 40202.
2. Applicant proposes construction of an antenna tower for communications services, which is to be located in an area outside the jurisdiction of a planning commission, and Applicant submits this application to the PSC for a certificate of public convenience and necessity pursuant to KRS §§ 278.020(1), 278.040, 278.650, 278.665, and other statutory authority.
3. The Certificate of Authority filed with the Kentucky Secretary of State for the Applicant entity was attached to a prior application and is part of the case record for PSC case number 2011-00473 and is hereby incorporated by reference.
4. The Applicant operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of the Applicant's FCC licenses to provide wireless services are attached to this Application or described as part of Exhibit A, and the facility will be constructed and operated in accordance with applicable FCC regulations.
5. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve the Applicant's services to an area currently not served or not adequately served by the Applicant by increasing coverage or capacity and thereby enhancing the public's access to innovative and competitive wireless communications services. The WCF will provide a necessary link in the Applicant's communications network that is designed to meet the increasing demands
for wireless services in Kentucky's wireless communications service area. The WCF is an integral link in the Applicant's network design that must be in place to provide adequate coverage to the service area.
6. To address the above-described service needs, Applicant proposes to construct a WCF at Hwy 2007 - Abe Hill 0, Coldiron, Kentucky 40873 ( $36^{\circ} 49^{\prime} 42.31^{\prime \prime}$ North latitude, $83^{\circ} 26^{\prime} 24.19^{\prime \prime}$ West longitude), on a parcel of land located entirely within the county referenced in the caption of this application. The property on which the WCF will be located is owned by Stacy Travis Hensley and Amy Hensley pursuant to a Deed recorded at Deed Book 286, Page 156 in the office of the County Clerk. The proposed WCF will consist of a 255-foot tall tower, with a 10-15 foot lightning arrestor attached at the top, for a total height not to exceed 270 feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of the Applicant's radio electronics equipment and appurtenant equipment. The Applicant's equipment cabinet or shelter will be approved for use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound will be fenced and all access gate(s) will be secured. A description of the manner in which the proposed WCF will be constructed is attached as Exhibit B and

## Exhibit C.

7. A list of utilities, corporations, or persons with whom the proposed WCF is likely to compete is attached as Exhibit D.
8. The site development plan and a vertical profile sketch of the WCF signed and sealed by a professional engineer registered in Kentucky depicting the tower height, as well as a proposed configuration for the antennas of the Applicant has also been included
as part of Exhibit B.
9. Foundation design plans signed and sealed by a professional engineer registered in Kentucky and a description of the standards according to which the tower was designed are included as part of Exhibit C.
10. Applicant has considered the likely effects of the installation of the proposed WCF on nearby land uses and values and has concluded that there is no more suitable location reasonably available from which adequate services can be provided, and that there are no reasonably available opportunities to co-locate Applicant's antennas on an existing structure. When suitable towers or structures exist, Applicant attempts to co-locate on existing structures such as communications towers or other structures capable of supporting Applicant's facilities; however, no other suitable or available co-location site was found to be located in the vicinity of the site.
11. A copy of the Determination of No Hazard to Air Navigation issued by the Federal Aviation Administration ("FAA") is attached as Exhibit E. Please note that the FAA approval documentation reflects a total structure height of 270 feet. This total structure height is based on the proposed construction of a 255 -foot tall tower, with a $10-15$ foot lightning arrestor attached at the top, for a total height of no greater than 270 feet.
12. A copy of the Kentucky Airport Zoning Commission ("KAZC") Approval to construct the tower is attached as Exhibit F. Please note that the KAZC approval documentation reflects a total structure height of 270 feet. This total structure height is based on the proposed construction of a 255 -foot tall tower, with a 10-15 foot lightning arrestor attached at the top, for a total height of no greater than 270 feet.
13. A geotechnical engineering firm has performed soil boring(s) and subsequent geotechnical engineering studies at the WCF site. A copy of the geotechnical engineering report, signed and sealed by a professional engineer registered in the Commonwealth of Kentucky, is attached as Exhibit G. The name and address of the geotechnical engineering firm and the professional engineer registered in the Commonwealth of Kentucky who supervised the examination of this WCF site are included as part of this exhibit.
14. Clear directions to the proposed WCF site from the County seat are attached as Exhibit H . The name and telephone number of the preparer of Exhibit H are included as part of this exhibit.
15. Applicant, pursuant to a written agreement, has acquired the right to use the WCF site and associated property rights. A copy of the agreement or an abbreviated agreement recorded with the County Clerk is attached as Exhibit I.
16. Personnel directly responsible for the design and construction of the proposed WCF are well qualified and experienced. The tower and foundation drawings for the proposed tower submitted as part of Exhibit C bear the signature and stamp of a professional engineer registered in the Commonwealth of Kentucky. All tower designs meet or exceed the minimum requirements of applicable laws and regulations.
17. The Construction Manager for the proposed facility is Don Murdock and the identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained in Exhibits B \& C.
18. As noted on the Survey attached as part of Exhibit B, the surveyor has
determined that the site is not within any flood hazard area.
19. Exhibit B includes a map drawn to an appropriate scale that shows the location of the proposed tower and identifies every owner of real estate within 500 feet of the proposed tower (according to the records maintained by the County Property Valuation Administrator). Every structure and every easement within 500 feet of the proposed tower or within 200 feet of the access road including intersection with the public street system is illustrated in Exhibit B.
20. Applicant has notified every person who, according to the records of the County Property Valuation Administrator, owns property which is within 500 feet of the proposed tower or contiguous to the site property, by certified mail, return receipt requested, of the proposed construction. Each notified property owner has been provided with a map of the location of the proposed construction, the PSC docket number for this application, the address of the PSC, and has been informed of his or her right to request intervention. A list of the notified property owners and a copy of the form of the notice sent by certified mail to each landowner are attached as Exhibit $\mathbf{J}$ and Exhibit K, respectively.
21. Applicant has notified the applicable County Judge/Executive by certified mail, return receipt requested, of the proposed construction. This notice included the PSC docket number under which the application will be processed and informed the County Judge/Executive of his/her right to request intervention. A copy of this notice is attached as Exhibit L.
22. Notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2) that measure at least 2 feet in height and 4 feet in width and that contain all required
language in letters of required height, have been posted, one in a visible location on the proposed site and one on the nearest public road. Such signs shall remain posted for at least two weeks after filing of the Application, and a copy of the posted text is attached as Exhibit M. A legal notice advertisement regarding the location of the proposed facility has been published in a newspaper of general circulation in the county in which the WCF is proposed to be located. A copy of the newspaper legal notice advertisement is attached as part of Exhibit M.
23. The general area where the proposed facility is to be located is on a mountaintop in unincorporated Harlan County, just south of Highway 119.
24. The process that was used by the Applicant's radio frequency engineers in selecting the site for the proposed WCF was consistent with the general process used for selecting all other existing and proposed WCF facilities within the proposed network design area. Applicant's radio frequency engineers have conducted studies and tests in order to develop a highly efficient network that is designed to handle voice and data traffic in the service area. The engineers determined an optimum area for the placement of the proposed facility in terms of elevation and location to provide the best quality service to customers in the service area. A radio frequency design search area prepared in reference to these radio frequency studies was considered by the Applicant when searching for sites for its antennas that would provide the coverage deemed necessary by the Applicant. A map of the area in which the tower is proposed to be located which is drawn to scale and clearly depicts the necessary search area within which the site should be located pursuant to radio frequency requirements is attached as Exhibit $\mathbf{N}$.
25. The tower must be located at the proposed location and proposed height to provide necessary service to wireless communications users in the subject area. In addition to expanding and improving voice and data service for AT\&T mobile customers, this site will also provide wireless local loop ("WLL") broadband internet service in the subject area. As a participant in the FCC's Connect America Fund Phase II (CAF II) program, AT\&T is aggressively deploying WLL service infrastructure to bring expanded internet access to residential and business customers in rural and other underserved areas. WLL will support internet access at the high speeds required to use and enjoy the most current business, education and entertainment technologies. Broadband service via WLL will be delivered from the tower to a dedicated antenna located at the home or business receiving service and will support downloads at 10 Mbps and uploads at 1 Mbps .
26. All Exhibits to this Application are hereby incorporated by reference as if fully set out as part of the Application.
27. All responses and requests associated with this Application may be directed to:

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

WHEREFORE, Applicant respectfully request that the PSC accept the foregoing Application for filing, and having met the requirements of KRS $\S \S 278.020(1), 278.650$, 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,


David A. Pike
Pike Legal Group, PLLC
1578 Highway 44 East, Suite 6
P. O. Box 369

Shepherdsville, KY 40165-0369
Telephone: (502) 955-4400
Telefax: (502) 543-4410
Email: dpike@pikelegal.com
Attorney for New Cingular Wireless PCS, LLC
d/b/a AT\&T Mobility

## LIST OF EXHIBITS

| A | - | FCC License Documentation |
| :---: | :---: | :---: |
| B | - | Site Development Plan: |
|  |  | 500' Vicinity Map |
|  |  | Legal Descriptions |
|  |  | Flood Plain Certification |
|  |  | Site Plan |
|  |  | Vertical Tower Profile |
| C | - | Tower and Foundation Design |
| D | - | Competing Utilities, Corporations, or Persons List |
| E | - | FAA |
| F | - | Kentucky Airport Zoning Commission |
| G | - | Geotechnical Report |
| H | - | Directions to WCF Site |
| 1 | - | Copy of Real Estate Agreement |
| J | - | Notification Listing |
| K | - | Copy of Property Owner Notification |
| L | - | Copy of County Judge/Executive Notice |
| M | - | Copy of Posted Notices and Newspaper Notice Advertisement |
| N | - | Copy of Radio Frequency Design Search Area |

## EXHIBIT A

FCC LICENSE DOCUMENTATION

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

## Federal Communications Commission <br> Wireless Telecommunications Bureau RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC 208 S AKARD ST., RM 1016
DALLAS, TX 75202

| Call Sign <br> KNKN673 | File Number |
| :---: | :---: |
| Radio Service <br> CL - Cellular |  |
| Market Numer <br> CMA453 | Channel Block <br> A |
| Sub-Market Designator |  |
| 0 |  |

FCC Registration Number (FRN): 0003291192
Market Name
Kentucky 11 - Clay

| Grant Date <br> $08-30-2011$ | Effective Date <br> $06-13-2017$ | Expiration Date <br> $10-01-2021$ | Five Yr Build-Out Date | Print Date |
| :---: | :---: | :---: | :---: | :---: |

Site Information:

| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :--- | :--- | :--- | :--- | :--- |
| 4 | $36-44-50.6 \mathrm{~N}$ | $084-08-43.6 \mathrm{~W}$ | 469.7 | 62.2 |

Address: 969 CELL TOWER ROAD (76426)
City: WILLIAMSBURG County: WHITLEY State: KY Construction Deadline:

| Antenna: 1 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) | 164.200 | 142.000 | 198.300 | 134.200 | 151.500 | 124.900 | 186.500 | 184.500 |
| Transmitting ERP (watts) | 80.790 | 33.632 | 2.346 | 0.254 | 0.164 | 0.164 | 5.156 | 40.160 |
| Antenna: 2 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) | 164.200 | 142.000 | 198.300 | 134.200 | 151.500 | 124.900 | 186.500 | 184.500 |
| Transmitting ERP (watts) | 1.159 | 16.802 | 80.666 | 104.784 | 22.590 | 1.407 | 0.209 | 0.204 |
| Antenna: 3 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) | 164.200 | 142.000 | 198.300 | 134.200 | 151.500 | 124.900 | 186.500 | 184.500 |
| Transmitting ERP (watts) | 0.393 | 0.106 | 0.095 | 1.187 | 9.994 | $\mathbf{3 4 . 7 1 2}$ | $\mathbf{2 6 . 1 2 6}$ | 3.238 |

## 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.

| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :--- | :--- | :--- | :--- | :--- |
| 7 | $36-38-29.0 \mathrm{~N}$ | $083-46-24.9 \mathrm{~W}$ | 917.4 | 64.9 |

Address: 2 MILES NORTHWEST OF NOETOWN 19 MIL (76435)
City: Middlesboro County: BELL State: KY Construction Deadline:

| Antenna: 1 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) | 514.300 | 514.900 | 478.800 | 557.800 | 452.400 | 334.800 | 345.400 | 421.600 |
| Transmitting ERP (watts) | 41.864 | 12.118 | 1.035 | 0.164 | 0.104 | 0.102 | 0.886 | 11.503 |
| Antenna: 2 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) | 514.300 | 514.900 | 478.800 | 557.800 | 452.400 | 334.800 | 345.400 | 421.600 |
| Transmitting ERP (watts) | 0.286 | 0.947 | 0.706 | 0.874 | 0.879 | 0.224 | 0.101 | 0.109 |


| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 12 | $36-58-46.0 \mathrm{~N}$ | $083-01-30.2 \mathrm{~W}$ | 736.8 | 80.5 | 1010610 |

Address: 21834 HIGHWAY 160 (76432)
City: GORDON County: LETCHER State: KY Construction Deadline:

| Antenna: 1 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) | 316.700 | 319.800 | 30.000 | 54.700 | 30.000 | 198.900 | 238.900 | 287.300 |
| Transmitting ERP (watts) | 112.719 | 46.762 | 8.219 | 1.163 | 0.285 | 0.298 | 5.383 | 44.574 |
| Antenna: 2 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) | 316.700 | 319.800 | 30.000 | 54.700 | 30.000 | 198.900 | 238.900 | 287.300 |
| Transmitting ERP (watts) | 0.636 | 12.989 | 91.274 | 94.955 | 26.405 | 2.175 | 0.841 | 0.311 |
| Antenna: 3 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) | 316.700 | 319.800 | 30.000 | 54.700 | 30.000 | 198.900 | 238.900 | 287.300 |
| Transmitting ERP (watts) | 1.458 | 0.224 | 0.588 | 1.866 | 27.246 | 84.787 | 72.123 | 11.074 |


| Location Latitude | Longitude |  | Ground Elevation (meters) |  |  | Structure Hgt to Tip (meters) |  |  | Antenna Structure Registration No. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13 36-40-53.1 N | 084-08 | -46.5 W |  | 6.2 |  | 58.8 |  |  |  |  |
| Address: 895 WAGON WHEEL ROAD (76433) |  |  |  |  |  |  |  |  |  |  |
| City: WILLIAMSBURG | County: WHITLEY |  | State: KY Co |  | Construction Deadline: |  |  |  |  |  |
| Antenna: 1 Azimuth (from | true north) | 0 | 45 | 90 | 135 |  | 180 | 225 | 270 | 315 |
| Antenna Height AAT (me | ters) | 159.200 | 160.200 | 107.400 | 125.7 | 00 | 101.20 | 58.800 | 107.500 | 145.600 |
| Transmitting ERP (watts) |  | 24.755 | 89.034 | 70.279 | 10.06 |  | 1.351 | 0.211 | 0.387 | 1.828 |

## Call Sign: KNKN673

File Number:
Print Date:

| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :--- | :--- | :--- | :--- | :--- |
| 13 | $36-40-53.1 \mathrm{~N}$ | $084-08-46.5 \mathrm{~W}$ | 446.2 | 58.8 |

Address: 895 WAGON WHEEL ROAD (76433)
City: WILLIAMSBURG County: WHITLEY State: KY Construction Deadline:

| Antenna: 2 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) | 159.200 | 160.200 | 107.400 | 125.700 | 101.200 | 58.800 | 107.500 | 145.600 |
| Transmitting ERP (watts) | 0.124 | 3.716 | 14.234 | 28.095 | 19.823 | 32.016 | 11.426 | 8.167 |
| Antenna: 3 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) | 159.200 | 160.200 | 107.400 | 125.700 | 101.200 | 58.800 | 107.500 | 145.600 |
| Transmitting ERP (watts) | 21.702 | 2.370 | 0.815 | 0.286 | 0.611 | 12.974 | 63.085 | 92.160 |


| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :---: | :---: | :---: | :--- | :--- |
| 16 | $36-50-41.4 \mathrm{~N}$ | $084-09-27.9 \mathrm{~W}$ | 410.0 | 97.8 |
| Address: | 4499 HIGHWAY 511 (64046) |  | 1204258 |  |

City: Rockholds County: WHITLEY State: KY Construction Deadline: 02-23-2013

| Antenna: 1 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) | 144.000 | 137.900 | 124.500 | 157.700 | 188.600 | 187.400 | 152.500 | 147.000 |
| Transmitting ERP (watts) | 40.926 | 37.139 | 5.069 | 0.465 | 0.105 | 0.099 | 1.028 | 10.105 |
| Antenna: 2 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) | 144.000 | 137.900 | 124.500 | 157.700 | 188.600 | 187.400 | 152.500 | 147.000 |
| Transmitting ERP (watts) | 0.176 | 0.199 | 0.523 | 10.033 | 46.347 | 45.959 | 7.311 | 1.005 |


| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 17 | $37-09-19.2 \mathrm{~N}$ | $083-26-33.1 \mathrm{~W}$ | 516.6 | 98.1 | 1043811 |

Address: 2255 DAVIDSON FORK ROAD (76424)
City: THOUSAND STICKS County: LESLIE State: KY Construction Deadline: 02-23-2013

| Antenna: 1 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) | 255.100 | 250.600 | 210.300 | 157.900 | 145.900 | 186.400 | 230.000 | 208.500 |
| Transmitting ERP (watts) | 183.310 | 76.153 | 8.501 | 2.109 | 0.426 | 0.548 | 8.899 | 75.006 |
| Antenna: 2 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) | 255.100 | 250.600 | 210.300 | 157.900 | 145.900 | 186.400 | 230.000 | 208.500 |
| Transmitting ERP (watts) | 1.243 | 25.877 | 136.672 | 204.174 | 47.594 | 4.976 | 1.640 | 0.627 |

## Call Sign: KNKN673

File Number:
Print Date:

| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :--- | :--- | :--- | :--- | :--- |
| 17 | $37-09-19.2 \mathrm{~N}$ | $083-26-33.1 \mathrm{~W}$ | 516.6 | 98.1 |

Address: 2255 DAVIDSON FORK ROAD (76424)
City: THOUSAND STICKS County: LESLIE State: KY Construction Deadline: 02-23-2013

| Antenna: 3 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) | 255.100 | 250.600 | 210.300 | 157.900 | 145.900 | 186.400 | 230.000 | 208.500 |
| Transmitting ERP (watts) | 2.923 | 0.456 | 0.895 | 4.155 | 54.327 | 193.511 | 147.915 | 23.334 |


| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :--- | :--- | :--- | :--- | :--- |
| 18 | $36-45-42.1 \mathrm{~N}$ | $083-40-29.0 \mathrm{~W}$ | 685.2 | 129.5 |

Address: RO7 PO BOX 264E BIRD BRANCH ROAD (76437)
City: PINEVILLE County: BELL State: KY Construction Deadline: 02-23-2013

| Antenna: 1 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) | 314.900 | 270.100 | 337.000 | 312.300 | 338.800 | 334.000 | 355.300 | 387.000 |
| Transmitting ERP (watts) | 91.981 | 37.204 | 3.868 | 0.986 | 0.201 | 0.271 | 4.377 | 36.079 |
| Antenna: 2 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) | 314.900 | 270.100 | 337.000 | 312.300 | 338.800 | 334.000 | 355.300 | 387.000 |
| Transmitting ERP (watts) | 2.152 | 13.241 | 26.567 | 29.575 | 18.963 | 5.601 | 3.888 | 1.518 |
| Antenna: 3 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) | 314.900 | 270.100 | 337.000 | 312.300 | 338.800 | 334.000 | 355.300 | 387.000 |
| Transmitting ERP (watts) | 5.299 | 1.993 | 2.409 | 5.378 | 23.634 | 32.748 | 36.478 | 14.971 |



| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 22 | $37-09-01.0 \mathrm{~N}$ | $083-41-03.6 \mathrm{~W}$ | 484.0 | 94.4 | 1267062 |

Address: Bear Creek Rd (87003)
City: Hector County: CLAY State: KY Construction Deadline: 02-23-2013

| Antenna: 1 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) | 247.900 | 220.000 | 188.600 | 160.500 | 206.100 | 259.700 | 247.500 | 246.500 |
| Transmitting ERP (watts) | 153.770 | 65.269 | 4.896 | 0.487 | 0.313 | 0.307 | 9.959 | 76.610 |
| Antenna: 2 Azimuth (from true north) | 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) | 247.900 | 220.000 | 188.600 | 160.500 | 206.100 | 259.700 | 247.500 | 246.500 |
| Transmitting ERP (watts) | 1.554 | 22.565 | 112.704 | 140.260 | 30.708 | 1.874 | 0.302 | 0.278 |
| Antenna: 3 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) | 247.900 | 220.000 | 188.600 | 160.500 | 206.100 | 259.700 | 247.500 | $\mathbf{2 4 6 . 5 0 0}$ |
| Transmitting ERP (watts) | 1.012 | 0.314 | 0.295 | 4.424 | 44.416 | 139.728 | 106.944 | 13.222 |


| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 23 | $37-08-58.7 \mathrm{~N}$ | $083-45-07.4 \mathrm{~W}$ | 452.6 | 96.0 | 1043808 |

Address: LUCAS ROAD ON TOP OF HILL (76428) City: MANCHESTER County: CLAY State: KY Construction Deadline:

| Antenna: 1 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) | 212.800 | 191.000 | 150.800 | 181.400 | 199.900 | 198.200 | 202.800 | 202.900 |
| Transmitting ERP (watts) | 111.736 | 45.822 | 5.058 | 1.185 | 0.248 | 0.336 | 5.441 | 44.976 |
| Antenna: 2 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) | 212.800 | 191.000 | 150.800 | 181.400 | 199.900 | 198.200 | 202.800 | 202.900 |
| Transmitting ERP (watts) | 0.630 | 13.113 | 68.789 | 97.232 | 23.078 | 2.526 | 0.830 | 0.308 |



| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 24 | $36-52-13.8 \mathrm{~N}$ | $083-24-54.2 \mathrm{~W}$ | 835.2 | 80.5 | 1007945 |

Address: 3700 WATTS CREEK TOWER ROAD (76431)
City: WALLINS CREEK County: HARLAN State: KY Construction Deadline:

| Antenna: 1 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) | 357.800 | 283.300 | 392.600 | 363.200 | 337.000 | 470.900 | 325.200 | 332.900 |
| Transmitting ERP (watts) | 116.142 | 48.918 | 4.986 | 1.287 | 0.267 | 0.341 | 5.779 | 46.632 |
| Antenna: 2 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) | 357.800 | 283.300 | 392.600 | 363.200 | 337.000 | 470.900 | 325.200 | 332.900 |
| Transmitting ERP (watts) | 1.626 | 16.756 | 46.777 | 60.050 | 27.346 | 5.464 | 2.977 | 1.029 |
| Antenna: 3 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) | 357.800 | 283.300 | 392.600 | 363.200 | 337.000 | 470.900 | 325.200 | 332.900 |
| Transmitting ERP (watts) | 1.479 | 0.233 | 0.427 | 2.031 | 27.025 | 95.886 | 77.822 | 11.442 |


| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 25 | $36-36-37.5 \mathrm{~N}$ | $083-42-49.1 \mathrm{~W}$ | 346.5 | 60.3 | 1232693 |

Address: 131 AMESBURY STREET (76438) City: MIDDLESBORO County: BELL State: KY Construction Deadline:

| Antenna: 1 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) | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 |
| Transmitting ERP (watts) | 145.069 | 41.420 | 3.508 | 0.571 | 0.313 | 0.301 | 3.015 | 39.614 |
| Antenna: 2 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) | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 |
| Transmitting ERP (watts) | 0.125 | 3.991 | 32.278 | 53.652 | 8.875 | $\mathbf{0 . 8 1 8}$ | 0.150 | 0.111 |

## Call Sign: KNKN673

File Number:

Longitude Ground Elevation (meters)
346.5

Print Date:

| Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |
| :--- | :--- |
| 60.3 | 1232693 |

Address: 131 AMESBURY STREET (76438)
City: MIDDLESBORO County: BELL State: KY Construction Deadline:

| Antenna: 3 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) | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 | 30.000 |
| Transmitting ERP (watts) | 0.906 | 0.242 | 0.226 | 0.866 | 20.330 | 108.084 | 76.154 | 7.898 |


| Location Latitude | Longitude | Ground Elevation <br> (meters) | Structure Hgt to Tip <br> (meters) | Antenna Structure <br> Registration No. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 26 | $36-42-35.9 \mathrm{~N}$ | $083-40-58.1 \mathrm{~W}$ | 636.1 | 57.3 |  |

Address: RURAL ROUTE 1 BOX 109 (76441)
City: PINEVILLE County: BELL State: KY Construction Deadline:

| Antenna: 1 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) | 218.900 | 188.400 | 284.100 | 201.300 | 245.000 | 65.400 | 242.700 | 257.700 |
| Transmitting ERP (watts) | 15.060 | 36.966 | 29.277 | 42.643 | 20.844 | 12.416 | 3.511 | 5.735 |
| Antenna: 2 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) | 218.900 | 188.400 | 284.100 | 201.300 | 245.000 | 65.400 | 242.700 | 257.700 |
| Transmitting ERP (watts) | 0.639 | 0.133 | 0.186 | 4.240 | 28.970 | 66.602 | 17.897 | 2.186 |

## Control Points:

Control Pt. No. 1
Address: 1650 LYNDON FARMS COURT
City: LOUISVILLE County: State: KY Telephone Number: (502)329-4700

## Waivers/Conditions:

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

WE MAKE NO FINDING IN THESE CASES THE ISSUES RAISED IN FOOTNOTE 3 OF LA STAR CELLULAR TELEPHONE COMPANY, 7 FF Rcd 3762 (1992). THEREFORE, THESE GRANTS OF TRANSFERS/ASSIGNMENTS ARE CONDITIONED ON ANY SUBSEQUENT ACTION THE COMMISSION MAY TAKE CONCERING THE

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

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## Federal Communications Commission

## Wireless Telecommunications Bureau

## RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

| Call Sign <br> KNLF288 | File Number |
| :---: | :---: |
| Radio Service |  |
| CW - PCS Broadband |  |

FCC Registration Number (FRN): 0003291192

| Grant Date <br> $06-02-2015$ | Effective Date <br> $06-13-2017$ | Expiration Date <br> $06-23-2025$ | Print Date |
| :---: | :---: | :---: | :---: |
| Market Number <br> MTA044 | Channel Block <br> B | Sub-Market Designator <br> 0 |  |


| Market Name <br> Knoxville |  |  |  |
| :---: | :---: | :---: | :---: |
| 1st Build-out Date <br> $06-23-2000$ | 2nd Build-out Date <br> $06-23-2005$ | 3rd Build-out Date | 4th Build-out Date |

## Waivers/Conditions:

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

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

## 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): 0003291192

| Grant Date | Effective Date | Expiration Date | Print Date |
| :---: | :---: | :---: | :---: |
| $04-11-2017$ | $06-14-2017$ | $04-28-2027$ |  |


| Market Number <br> BTA229 | Channel Block <br> E | Sub-Market Designator <br> 0 |
| :---: | :---: | :---: |


| Market Name |
| :---: |
| Kingsport-Johnston City, TN-Br |


| 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.

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

## 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.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

## Print Date:

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


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Wireless Telecommunications Bureau

## RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

| Call Sign <br> KNLH575 | File Number |
| :---: | :---: |
| Radio Service |  |
| CW - PCS Broadband |  |

FCC Registration Number (FRN): 0003291192
$\left.\begin{array}{|c|c|c|c|}\hline \text { Grant Date } & \text { Effective Date } \\ 04-13-2017\end{array} \quad \begin{array}{c}\text { Expiration Date } \\ 04-28-2027\end{array}\right]$ Print Date $\quad$.

| Market Number <br> BTA295 | Channel Block | Sub-Market Designator <br> 0 |
| :---: | :---: | :---: |


| Market Name <br> Middlesboro-Harlan, KY |
| :---: |


| 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.

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


#### Abstract

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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## Print Date:

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


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FCC Registration Number (FRN): 0003291192

| Grant Date | Effective Date | Expiration Date | Print Date |
| :---: | :---: | :---: | :---: |
| $11-29-2006$ | $06-14-2017$ | $11-29-2021$ |  |


| Market Number <br> CMA453 | Channel Block <br> A | Sub-Market Designator <br> 0 |
| :---: | :---: | :---: |
| Market Name |  |  |
| Kentucky 11-Clay |  |  |


| 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.


#### Abstract

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. $\S 606$.


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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## Federal Communications Commission

## Wireless Telecommunications Bureau

## RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1016
DALLAS, TX 75202

| Call Sign <br> WQGA852 | File Number |
| :---: | :---: |
| Radio Service |  |
| AW - AWS (1710-1755 MHz and |  |
| $2110-2155 \mathrm{MHz})$ |  |

FCC Registration Number (FRN): 0003291192

| Grant Date 11-29-2006 | Effective Date 06-14-2017 | Expiration Date 11-29-2021 | Print Date |
| :---: | :---: | :---: | :---: |
| Market Number CMA681 |  |  | Sub-Market Designator 0 |
| Market Name Virginia 1 - Lee |  |  |  |
| 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 $1710-1755 \mathrm{MHz}$ 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.

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FCC Registration Number (FRN): 0003291192

| Grant Date | Effective Date | Expiration Date | Print Date |
| :---: | :---: | :---: | :---: |
| $12-18-2006$ | $09-05-2017$ | $12-18-2021$ | $09-28-2017$ |


| Market Number <br> BEA047 | Channel Block | C |
| :---: | :---: | :---: | | Sub-Market Designator |
| :---: |
| 7 |


| Market Name <br> Lexington, KY-TN-VA-WV |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 1st 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.

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. $\S 309(\mathrm{~h})$, 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.

## EXHIBIT B

## SITE DEVELOPMENT PLAN:

## 500' VICINITY MAP <br> LEGAL DESCRIPTIONS <br> FLOOD PLAIN CERTIFICATION <br> SITE PLAN <br> VERTICAL TOWER PROFILE



(A) PARCEL ID: 022-00-00-096.00 WNER: HENSLEY STACY TRAVIS \& AMY HENSLEY PO BOX 857
WALINS, KY 40873

PARCEL ID: 022-00-00-086.0
B) OWNER: BLEVINS VERNIS \& WILLIAM BLEVINS PO BOX 27
COLDIRON KY 40819

$$
500^{\prime} \text { RADIUS }
$$

PARCEL ID: O22-00-00-087.00-1
OWNER:
BRUCKER MARVIN OWNER: BRUCK
577 ABE LANE 577 ABE LANE
COLDIRON, KY 40819

PARCEL ID: 022-00-00-087.00
OWNER: HENSLEY CLAUDE-HEIRS C/O OTIS HENSLEY PO BOX 589 WALLINS, KY 40873

D PARCEL ID: 022-00-00-088:00 PARCELID: 022-00000-088.00
OWNER: COLETT JAMES \& RHONDA COLLETT P O BOX 286
COLDIRON, KY 40819PARCEL ID:022-00-00-092.00 OWNER: THOMAS TANYA \& JERRY PO BOX 284
COLDIRON KY 40819

PARCEL ID: 022-00-00-099.00 OWNER: GREEN BERNADINE P OBOX 617
WALINS, KY 4087
(G)

PARCEL ID: O22-00-00-095.00
OWNER: HENSLEY OTIS SR \& ROCHELLA C/O OTIS JR \& MAE HENSLEY РО BOX 589
WWLUNS KY 40873
(H) PARCEL ID: 022-00-00-097.00 OWNER: HENSLEY FAMLLY CEMETERY C/O OTIS HENSLE
PO BOX 589 PO BOX 589
WALLINS, KY 40873
(I) PARCEL ID: 022-00-00-102.00 OWNER: STEPHENS JOHN
C/O NICHOLAS STEPHENS PO BOX 119
COLDLIRON, KY 40819 PARCEL ID: 022-00-00-102 OWNER: STEPHENS GREG POBOX 80 COLDIRON, KY 40819

PARCEL ID: 022-00-00-10200 OWNER: STEPHENS JO JAMES KEITH SAYLOR PO BOX 581 POBOX 581
WALLINS, KY 40873
 PO BOX 246
COLDLIRON, KY 40819

PARCEL ID:022-00-00-092.00_1 OWNER: BAKERELVA HWY 522 BOX 777
TOTZ, KY 40870

(B)
\} B
B)




## EXHIBIT C

TOWER AND FOUNDATION DESIGN

January 26, 2018
Kentucky Public Service Commission
211 Sower Blvd.
P.O. Box 615

Frankfort, KY 40602-0615

RE: Site Name - Coldiron
Proposed Cell Tower
36 49'42.311" North Latitude, 83 26'24.187" West Longitude

## Dear Commissioners:

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

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

Thank you,


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

## Sabre Industries

# Structural Design Report <br> 255' S3TL Series HD1 Self-Supporting Tower Site: Coldiron, KY <br> Site Number: KYL06091 

Prepared for: AT\&T<br>by: Sabre Towers \& Poles ${ }^{\mathrm{TM}}$

Job Number: 401278

January 24, 2018
Tower Profile. ..... 1-2
Foundation Design Summary. ..... 3
Maximum Leg Loads ..... 4
Maximum Diagonal Loads ..... 5
Maximum Foundation Loads ..... 6
Calculations ..... 7-18


$255^{\prime}$
$0^{\prime}$


| 401278 |  |
| :--- | :--- |
| AT\&T |  |
| Coldiron, KY KYL06091 |  |
| 255 ' S3TL |  |
| $1 / 24 / 2018$ | By: MH |

Designed Appurtenance Loading

| Elev | Description | Tx-Line | Elev | Description | Tx-Line |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 260 | (1) Extendible Lightning Rod |  | 226 | (1) 208 sq. ft. EPA 4000\# (no ice) | (18) $15 / 8^{\prime \prime}$ |
| 250 | (1) 278 sq. ft. EPA 6000\# (no Ice) | (18) $15 / 8^{\prime \prime}$ | 214 | (1) 208 sq. ft. EPA $4000 \%$ (no ice) | (18) $15 / 8^{\prime \prime}$ |
| 238 | (1) 208 sq. ft. EPA 4000\# (no ice) | (18) $15 / 8^{\prime \prime}$ |  |  |  |


|  | Job: 401278 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Customer: AT\& |  |  |  |
|  | Site Name: | Coldiron, K |  |  |
| Information contained herein is the sole property of Sabre Communications Corporation, constitutes a trade secret as defined by lowa Code Ch. 550 and shall not be reproduced copied or used in whole or part for any purpose whatsoever without the prior written consent of Sabre Communications | Description: | $255^{\prime}$ S3TL |  |  |
|  | Date: | 1/24/2018 | By: | MH |

## Customer: AT\&T

Site: Coldiron, KY KYL06091
255 ft . Model S3TL Series HD1 Self Supporting Tower At 89 mph Wind with no ice and 30 mph Wind with 0.5 in . Ice per ANSI/TIA-222-G.


ELEVATION VIEW
(7.72 Cu. Yds. each)
(3 REQUIRED; NOT TO SCALE)

## Notes:

1). Concrete shall have a minimum 28-day compressive strength of 4500 PSI , in accordance with ACI 318-11.
2). Rebars to conform to ASTM specification A615 Grade 60.
3). All rebar to have a minimum of $3^{\prime \prime}$ concrete cover.
4). All exposed concrete corners to be chamfered 3/4".
5.) The foundation design is based on the geotechnical report by ECS Project No. 26:3125-U1, dated: 12/29/2017.
6). See the geotechnical report for drilled pier installation requirements, if specified.
7). The foundation is based on the following factored loads:
Factored uplift (kips) $=562$
Factored download (kips) $=641$
Factored shear (kips) $=59$

| Rebar Schedule per Pier |  |
| :---: | :---: |
| Pier | (14) \#11 vertical rebar w/\#4 ties, two (2) <br> within top 5" of pier then 9" C/C |

## Maximum



# IrawResults Copyright (C) Guymast Inc. 2010 Phone: (416) 736-745 

## Maximum



## Maximum

TOTAL FOUNDATION LOADS (kip, ft-kip)


INDIVIDUAL FOOTING LOADS (kip)



MAST GEOMETRY ( ft )

| PANEL <br> TYPE | NO.OF <br> LEGS | ELEV.AT <br> BOTTOM | ELEV.AT <br> TOP | F.W. AT <br> BOTTOM | F.W..AT | TYPICAL |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |  |
| X TOP | PANEL <br> HEIGHT |  |  |  |  |  |
| X | 3 | 250.00 | 255.00 | 5.00 | 5.00 | 5.00 |
| X | 3 | 240.00 | 250.00 | 5.00 | 5.00 | 5.00 |
| X | 3 | 235.00 | 240.00 | 5.50 | 5.00 | 5.00 |
| X | 3 | 220.00 | 235.00 | 7.00 | 5.50 | 5.00 |
| X | 3 | 200.00 | 220.00 | 9.00 | 7.00 | 5.00 |
| X | 3 | 180.00 | 200.00 | 11.00 | 9.00 | 6.67 |
| X | 3 | 160.00 | 180.00 | 13.00 | 11.00 | 6.67 |
| X | 3 | 120.00 | 160.00 | 15.00 | 13.00 | 6.67 |
| X | 3 | 100.00 | 140.00 | 17.00 | 15.00 | 10.00 |
| X | 3 | 80.00 | 120.00 | 19.00 | 17.00 | 10.00 |
| X | 3 | 60.00 | 100.00 | 21.00 | 19.00 | 10.00 |
| V | 3 | 30.00 | 20.00 | 60.00 | 40.00 | 23.00 |
| X | 3 | 13.33 | 20.00 | 27.00 | 23.00 | 10.00 |

MEMBER PROPERTIES

| MEMBER |  |  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| TYPE | BOTTOM <br> ELEV <br> ft | TOP <br> ELEV <br> ft | X-SECTN <br> AREA | RADIUS <br> OF GYRAT | ELASTIC <br> MODULUS | THERMAL <br> EXPANSN |
|  |  |  |  |  | kn | kSi |

FACTORED MEMBER RESISTANCES

| BOTTOM | TOP | LEGS |  | DIAGONALS |  | HORIZONTALS |  | INT | BRACING |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ELEV | ELEV | COMP | TENS | COMP | TENS | COMP | TENS | COMP | TENS |
| ft | ft | kip | kip | kip | kip | kip | kip | kip | kip |
| 250.0 | 255.0 | 31.48 | 48.15 | 7.16 | 7.16 | 5.82 | 5.82 | 0.00 | 0.00 |
| 240.0 | 250.0 | 31.48 | 48.15 | 7.16 | 7.16 | 0.00 | 0.00 | 0.00 | 0.00 |
| 235.0 | 240.0 | 110.98 | 135.90 | 10.74 | 10.74 | 8.46 | 8.46 | 0.00 | 0.00 |
| 220.0 | 235.0 | 110.98 | 135.90 | 10.74 | 10.74 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.0 | 220.0 | 175.98 | 198.45 | 13.03 | 13.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| 180.0 | 200.0 | 239.46 | 274.95 | 13.00 | 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 160.0 | 180.0 | 309.64 | 357.75 | 13.34 | 13.34 | 0.00 | 0.00 | 0.00 | 0.00 |
| 140.0 | 160.0 | 358.08 | 378.00 | 10.34 | 10.34 | 0.00 | 0.00 | 0.00 | 0.00 |
| 120.0 | 140.0 | 507.33 | 457.90 | 15.01 | 15.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.0 | 120.0 | 507.33 | 457.90 | 12.53 | 12.53 | 0.00 | 0.00 | 0.00 | 0.00 |
| 80.0 | 100.0 | 507.33 | 576.00 | 15.77 | 15.77 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.0 | 80.0 | 668.86 | 724.50 | 13.43 | 13.43 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.0 | 60.0 | 621.06 | 656.10 | 14.31 | 14.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.0 | 40.0 | 621.06 | 656.10 | 15.70 | 15.70 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.3 | 20.0 | 640.29 | 656.10 | 20.02 | 20.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.0 | 13.3 | 640.29 | 656.10 | 30.51 | 30.51 | 11.36 | 11.36 | 7.41 | 7.41 |

* only 3 condition(s) shown in ful1
* Some wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A ===========================================================
89 mph wind with no ice. wind Azimuth: 0 .

MAST LOADING

| $\begin{aligned} & \text { LOAD } \\ & \text { TYPE } \end{aligned}$ | ELEV <br> $f t$ | APPLY..LOAD. . AT |  | $\begin{array}{r} \text { LOAD } \\ \text { AZI } \end{array}$ | . . . . . FORCES . . . . . . . . . . MOMENTS . . . . . |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | RADIUS | AZI |  | HORIZ | DOWN | VERTICAL | TORSNAL |
|  |  | ft |  |  | kip | kip | ft-kip | ft-kip |
| C | 260.0 | 0.00 | 0.0 | 0.0 | 0.28 | 0.15 | 0.00 | 0.00 |
| C | 250.0 | 0.00 | 0.0 | 0.0 | 10.00 | 7.20 | 0.00 | 0.00 |
| C | 238.0 | 0.00 | 0.0 | 0.0 | 7.41 | 4.80 | 0.00 | 0.00 |
| C | 226.0 | 0.00 | 0.0 | 0.0 | 7.33 | 4.80 | 0.00 | 0.00 |
| C | 214.0 | 0.00 | 0.0 | 0.0 | 7.24 | 4.80 | 0.00 | 0.00 |
| D | 255.0 | 0.00 | 180.0 | 0.0 | 0.07 | 0.04 | 0.00 | 0.00 |
| D | 250.0 | 0.00 | 180.0 | 0.0 | 0.07 | 0.04 | 0.00 | 0.00 |
| D | 250.0 | 0.00 | 42.0 | 0.0 | 0.13 | 0.06 | 0.06 | 0.10 |
| D | 240.0 | 0.00 | 42.0 | 0.0 | 0.13 | 0.06 | 0.06 | 0.10 |
| D | 240.0 | 0.00 | 64.4 | 0.0 | 0.16 | 0.12 | 0.06 | 0.11 |
| D | 235.0 | 0.00 | 64.4 | 0.0 | 0.16 | 0.12 | 0.06 | 0.11 |
| D | 235.0 | 0.00 | 79.5 | 0.0 | 0.17 | 0.12 | 0.06 | 0.11 |
| D | 230.0 | 0.00 | 79.5 | 0.0 | 0.17 | 0.12 | 0.06 | 0.11 |
| D | 230.0 | 0.00 | 83.3 | 0.0 | 0.18 | 0.13 | 0.05 | 0.10 |
| D | 225.0 | 0.00 | 83.3 | 0.0 | 0.18 | 0.13 | 0.05 | 0.10 |
| D | 225.0 | 0.00 | 92.0 | 0.0 | 0.20 | 0.15 | 0.04 | 0.06 |
| D | 220.0 | 0.00 | 92.0 | 0.0 | 0.20 | 0.15 | 0.04 | 0.06 |
| D | 220.0 | 0.00 | 89.2 | 0.0 | 0.22 | 0.18 | 0.05 | 0.06 |
| D | 215.0 | 0.00 | 89.2 | 0.0 | 0.22 | 0.18 | 0.05 | 0.06 |
| D | 215.0 | 0.00 | 353.1 | 0.0 | 0.23 | 0.20 | 0.01 | 0.04 |
| D | 210.0 | 0.00 | 353.1 | 0.0 | 0.23 | 0.20 | 0.01 | 0.04 |
| D | 210.0 | 0.00 | 322.3 | 0.0 | 0.23 | 0.20 | 0.02 | 0.04 |
| D | 200.0 | 0.00 | 322.2 | 0.0 | 0.24 | 0.21 | 0.02 | 0.04 |
| D | 200.0 | 0.00 | 322.4 | 0.0 | 0.23 | 0.23 | 0.02 | 0.04 |
| D | 180.0 | 0.00 | 321.9 | 0.0 | 0.24 | 0.24 | 0.02 | 0.04 |
| D | 180.0 | 0.00 | 322.4 | 0.0 | 0.24 | 0.26 | 0.02 | 0.04 |
| D | 160.0 | 0.00 | 321.9 | 0.0 | 0.25 | 0.26 | 0.02 | 0.04 |
| D | 160.0 | 0.00 | 322.4 | 0.0 | 0.26 | 0.27 | 0.02 | 0.04 |
| D | 140.0 | 0.00 | 322.0 | 0.0 | 0.26 | 0.27 | 0.02 | 0.04 |
| D | 140.0 | 0.00 | 322.3 | 0.0 | 0.25 | 0.34 | 0.02 | 0.04 |
| D | 110.0 | 0.00 | 322.3 | 0.0 | 0.25 | 0.35 | 0.02 | 0.04 |
| D | 110.0 | 0.00 | 322.3 | 0.0 | 0.25 | 0.35 | 0.02 | 0.04 |
| D | 80.0 | 0.00 | 322.3 | 0.0 | 0.26 | 0.37 | 0.02 | 0.03 |
| D | 80.0 | 0.00 | 322.4 | 0.0 | 0.26 | 0.42 | 0.02 | 0.03 |
| D | 40.0 | 0.00 | 322.3 | 0.0 | 0.27 | 0.41 | 0.02 | 0.03 |
| D | 40.0 | 0.00 | 322.4 | 0.0 | 0.25 | 0.45 | 0.02 | 0.03 |
| D | 20.0 | 0.00 | 322.3 | 0.0 | 0.25 | 0.45 | 0.02 | 0.03 |
| D | 20.0 | 0.00 | 322.4 | 0.0 | 0.20 | 0.42 | 0.02 | 0.02 |
| D | 13.3 | 0.00 | 322.4 | 0.0 | 0.20 | 0.42 | 0.02 | 0.02 |
| D | 13.3 | 0.00 | 322.4 | 0.0 | 0.23 | 0.49 | 0.02 | 0.02 |
| D | 0.0 | 0.00 | 322.4 | 0.0 | 0.23 | 0.49 | 0.02 | 0.02 |

SUPPRESS PRINTING

|  | $\begin{aligned} & \text {...FOR } \\ & \text { DISPL } \end{aligned}$ | THIS LOADING.. |  | $\ddot{\Delta i}$ | MAXIMUMS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LOADS |  | MEMBER | FOUNDN |  | DISPL | MEMBER | FOUNDN |
| INPUT |  | FORCES | LOADS |  |  | FORCES | LOADS |
| no | yes | yes | yes | no | no | no | no |



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

MAST LOADING

| $\begin{aligned} & \text { LOAD } \\ & \text { TYPE } \end{aligned}$ | ELEV | APPLY.. LOAD. . AT |  | LOAD | . . . . . FORCES |  | . MOMENTS |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | RADIUS | AZI | AZI | HORIZ | DOWN | VERTICAL | TORSNAL |
|  | ft | ft |  |  | kip | kip | ft-kip | ft-kip |
| C | 260.0 | 0.00 | 0.0 | 0.0 | 0.28 | 0.12 | 0.00 | 0.00 |
| C | 250.0 | 0.00 | 0.0 | 0.0 | 10.00 | 5.40 | 0.00 | 0.00 |
| C | 238.0 | 0.00 | 0.0 | 0.0 | 7.41 | 3.60 | 0.00 | 0.00 |
| C | 226.0 | 0.00 | 0.0 | 0.0 | 7.33 | 3.60 | 0.00 | 0.00 |
| C | 214.0 | 0.00 | 0.0 | 0.0 | 7.24 | 3.60 | 0.00 | 0.00 |


|  |  |  |  |  | 401278 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| D | 255.0 | 0.00 | 180.0 | 0.0 | 0.07 | 0.03 | 0.00 | 0.00 |
| D | 250.0 | 0.00 | 180.0 | 0.0 | 0.07 | 0.03 | 0.00 | 0.00 |
| D | 250.0 | 0.00 | 42.0 | 0.0 | 0.13 | 0.04 | 0.04 | 0.10 |
| D | 240.0 | 0.00 | 42.0 | 0.0 | 0.13 | 0.04 | 0.04 | 0.10 |
| D | 240.0 | 0.00 | 64.4 | 0.0 | 0.16 | 0.09 | 0.04 | 0.11 |
| D | 235.0 | 0.00 | 64.4 | 0.0 | 0.16 | 0.09 | 0.04 | 0.11 |
| D | 235.0 | 0.00 | 79.5 | 0.0 | 0.17 | 0.09 | 0.04 | 0.11 |
| D | 230.0 | 0.00 | 79.5 | 0.0 | 0.17 | 0.09 | 0.04 | 0.11 |
| D | 230.0 | 0.00 | 83.3 | 0.0 | 0.18 | 0.10 | 0.04 | 0.10 |
| D | 225.0 | 0.00 | 83.3 | 0.0 | 0.18 | 0.10 | 0.04 | 0.10 |
| D | 225.0 | 0.00 | 92.0 | 0.0 | 0.20 | 0.11 | 0.03 | 0.06 |
| D | 220.0 | 0.00 | 92.0 | 0.0 | 0.20 | 0.11 | 0.03 | 0.06 |
| D | 220.0 | 0.00 | 89.2 | 0.0 | 0.22 | 0.13 | 0.04 | 0.06 |
| D | 215.0 | 0.00 | 89.2 | 0.0 | 0.22 | 0.13 | 0.04 | 0.06 |
| D | 215.0 | 0.00 | 351.6 | 0.0 | 0.23 | 0.15 | 0.01 | 0.04 |
| D | 200.0 | 0.00 | 316.7 | 0.0 | 0.24 | 0.15 | 0.02 | 0.04 |
| D | 200.0 | 0.00 | 322.4 | 0.0 | 0.23 | 0.17 | 0.02 | 0.04 |
| D | 180.0 | 0.00 | 321.9 | 0.0 | 0.24 | 0.18 | 0.02 | 0.04 |
| D | 180.0 | 0.00 | 322.4 | 0.0 | 0.24 | 0.19 | 0.02 | 0.04 |
| D | 160.0 | 0.00 | 321.9 | 0.0 | 0.25 | 0.20 | 0.02 | 0.04 |
| D | 160.0 | 0.00 | 322.4 | 0.0 | 0.26 | 0.20 | 0.02 | 0.04 |
| D | 140.0 | 0.00 | 322.0 | 0.0 | 0.26 | 0.21 | 0.02 | 0.04 |
| D | 140.0 | 0.00 | 322.3 | 0.0 | 0.25 | 0.25 | 0.02 | 0.04 |
| D | 110.0 | 0.00 | 322.3 | 0.0 | 0.25 | 0.26 | 0.02 | 0.04 |
| D | 110.0 | 0.00 | 322.3 | 0.0 | 0.25 | 0.26 | 0.02 | 0.04 |
| D | 80.0 | 0.00 | 322.3 | 0.0 | 0.26 | 0.28 | 0.02 | 0.03 |
| D | 80.0 | 0.00 | 322.4 | 0.0 | 0.26 | 0.31 | 0.02 | 0.03 |
| D | 40.0 | 0.00 | 322.3 | 0.0 | 0.27 | 0.31 | 0.02 | 0.03 |
| D | 40.0 | 0.00 | 322.4 | 0.0 | 0.25 | 0.33 | 0.02 | 0.03 |
| D | 20.0 | 0.00 | 322.3 | 0.0 | 0.25 | 0.34 | 0.02 | 0.03 |
| D | 20.0 | 0.00 | 322.4 | 0.0 | 0.20 | 0.31 | 0.02 | 0.02 |
| D | 13.3 | 0.00 | 322.4 | 0.0 | 0.20 | 0.31 | 0.02 | 0.02 |
| D | 13.3 | 0.00 | 322.4 | 0.0 | 0.23 | 0.36 | 0.02 | 0.02 |
| D | 0.0 | 0.00 | 322.4 | 0.0 | 0.23 | 0.36 | 0.02 | 0.02 |



| $\begin{aligned} & \text { LOAD } \\ & \text { TYPE } \end{aligned}$ | ELEV <br> ft | APPLY..LOAD. . AT |  | $\begin{array}{r} \text { LOAD } \\ \text { AZI } \end{array}$ |  |  | . . . . . MOMENTS. . . . . |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | RADIUS | AZI |  |  |  | VERTICAL | TORSNAL |
|  |  | ft |  |  |  |  | ft-kip | ft-kip |
| C | 260.0 | 0.00 | 0.0 | 0.0 | 0.04 | 0.25 | 0.00 | 0.00 |
| C | 250.0 | 0.00 | 0.0 | 0.0 | 1.06 | 14.55 | 0.00 | 0.00 |
| C | 238.0 | 0.00 | 0.0 | 0.0 | 1.17 | 9.67 | 0.00 | 0.00 |
| C | 226.0 | 0.00 | 0.0 | 0.0 | 1.15 | 9.65 | 0.00 | 0.00 |
| C | 214.0 | 0.00 | 0.0 | 0.0 | 1.13 | 9.62 | 0.00 | 0.00 |
| D | 255.0 | 0.00 | 180.0 | 0.0 | 0.01 | 0.12 | 0.00 | 0.00 |
| D | 250.0 | 0.00 | 180.0 | 0.0 | 0.01 | 0.12 | 0.00 | 0.00 |
| D | 250.0 | 0.00 | 42.0 | 0.0 | 0.01 | 0.18 | 0.17 | 0.01 |
| D | 240.0 | 0.00 | 42.0 | 0.0 | 0.01 | 0.18 | 0.17 | 0.01 |
| D | 240.0 | 0.00 | 68.0 | 0.0 | 0.01 | 0.29 | 0.16 | 0.01 |
| D | 235.0 | 0.00 | 68.0 | 0.0 | 0.01 | 0.29 | 0.16 | 0.01 |
| D | 235.0 | 0.00 | 86.0 | 0.0 | 0.02 | 0.30 | 0.17 | 0.01 |
| D | 230.0 | 0.00 | 86.0 | 0.0 | 0.02 | 0.30 | 0.17 | 0.01 |
| D | 230.0 | 0.00 | 88.3 | 0.0 | 0.02 | 0.32 | 0.15 | 0.01 |
| D | 225.0 | 0.00 | 88.3 | 0.0 | 0.02 | 0.32 | 0.15 | 0.01 |
| D | 225.0 | 0.00 | 89.1 | 0.0 | 0.02 | 0.38 | 0.11 | 0.00 |
| D | 220.0 | 0.00 | 89.1 | 0.0 | 0.02 | 0.38 | 0.11 | 0.00 |
| D | 220.0 | 0.00 | 86.5 | 0.0 | 0.02 | 0.42 | 0.12 | 0.00 |
| D | 215.0 | 0.00 | 86.5 | 0.0 | 0.02 | 0.42 | 0.12 | 0.00 |
| D | 215.0 | 0.00 | 348.3 | 0.0 | 0.02 | 0.47 | 0.04 | 0.00 |
| D | 210.0 | 0.00 | 348.3 | 0.0 | 0.02 | 0.47 | 0.04 | 0.00 |
| D | 210.0 | 0.00 | 322.4 | 0.0 | 0.02 | 0.49 | 0.06 | 0.00 |
| D | 180.0 | 0.00 | 321.9 | 0.0 | 0.02 | 0.53 | 0.06 | 0.00 |
| D | 180.0 | 0.00 | 322.4 | 0.0 | 0.02 | 0.56 | 0.06 | 0.00 |
| D | 160.0 | 0.00 | 321.9 | 0.0 | 0.02 | 0.57 | 0.06 | 0.00 |
| D | 160.0 | 0.00 | 322.4 | 0.0 | 0.02 | 0.59 | 0.06 | 0.00 |
| D | 140.0 | 0.00 | 322.0 | 0.0 | 0.02 | 0.60 | 0.06 | 0.00 |
| D | 140.0 | 0.00 | 322.3 | 0.0 | 0.02 | 0.65 | 0.06 | 0.00 |
| D | 110.0 | 0.00 | 322.3 | 0.0 | 0.02 | 0.66 | 0.06 | 0.00 |
| D | 110.0 | 0.00 | 322.3 | 0.0 | 0.02 | 0.67 | 0.06 | 0.00 |



MAXIMUM MAST DISPLACEMENTS:

maximum tension in mast members (kip)


| 205.0 | $152.72 \text { м }$ | 10.37 | T | $0.05$ | A | $\begin{aligned} & 401278 \\ & 0.00 \mathrm{~A} \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| 200.0 |  |  |  | 0.20 | A | 0.00 | A |
| 193.3 | 173.61 M | 10.88 | T | 0.07 | A | 0.00 | A |
|  | 193.99 м | 10.46 | N |  |  |  |  |
| 186.7 |  |  |  | 0.18 | A | 0.00 | A |
| 180.0 | 214.28 M | 10.18 | R | 0.07 | A | 0.00 | A |
|  | 232.06 M | 9.99 | X |  |  |  |  |
| 173.3 |  |  |  | 0.12 | A | 0.00 | A |
| 166.7 | 249.75 M | 9.89 | X | 0.07 | A | 0.00 | A |
|  | 265.76 M | 9.83 | x |  |  |  |  |
| 160.0 | 281.74 M | 9.83 | R | 0.10 | A | 0.00 | A |
| 153.3 |  |  |  | 0.10 | A | 0.00 | A |
|  | 296.52 M | 9.87 | P | 0.09 | A |  |  |
| 146.7 | 311.33 m | 9.95 | V |  | A | 0.00 | A |
| 140.0 |  |  |  | 0.09 | A | 0.00 | A |
|  | 328.41 M | 10.98 | P | 0.11 | A | 0.00 | A |
| 130.0 | 348.85 M | 11.06 | $v$ |  |  |  |  |
| 120.0 | 368.01 м | 11.17 | P | 0.08 | A | 0.00 | A |
| 110.0 |  |  |  | 0.10 | A | 0.00 | A |
|  | 387.00 M | 11.34 | V | 0.06 | A | 0.00 | A |
| 100.0 | 405.07 M | 11.53 | P |  |  |  |  |
| 90.0 | 423.03 м | 11.78 | V | 0.09 | A | 0.00 | A |
| 80.0 |  |  |  | 0.06 | A | 0.00 | A |
|  | 440.32 M | 12.04 | P | 0.06 | A. | 0.00 |  |
| 70.0 | 457.51 M | 12.34 | P |  |  |  |  |
| 60.0 | 474.26 M |  |  | 0.06 | A | 0.00 | A |
| 50.0 | 474.26 M | 12.65 | $\checkmark$ | 0.06 | A | 0.00 | A |
|  | 490.99 M | 12.97 | P |  |  |  |  |
| 40.0 | 507.35 M | 13.28 | P |  |  |  | A |
| 30.0 |  |  |  | 0.08 | S | 0.00 | A |
|  | 523.54 M | 13.57 | P | 0.15 | A | 0.00 |  |
| 20.0 | 542.38 M | 14.22 | $v$ |  |  |  |  |
| 13.3 | 541.22 M | 18.32 | P | 0.83 | U | 0.00 | R |
| 0.0 |  |  |  | 0.00 | A | 0.00 | A |

MAXIMUM COMPRESSION IN MAST MEMBERS (kip)

| $\begin{aligned} & \text { ELEV } \\ & \mathrm{ft} \end{aligned}$ | LEGS | DIAG |  | HORIZ |  | BRACE |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 255.0 |  |  |  | -1.21 G |  | 0.00 A |  |
| 250.0 | -1.02 A | -1.90 | A |  |  |  |  |
|  | -9.37 G | -5.20 | B | -0.19 | M | 0.00 A |  |
| 245.0 |  |  |  | -0.18 | 0 | 0.00 A |  |
| 240.0 | -23.14 G | -5.55 | H | -0.50 |  | 0.00 | A |
|  | -37.61 G | -6.61 | G |  | Q |  |  |
| 235.0 |  |  |  | -0.10 | S | 0.00 A |  |
| 230.0 | -55.74 G | -7.11 | N | -0.11 | S | 0.00 A |  |
| 225.0 | -71.84 G | -7.38 | H | -0.02 |  |  |  |
|  | -91.19 G | -9.26 | B |  | S | 0.00 |  |
| 220.0 | -110.81 G | -8.79 | B | -0.20 | S | 0.00 | A |
| 215.0 |  |  |  | -0.01 | U | 0.00 |  |
| 210.0 | -130.32 G | -10.73 | G |  |  |  |  |
|  | -152.72 G | -10.76 | T | -0.21 | S | 0.00 | A |
| 205.0 | -171.26 |  | B | -0.03 | S | 0.00 | A |
| 200.0 |  |  |  | -0.18 | S | 0.00 |  |
|  | -193.28 G | -10.89 | B |  |  |  |  |
| 193.3 | -214.91 G | -10.50 | B | -0.05 | S | 0.00 | A |
| 186.7 |  |  |  | -0.16 | S | 0.00 A |  |
| 180.0 | -236.55 G | -10.20 | L | -0.05 | S |  |  |
|  | -255.70 G | -10.03 | F |  |  | 0.00 A |  |
| 173.3 |  |  |  | -0.10 | S | 0.00 | A |

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| 166.7 | -274.86 G | -9.91 | L |
| :---: | :---: | :---: | :---: |
|  | -292.34 G | -9.86 | F |
| 160.0 |  |  |  |
|  | -309.86 G | -9.85 | L |
| 153.3 | -326.19 G | -9.90 | J |
| 146.7 | -342.61 G | -9.97 | D |
| 140.0 |  |  |  |
|  | -361.85 G | -11.04 | J |
| 130.0 | -385.16 G | -11.10 | J |
| 120.0 | -407.18 G | -11.23 | D |
| 110.0 |  |  |  |
|  | -429.12 G | -11.37 | D |
| 100.0 | -450.20 G | -11.58 | D |
| 90.0 | -471.27 G | -11.82 | J |
| 80.0 | -491.84 G | -12.10 | D |
| 70.0 |  |  | D |
|  | -512.49 G | -12.39 | J |
| 60.0 | -532.70 G | -12.70 | D |
| 50.0 | -552.91 G | -13.02 | D |
| 40.0 |  |  |  |
|  | -572.87 G | -13.32 | D |
| 30.0 | -592.80 G | -13.60 | D |
| 20.0 | -615.03 G | -14.29 | D |
| 13.3 | -616 58 G |  |  |
| 0.0 | -616.58 G | -18.37 | D |

0.00 A

| -0.06 S | 0.00 A |
| :--- | :--- |
| -0.09 S | 0.00 A |

$\begin{array}{ll}-0.09 \mathrm{~S} & 0.00 \mathrm{~A} \\ -0.08 \mathrm{~S} & 0.00 \mathrm{~A}\end{array}$
$-0.08 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-0.08 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-0.10 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-0.07 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-0.08 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-0.05 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-0.08 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-0.05 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-0.05 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-0.05 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-0.05 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-0.06 \mathrm{I} \quad 0.00 \mathrm{~A}$
$-0.09 \mathrm{~A} \quad 0.00 \mathrm{~A}$
$-0.13 \mathrm{~S} \quad 0.00 \mathrm{~A}$
$-1.00 \mathrm{C} \quad 0.00 \mathrm{C}$
$0.00 \mathrm{~A} \quad 0.00 \mathrm{~A}$

MAXIMUM INDIVIDUAL FOUNDATION LOADS: (kip)

|  | OAS | NENT |  | TOTAL |
| :---: | :---: | :---: | :---: | :---: |
| NORTH | EAST | DOWN | UPLIFT | SHEAR |
| 58.93 G | 50.67 | 640.51 G | -561.81 |  |

MAXIMUM TOTAL LOADS ON FOUNDATION : (kip \& kip-ft)

| NORTH EAST TOTAL |  |  | DOWN | ---------OVERTURNING---------- TORSION |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NORTH | EAST | $\begin{array}{r} \text { TOTAL } \\ 0.0 \end{array}$ |  | NORTH EAST |  | $\text { a TOTAL } \begin{array}{r} 0.0 \end{array}$ |  |
| $96.8$ | $-92 \cdot 3$ | $\underset{G}{96.8}$ | $\begin{gathered} 200.4 \\ a \end{gathered}$ | $15247.2$ | $14618.6$ | $15247.2$ | ${ }_{\mathrm{T}}^{39.6}$ |

```
*******************************************************************************
************************** Service Load Condition ***************************
***************************************************************************************
```


and
60 mph wind with no ice. Wind Azimuth: 0

MAST LOADING

| $\begin{aligned} & \text { LOAD } \\ & \text { TYPE } \end{aligned}$ | ELEV <br> ft | APPLY..LOAD. . AT |  | $\begin{array}{r} \text { LOAD } \\ \text { AZI } \end{array}$ | . FO |  | . . . . . MOMENTS . . . . . |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | RADIUS | AZI |  | HORIZ | DOWN | VERTICAL | TORSNAL |
|  |  | ft |  |  | kip | kip | ft-kip | . ft-kip |
| C | 260.0 | 0.00 | 0.0 | 0.0 | 0.08 | 0.13 | 0.00 | 0.00 |
| C | 250.0 | 0.00 | 0.0 | 0.0 | 2.84 | 6.00 | 0.00 | 0.00 |
| C | 238.0 | 0.00 | 0.0 | 0.0 | 2.10 | 4.00 | 0.00 | 0.00 |
| C | 226.0 | 0.00 | 0.0 | 0.0 | 2.08 | 4.00 | 0.00 | 0.00 |
| C | 214.0 | 0.00 | 0.0 | 0.0 | 2.06 | 4.00 | 0.00 | 0.00 |
| D | 255.0 | 0.00 | 180.0 | 0.0 | 0.02 | 0.03 | 0.00 | 0.00 |
| D | 250.0 | 0.00 | 180.0 | 0.0 | 0.02 | 0.03 | 0.00 | 0.00 |
| D | 250.0 | 0.00 | 42.0 | 0.0 | 0.04 | 0.05 | 0.05 | 0.03 |
| D | 240.0 | 0.00 | 42.0 | 0.0 | 0.04 | 0.05 | 0.05 | 0.03 |
| D | 240.0 | 0.00 | 64.4 | 0.0 | 0.05 | 0.10 | 0.05 | 0.03 |
| D | 235.0 | 0.00 | 64.4 | 0.0 | 0.05 | 0.10 | 0.05 | 0.03 |
| D | 235.0 | 0.00 | 79.5 | 0.0 | 0.05 | 0.10 | 0.05 | 0.03 |
| D | 225.0 | 0.00 | 83.3 | 0.0 | 0.05 | 0.11 | 0.04 | 0.03 |
| D | 225.0 | 0.00 | 92.0 | 0.0 | 0.06 | 0.13 | 0.04 | 0.02 |
| D | 220.0 | 0.00 | 92.0 | 0.0 | 0.06 | 0.13 | 0.04 | 0.02 |
| D | 220.0 | 0.00 | 89.2 | 0.0 | 0.06 | 0.15 | 0.04 | 0.02 |
| D | 215.0 | 0.00 | 89.2 | 0.0 | 0.06 | 0.15 | 0.04 | 0.02 |
| D | 215.0 | 0.00 | 353.1 | 0.0 | 0.07 | 0.16 | 0.01 | 0.01 |
| D | 210.0 | 0.00 | 353.1 | 0.0 | 0.07 | 0.16 | 0.01 | 0.01 |
| D | 210.0 | 0.00 | 322.3 | 0.0 | 0.07 | 0.17 | 0.02 | 0.01 |
| D | 200.0 | 0.00 | 322.2 | 0.0 | 0.07 | 0.17 | 0.02 | 0.01 |
| D | 200.0 | 0.00 | 322.4 | 0.0 | 0.07 | 0.19 | 0.02 | 0.01 |
| D | 180.0 | 0.00 | 321.9 | 0.0 | 0.07 | 0.20 | 0.02 | 0.01 |
| D | 180.0 | 0.00 | 322.4 | 0.0 | 0.07 | 0.21 | 0.02 | 0.01 |
| D | 160.0 | 0.00 | 321.9 | 0.0 | 0.07 | 0.22 | 0.02 | 0.01 |
| D | 160.0 | 0.00 | 322.4 | 0.0 | 0.07 | 0.22 | 0.02 | 0.01 |
| D | 140.0 | 0.00 | 322.0 | 0.0 | 0.08 | 0.23 | 0.02 | 0.01 |
| D | 140.0 | 0.00 | 322.3 | 0.0 | 0.07 | 0.28 | 0.02 | 0.01 |
| D | 110.0 | 0.00 | 322.3 | 0.0 | 0.07 | 0.29 | 0.02 | 0.01 |
| D | 110.0 | 0.00 | 322.3 | 0.0 | 0.07 | 0.29 | 0.02 | 0.01 |
| D | 80.0 | 0.00 | 322.3 | 0.0 | 0.08 | 0.31 | 0.02 | 0.01 |
| D | 80.0 | 0.00 | 322.4 | 0.0 | 0.08 | 0.35 | 0.02 | 0.01 |
| D | 40.0 | 0.00 | 322.3 | 0.0 | 0.08 | 0.34 | 0.02 | 0.01 |
| D | 40.0 | 0.00 | 322.4 | 0.0 | 0.07 | 0.37 | 0.02 | 0.01 |
| D | 20.0 | 0.00 | 322.3 | 0.0 | 0.07 | 0.38 | 0.02 | 0.01 |
| D | 20.0 | 0.00 | 322.4 | 0.0 | 0.06 | 0.35 | 0.02 | 0.01 |
| D | 13.3 | 0.00 | 322.4 | 0.0 | 0.06 | 0.35 | 0.02 | 0.01 |
| D | 13.3 | 0.00 | 322.4 | 0.0 | 0.07 | 0.41 | 0.02 | 0.01 |
| D | 0.0 | 0.00 | 322.4 | 0.0 | 0.07 | 0.41 | 0.02 | 0.01 |

SUPPRESS PRINTING

|  | . . F FOR | THIS LOADING.. |  | . . <br> ALL | MAXIMUMS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LOADS | DISPL | MEMBER | FOUNDN |  | DISPL | MEMBER | FOUNDN |
| INPUT |  | FORCES | LOADS |  |  | FORCES | LOADS |
| no | yes | yes | yes | no | no | no | no |

MAXIMUM MAST DISPLACEMENTS :

| $\begin{array}{r} \text { ELEV } \\ \mathrm{ft} \end{array}$ | ------DEFLECTIONS |  |  | (ft)----- |  |  | --TILTS (DEG)--- |  |  |  | TWIST |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NORTH |  | EAST |  | DOWN |  | NORTH |  | EAST |  |  |  |
| 255.0 | 1.029 | G | -0.989 | D | 0.015 | G | 0.523 | G | -0.504 | D | -0.029 | F |
| 250.0 | 0.983 | G | -0.946 | D | 0.015 | G | 0.524 | G | -0.505 | D | -0.029 | F |
| 245.0 | 0.936 | G | -0.900 | D | 0.014 | G | 0.518 | G | -0.499 | D | -0.029 | F |
| 240.0 | 0.891 | G | -0.857 | D | 0.014 | G | 0.499 | G | -0.480 | D | -0.027 | F |
| 235.0 | 0.847 | G | -0.814 | D | 0.013 | G | 0.490 | G | -0.471 | D | -0.026 | F |
| 230.0 | 0.804 | G | -0.773 | D | 0.013 | G | 0.476 | G | -0.458 | D | -0.025 | F |
| 225.0 | 0.762 | G | -0.733 | D | 0.012 | G | 0.460 | G | -0.443 | D | -0.024 | F |
| 220.0 | 0.722 | G | -0.694 | D | 0.012 | G | 0.441 | G | -0.424 | D | -0.023 | F |
| 215.0 | 0.683 | G | -0.657 | D | 0.012 | G | 0.426 | G | -0.410 | D | -0.022 | F |
| 210.0 | 0.645 | G | -0.621 | D | 0.011 | G | 0.409 | G | -0.394 | D | -0.021 | $F$ |
| 205.0 | 0.610 | G | -0.586 | D | 0.011 | G | 0.392 | G | -0.377 | D | -0.020 | F |
| 200.0 | 0.575 | G | -0.553 | D | 0.010 | G | 0.372 | G | -0.358 | D | -0.019 | F |
| 193.3 | 0.532 | G | -0.512 | D | 0.010 | G | 0.352 | G | -0.339 | D | -0.018 | F |
| 186.7 | 0.491 | G | -0.472 | D | 0.009 | G | 0.331 | G | -0.318 | D | -0.017 | F |
| 180.0 | 0.453 | G | -0.436 | D | 0.009 | G | 0.309 | G | -0.298 | D | -0.016 | F |
| 173.3 | 0.417 | G | -0.401 | D | 0.009 | G | 0.292 | G | -0.281 | D | -0.015 | F |
| 166.7 | 0.383 | G | -0.368 | D | 0.008 | G | 0.275 | G | -0.265 | D | 0.014 | H |
| 160.0 | 0.350 | G | -0.337 | D | 0.008 | G | 0.258 | G | -0.248 | D | 0.014 | H |
| 153.3 | 0.320 | G | -0.307 | D | 0.008 | G | 0.242 | G | -0.232 | D | 0.013 | H |
| 146.7 | 0.292 | G | -0.280 | D | 0.007 | G | 0.225 | G | -0.216 | D | 0.012 | H |
| 140.0 | 0.265 | G | -0.255 | D | 0.007 | G | 0.208 | G | -0.200 | D | 0.011 |  |
| 130.0 | 0.229 | G | -0.220 | D | 0.007 | G | 0.192 | G | -0.184 | D | 0.010 |  |
| 120.0 | 0.196 | G | -0.188 | D | 0.006 | G | 0.175 | G | -0.169 | D | 0.009 |  |


| 110.0 |  |  |  | D | 0.006 | G | 401278 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 100.0 | 0.138 | G | -0.132 | D | 0.005 | G | 0.143 | G | -0.137 | D | 0.008 |  |
| 90.0 | 0.113 | G | -0.108 | D | 0.005 | G | 0.126 | G | -0.121 | D | 0.007 | H |
| 80.0 | 0.091 | G | -0.087 | D | 0.004 | G | 0.110 | G | -0.105 | D | 0.006 | H |
| 70.0 | 0.072 | G | -0.069 | D | 0.004 | G | 0.097 | G | -0.093 | D | 0.005 |  |
| 60.0 | 0.054 | G | -0.052 | D | 0.003 | G | 0.084 | G | -0.081 | D | 0.004 | H |
| 50.0 | 0.039 | G | -0.038 | D | 0.003 | G | 0.070 | G | -0.067 | D | 0.004 | H |
| 40.0 | 0.027 | G | -0.025 | D | 0.002 | G | 0.056 | G | -0.054 | D | 0.003 | H |
| 30.0 | 0.015 | G | -0.014 | D | 0.002 | G | 0.042 | G | -0.040 | D | 0.002 | H |
| 20.0 | 0.005 |  | 0.005 |  | 0.001 |  | 0.028 | G | -0.027 | D | 0.001 |  |
| 13.3 | 0.002 |  | 0.002 |  | 0.001 |  | 0.019 | G | -0.018 | D | 0.001 |  |
| 0.0 | 0.000 |  | 0.000 |  | 0.000 |  | 0.000 |  | 0.000 |  | 0.000 |  |

MAXIMUM TENSION IN MAST MEMBERS (kip)


MAXIMUM COMPRESSION IN MAST MEMBERS (kip)


MAXIMUM INDIVIDUAL FOUNDATION LOADS: (kip)


MAXIMUM TOTAL LOADS ON FOUNDATION : (kip \& kip-ft)

|  | RIZONTA | ----- | DOWN |  | VERTURNI |  | TORSION |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NORTH | EAST | $\begin{array}{r} \text { TOTAL } \\ 0.0 \end{array}$ |  | NORTH | EAST | $\begin{array}{r} \text { TOTAL } \\ 0.0 \end{array}$ |  |
| 27.8 | -26.5 | 27.8 | 83.5 | 4375.2 | -4196.4 | 4375.2 | 11.2 |
| G | D | G | G | G | D | G | H |

## DRILLED STRAIGHT PIER DESIGN BY SABRE TOWERS \& POLES

Tower Description 255' S3TL Series HD1

Date 1/24/2018
Engineer MH
Factored Uplift (kips)
Factored Download (kips)
Factored Shear (kips)
Ultimate Bearing Pressure Bearing ${ }^{\text {© }}$
Bearing Design Strength (ksf)
Water Table Below Grade (ft) Bolt Circle Diameter (in) Top of Concrete to Top of Bottom Threads (in) Pier Diameter ( ft ) Ht. Above Ground (ft) Pier Length Below Ground ( ft ) Quantity of Bars Bar Diameter (in) Tie Bar Diameter (in) Spacing of Ties (in)
Area of Bars ( $\mathrm{in}^{2}$ )
Spacing of Bars (in)
$\mathrm{f}^{\prime} \mathrm{c}(\mathrm{ksi})$
fy (ksi)
Unit Wt. of Concrete (kcf) Download Friction ©s Uplift Friction ©s $^{\text {s }}$
Volume of Concrete ( $\mathrm{yd}^{3}$ )
Skin Friction Factor for Uplift Ignore Bottom Length in Download?

| 562 |
| :---: |
| 641 |
| 59 |
| 20 |
| 0.75 |
| 15 |
| 999 |
| 18 |

Anchor Bolt Count (per leg)

| 65.5 |  |
| :---: | :---: |
| 3 | Minimum Pier Diameter (ft) |
| 0.5 |  |
|  |  |
| 20 |  |

Minimum Area of Steel $\left(\mathrm{in}^{2}\right)$

| Depth at Bottom of Layer (ft) | Ult. Skin Friction (ksf) | (Ult. Skin Friction)*(Uplift Factor) | $\gamma$ (kcf) |
| :---: | :---: | :---: | :---: |
| 5 | 0.00 | 0.00 | 0.11 |
| 12 | 1.50 | 1.50 | 0.11 |
| 60 | 4.00 | 4.00 | 0.11 |
| 0 | 0.00 | 0.00 | 0 |
| 0 | 0.00 | 0.00 | 0 |
| 0 | 0.00 | 0.00 | 0 |
| 0 | 0.00 | 0.00 | 0 |
| 0 | 0.00 | 0.00 | 0 |
| 0 | 0.00 | 0.00 | 0 |
| 0 | 0.00 | 0.00 | 0 |

Download:
Factored Net Weight of Concrete (kips)
Bearing Design Strength (kips)
Skin Friction Design Strength (kips)
Download Design Strength (kips)

| 0.6 |
| :---: |
| 106.0 |
| 554.9 |
| 660.9 |

Factored Net Download (kips)
641.6

DRILLED STRAIGHT PIER DESIGN BY SABRE TOWERS \& POLES (CONTINUED) Uplift:


| Condition | 1 is OK, 0 Fails |
| :---: | :---: |
| Download | 1 |
| Uplift | 1 |
| Area of Steel | 1 |
| Shear | 1 |
| Anchor Bolt Pull-Out | 1 |
| Interaction Diagram Visual Check | 1 |

EXHIBIT D
COMPETING UTILITIES, CORPORATIONS, OR PERSONS LIST
$\square$

## KY Public Service Commission

## Master Utility Search

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

```
Address/City/Contact Utility Type
Status
Utility ID Utility Name
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline & Utility ID & Utility Name & Utility Type & Class & City & State \\
\hline View & 4107900 & 365 Wireless, LLC & Cellular & D & Atlanta & GA \\
\hline View & 4109300 & Access Point, Inc. & Cellular & D & Cary & NC \\
\hline View & 4108300 & Air Voice Wireless, LLC & Cellular & A & Bloomfield Hill & MI \\
\hline View & 4110650 & Alliant Technologies of KY, L.L.C. & Cellular & C & Morristown & NJ \\
\hline View & 44451184 & Alltel Communications, LLC & Cellular & A & Basking Ridge & NJ \\
\hline View & 4110850 & AltaWorx, LLC & Cellular & C & Fairhope & AL \\
\hline View & 4107800 & American Broadband and Telecommunications Company & Cellular & C & Toledo & OH \\
\hline View & 4108650 & AmeriMex Communications Corp. & Cellular & D & Dunedin & FL \\
\hline View & 4105100 & AmeriVision Communications, Inc. d/b/a Affinity 4 & Cellular & D & Virginia Beach & VA \\
\hline View & 4110700 & Andrew David Balholm dba Norcell & Cellular & C & Clayton & WA \\
\hline View & 4108600 & BCN Telecom, Inc. & Cellular & D & Morristown & NJ \\
\hline View & 4110550 & Blue Casa Mobile, LLC & Cellular & D & Santa Barbara & CA \\
\hline View & 4108750 & Blue Jay Wireless, LLC & Cellular & C & Carrollton & TX \\
\hline View & 4111050 & BlueBird Communications, LLC & Cellular & C & New York & NY \\
\hline View & 4202300 & Bluegrass Wireless, LLC & Cellular & A & Elizabethtown & KY \\
\hline View & 4107600 & Boomerang Wireless, LLC & Cellular & B & Hiawatha & IA \\
\hline View & 4105500 & BullsEye Telecom, Inc. & Cellular & D & Southfield & MI \\
\hline & & & & & & \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline View & 4110050 & CampusSims, Inc. & Cellular & D & Boston & MA \\
\hline View & 4100700 & Cellco Partnership dba Verizon Wireless & Cellular & A & Basking Ridge & NJ \\
\hline View & 4106600 & Cintex Wireless, LLC & Cellular & D & Rockville & MD \\
\hline View & 4111000 & ComApp Technologies LLC & Cellular & C & Melrose & MA \\
\hline View & 4101900 & Consumer Cellular, Incorporated & Cellular & A & Portland & OR \\
\hline View & 4106400 & Credo Mobile, Inc. & Cellular & A & San Francisco & CA \\
\hline View & 4108850 & Cricket Wireless, LLC & Cellular & A & San Antonio & TX \\
\hline View & 4001900 & CTC Communications Corp. d/b/a EarthLink Business I & Cellular & D & Grand Rapids & MI \\
\hline View & 10640 & Cumberland Cellular Partnership & Cellular & A & Elizabethtown & KY \\
\hline View & 4101000 & East Kentucky Network, LLC dba Appalachian Wireless & Cellular & A & Ivel & KY \\
\hline View & 4002300 & Easy Telephone Service Company dba Easy Wireless & Cellular & D & Ocala & FL \\
\hline View & 4109500 & Enhanced Communications Group, LLC & Cellular & D & Bartlesville & OK \\
\hline View & 4110450 & Excellus Communications, LLC & Cellular & D & Chattanooga & TN \\
\hline View & 4105900 & Flash Wireless, LLC & Cellular & C & Concord & NC \\
\hline View & 4104800 & France Telecom Corporate Solutions L.L.C. & Cellular & D & Oak Hill & VA \\
\hline View & 4109350 & Global Connection Inc. of America & Cellular & D & Norcross & GA \\
\hline View & 4102200 & Globalstar USA, LLC & Cellular & B & Covington & LA \\
\hline View & 4109600 & Google North America Inc. & Cellular & B & Mountain View & CA \\
\hline View & 33350363 & Granite Telecommunications, LLC & Cellular & D & Quincy & MA \\
\hline View & 4106000 & GreatCall, Inc. d/b/a Jitterbug & Cellular & A & San Diego & CA \\
\hline View & 10630 & GTE Wireless of the Midwest dba Verizon Wireless & Cellular & A & Basking Ridge & NJ \\
\hline View & 4110600 & Horizon River Technologies, LLC & Cellular & C & Atlanta & GA \\
\hline View & 4103100 & i-Wireless, LLC & Cellular & A & Newport & KY \\
\hline View & 4109800 & IM Telecom, LLC d/b/a Infiniti Mobile & Cellular & D & Tulsa & OK \\
\hline View & 22215360 & KDDI America, Inc. & Cellular & D & New York & NY \\
\hline View & 10872 & Kentucky RSA \#1 Partnership & Cellular & A & Basking Ridge & NJ \\
\hline View & 10680 & Kentucky RSA \#3 Cellular General & Cellular & A & Elizabethtown & KY \\
\hline View & 10681 & Kentucky RSA \#4 Cellular General & Cellular & A & Elizabethtown & KY \\
\hline View & 4109750 & Konatel, Inc. dba telecom.mobi & Cellular & D & Johnstown & PA \\
\hline View & 4110900 & Lunar Labs, Inc. & Cellular & C & Detroit & MI \\
\hline View & 4107300 & Lycamobile USA, Inc. & Cellular & D & Newark & NJ \\
\hline View & 4108800 & MetroPCS Michigan, LLC & Cellular & A & Bellevue & WA \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline View & 4109650 & Mitel Cloud Services, Inc. & Cellular & D & Mesa & AZ \\
\hline View & 4202400 & New Cingular Wireless PCS, LLC dba AT\&T Mobility, PCS & Cellular & A & San Antonio & TX \\
\hline View & 10900 & New Par dba Verizon Wireless & Cellular & A & Basking Ridge & NJ \\
\hline View & 4000800 & Nextel West Corporation & Cellular & D & Overland Park & KS \\
\hline View & 4001300 & NPCR, Inc. dba Nextel Partners & Cellular & D & Overland Park & KS \\
\hline View & 4001800 & OnStar, LLC & Cellular & A & Detroit & MI \\
\hline View & 4110750 & Onvoy Spectrum, LLC & Cellular & C & Plymouth & MN \\
\hline View & 4109050 & Patriot Mobile LLC & Cellular & D & Southlake & TX \\
\hline View & 4110250 & Plintron Technologies USA LLC & Cellular & D & Bellevue & WA \\
\hline View & 33351182 & PNG Telecommunications, Inc. dba PowerNet Global Communications & Cellular & D & Cincinnati & OH \\
\hline View & 4202100 & Powertel/Memphis, Inc. dba TMobile & Cellular & A & Bellevue & WA \\
\hline View & 4107700 & Puretalk Holdings, LLC & Cellular & A & Covington & GA \\
\hline View & 4106700 & Q Link Wireless, LLC & Cellular & A & Dania & FL \\
\hline View & 4108700 & Ready Wireless, LLC & Cellular & B & Hiawatha & IA \\
\hline View & 4110500 & Republic Wireless, Inc. & Cellular & D & Raleigh & NC \\
\hline View & 4106200 & Rural Cellular Corporation & Cellular & A & Basking Ridge & NJ \\
\hline View & 4108550 & Sage Telecom Communications, LLC dba TruConnect & Cellular & D & Los Angeles & CA \\
\hline View & 4109150 & SelecTel, Inc. d/b/a SelecTel Wireless & Cellular & D & Freemont & NE \\
\hline View & 4106300 & SI Wireless, LLC & Cellular & A & Carbondale & IL \\
\hline View & 4110150 & Spectrotel, Inc. d/b/a Touch Base Communications & Cellular & D & Neptune & NJ \\
\hline View & 4200100 & Sprint Spectrum, L.P. & Cellular & A & Atlanta & GA \\
\hline View & 4200500 & SprintCom, Inc. & Cellular & A & Atlanta & GA \\
\hline View & 4109550 & Stream Communications, LLC & Cellular & D & Dallas & TX \\
\hline View & 4110200 & T C Telephone LLC d/b/a Horizon Cellular & Cellular & D & Red Bluff & CA \\
\hline View & 4202200 & T-Mobile Central, LLC dba TMobile & Cellular & A & Bellevue & WA \\
\hline View & 4002500 & TAG Mobile, LLC & Cellular & D & Carrollton & TX \\
\hline View & 4109700 & Telecom Management, Inc. dba Pioneer Telephone & Cellular & D & South Portland & ME \\
\hline View & 4107200 & Telefonica USA, Inc. & Cellular & D & Miami & FL \\
\hline View & 4108900 & Telrite Corporation dba Life Wireless & Cellular & D & Covington & GA \\
\hline View & 4108450 & Tempo Telecom, LLC & Cellular & D & Kansas City & MO \\
\hline View & 4109950 & The People's Operator USA, LLC & Cellular & D & New York & NY \\
\hline View & 4109000 & Ting, Inc. & Cellular & A & Toronto & ON \\
\hline View & 4110400 & Torch Wireless Corp. & Cellular & D & Jacksonville & FL \\
\hline
\end{tabular}
\begin{tabular}{|l|l|l|l|l|l|l|}
\hline View & 4103300 & \begin{tabular}{l} 
Touchtone Communications, \\
Inc.
\end{tabular} & Cellular & D & Whippany & NJ \\
\hline View & 4104200 & TracFone Wireless, Inc. & Cellular & D & Miami & FL \\
\hline View & 4002000 & Truphone, Inc. & Cellular & D & Durham & NC \\
\hline \hline View & 4110300 & UVNV, Inc. & Cellular & D & Costa Mesa & CA \\
\hline \hline View & 4105700 & Virgin Mobile USA, L.P. & Cellular & A & Atlanta & GA \\
\hline \hline View & 4110800 & Visible Service LLC & Cellular & C & Lone Tree & CO \\
\hline \hline View & 4106500 & WiMacTel, Inc. & Cellular & D & Palo Alto & CA \\
\hline View & 4110950 & Wing Tel Inc. & Cellular & C & New York & NY \\
\hline View & 4109900 & \begin{tabular}{l} 
Wireless Telecom Cooperative, \\
Inc. dba theWirelessFreeway
\end{tabular} & Cellular & D & Louisville & KY \\
\hline
\end{tabular}

\section*{EXHIBIT E} FAA

Issued Date: 02/08/2018

Dave Cundiff
ATT Mobility (SW)
208 S Akard
Dallas, TX 75202
** DETERMINATION OF NO HAZARD TO AIR NAVIGATION **
The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:
\begin{tabular}{ll} 
Structure: & Antenna Tower Coldiron \\
Location: & Coldiron, KY \\
Latitude: & \(36-49-42.31 \mathrm{~N}\) NAD 83 \\
Longitude: & \(83-26-24.19 \mathrm{~W}\) \\
Heights: & \begin{tabular}{l}
1637 feet site elevation (SE) \\
\\
\end{tabular} \\
& 270 feet above ground level (AGL) \\
& 1907 feet above mean sea level (AMSL)
\end{tabular}

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 1, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(MDual),\&12.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

At least 10 days prior to start of construction (7460-2, Part 1)
_ X_ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)
This determination expires on 08/08/2019 unless:
(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination does not constitute authority to transmit on the frequency(ies) identified in this study. The proponent is required to obtain a formal frequency transmit license from the Federal Communications Commission (FCC) or National Telecommunications and Information Administration (NTIA), prior to on-air operations of these frequency(ies).

This determination of No Hazard is granted provided the following conditional statement is included in the proponent's construction permit or license to radiate:

Upon receipt of notification from the Federal Communications Commission that harmful interference is being caused by the licencee's (permittee's) transmitter, the licensee (permittee) shall either immediately reduce the power to the point of no interference, cease operation, or take such immediate corrective action as is necessary to eliminate the harmful interference. This condition expires after 1 year of interference-free operation.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this 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 determination 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 (202) 267-5281, or lynnette.farrell@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-ASO-25669-OE.

Lynnette Farrell
Technician
Attachment(s)
Frequency Data
Map(s)
cc: FCC

\section*{Frequency Data for ASN 2017-ASO-25669-OE}
\begin{tabular}{|c|c|c|c|c|}
\hline \[
\begin{gathered}
\text { LOW } \\
\text { FREQUENCY }
\end{gathered}
\] & \[
\begin{gathered}
\text { HIGH } \\
\text { FREQUENCY }
\end{gathered}
\] & FREQUENCY UNIT & ERP & \[
\begin{gathered}
\text { ERP } \\
\text { UNIT }
\end{gathered}
\] \\
\hline 6 & 7 & GHz & 55 & dBW \\
\hline 6 & 7 & GHz & 42 & dBW \\
\hline 10 & 11.7 & GHz & 55 & dBW \\
\hline 10 & 11.7 & GHz & 42 & dBW \\
\hline 17.7 & 19.7 & GHz & 55 & dBW \\
\hline 17.7 & 19.7 & GHz & 42 & dBW \\
\hline 21.2 & 23.6 & GHz & 55 & dBW \\
\hline 21.2 & 23.6 & GHz & 42 & dBW \\
\hline 614 & 698 & MHz & 1000 & W \\
\hline 614 & 698 & MHz & 2000 & W \\
\hline 698 & 806 & MHz & 1000 & W \\
\hline 806 & 901 & MHz & 500 & W \\
\hline 806 & 824 & MHz & 500 & W \\
\hline 824 & 849 & MHz & 500 & W \\
\hline 851 & 866 & MHz & 500 & W \\
\hline 869 & 894 & MHz & 500 & W \\
\hline 896 & 901 & MHz & 500 & W \\
\hline 901 & 902 & MHz & 7 & W \\
\hline 929 & 932 & MHz & 3500 & W \\
\hline 930 & 931 & MHz & 3500 & W \\
\hline 931 & 932 & MHz & 3500 & W \\
\hline 932 & 932.5 & MHz & 17 & dBW \\
\hline 935 & 940 & MHz & 1000 & W \\
\hline 940 & 941 & MHz & 3500 & W \\
\hline 1670 & 1675 & MHz & 500 & W \\
\hline 1710 & 1755 & MHz & 500 & W \\
\hline 1850 & 1910 & MHz & 1640 & W \\
\hline 1850 & 1990 & MHz & 1640 & W \\
\hline 1930 & 1990 & MHz & 1640 & W \\
\hline 1990 & 2025 & MHz & 500 & W \\
\hline 2110 & 2200 & MHz & 500 & W \\
\hline 2305 & 2360 & MHz & 2000 & W \\
\hline 2305 & 2310 & MHz & 2000 & W \\
\hline 2345 & 2360 & MHz & 2000 & W \\
\hline 2496 & 2690 & MHz & 500 & W \\
\hline
\end{tabular}

TOPO Map for ASN 2017-ASO-25669-OE


Page 5 of 5

\section*{EXHIBIT F}

KENTUCKY AIRPORT ZONING COMMISSION

\title{
KENTUCKY AIRPORT ZONING COMMISSION
}

\section*{MATTHEW BEVIN} Governor

421 Buttermilk Pike
Covington, KY 41017
www.transportation.ky.gov
859-341-2700

February 14,2018
APPROVAL OF APPLICATION

\section*{APPLICANT:}

John Monday
John Monday
3300 E. Renner Rd B3132
Richardson, TX 75082
SUBJECT: AS-048-I35-2018-013
STRUCTURE: Antenna Tower
LOCATION: Coldiron, KY
COORDINATES: \(36^{\circ} 49^{\prime} 42.31^{\prime \prime} \mathrm{N} / 83^{\circ} 26^{\prime} 24.19{ }^{\prime \prime} \mathrm{W}\)
HEIGHT: 270' AGL/1907'AMSL
The Kentucky Airport Zoning Commission has approved your application for a permit to construct \(270^{\prime} \mathrm{AGL} / \mathrm{I}^{\prime} 907^{\prime} \mathrm{AMSL}\) Antenna Tower near Coldiron, KY \(36^{\circ} 49^{\prime} 42.31\) " N / \(83^{\circ} 26^{\prime} 24.19^{\prime \prime} \mathrm{W}\).

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.

A copy of the approved application is enclosed for your files.
Medium Dual Obstruction Lighting is required in accordance with 602 KAR 50:100.

John Houlihan
Administrator

\title{
KENTUCKY AIRPORT ZONING COMMISSION
}

\section*{MATTHEW BEVIN}

Governor

421 Buttermilk Pike
Covington, KY 41017
www.transportation.ky.gov
859-341-2700

\section*{CONSTRUCTION/ALTERATION STATUS REPORT}

February 14, 2018
AERONAUTICIAL STUDY NUMBER: AS-048-I35-2018-013
John Monday
John Monday
3300 E. Renner Rd B3132
Richardson, TX 75082
This concerns the permit which was issued to you by the Kentucky Airport Zoning Commission on February 14, 2018. This permit is valid for a period of \(18 \mathrm{Month}(\mathrm{s})\) from its date of issuance. If construction is not completed within the said 18 -Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit. When appropriate, please indicate the status of the project in the place below and return this letter to John Houlihan, Administrator, Kentucky Airport Zoning Commission, 421 Buttermilk Pike, Covington, KY, 41017. 859-341-2700.
\begin{tabular}{ll} 
STRUCTURE: & Antenna Tower \\
LOCATION: & Coldiron, KY \\
COORDINATES: & \(36^{\circ} 49^{\prime} 42.31^{\prime \prime} \mathrm{N} / 83^{\circ} 26^{\prime} 24.19^{\prime \prime} \mathrm{W}\) \\
HEIGHT: & \(270^{\prime} \mathrm{AGL} / 1907^{\prime} \mathrm{AMSL}\)
\end{tabular}

CONSTRUCTION/ALTERATION STATUS
1. The project ( ) is abandoned. ( ) is not abandoned.
2. Construction status is as follows:

Structure reached its greatest height of \(\qquad\) ft. AGL
\(\qquad\) ft . AMSL on \(\qquad\) (date).

Date construction was completed. \(\qquad\)
Type of obstruction marking/painting. \(\qquad\)
Type of obstruction lighting. \(\qquad\)
As built coordinates. \(\qquad\)
Miscellaneous Information. \(\qquad\)
DATE
SIGNATURE/TITLE \(\qquad\)
Kentuchys

TC 55-2
KENTUCKY TRANSPORTATION CABINET
Rev. 06/2016
Page 2 of 2

\section*{APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE}


\section*{EXHIBIT G}

GEOTECHNICAL REPORT

ECS SOUTHEAST, LLP
"Setting the Standard for Service"
Geotechnical • Construction Materials • Environmental • Facilities
December 29, 2017
Mr. Jacob Goralski, P.E. Irish Tower, LLC
4603 Bermuda Drive, Sugar Land, TX 77479

ECS Project No. 26:3125-U1

\section*{Reference: Report of Subsurface Exploration and Geotechnical Engineering Services Coldiron Tower \\ Highway 2007 - Abe Hill 0 \\ Coldiron, KY}

Dear Mr. Goralski:
ECS Southeast, LLP (ECS) has completed the subsurface exploration for the proposed construction of a self-supporting tower located at Highway 2007 - Abe Hill 0, in Coldiron, Kentucky, approximately 1,700 feet northweast of the intersection with Jack Hensley Road. The purpose of these services was to explore the subsurface soil and groundwater conditions at the site, and to develop geotechnical recommendations pertaining to foundation support of the structures. This report explains our understanding of the project, documents our findings, and presents our conclusions and geotechnical engineering recommendations to serve as an aid during the design and construction of the project.

\section*{PROJECT INFORMATION AND PROPOSED CONSTRUCTION}

The project will consist of the construction of a new 255+/-foot tall self-supporting tower with a 15 -foot lightning arrestor and fenced equipment compound. The proposed tower site is located in a grassy area. See the attached Site Location Diagram (Figure 1) and Boring Location Diagram (Figure 2). We have received preliminary site plans showing the site boundaries and proposed tower location. No loading information was provided for the tower. Based on information provided from the client, the current ground surface elevation at the center of the tower is approximately 1636.4 feet MSL. To achieve the proposed grading at the tower site, we anticipate that less than 7 feet of cut and fill will be required. We do not anticipate that any significant stormwater management (SWM) facilities or site retaining walls will be required for this project.

\section*{EXPLORATION PROCEDURES}

The site subsurface conditions were explored on December 19, 2017 by completing three Standard Penetration Test (SPT) boring drilled 35 feet from the staked center of the tower location. The borings were drilled to depths of auger refusal (approximately 1 to \(19-1 / 2\) feet). The approximate boring locations are shown on the attached Boring Location Diagram (Figure 2). The boring locations were based on a survey stake-out that was performed by others. Prior to drilling, underground utilities were cleared through the Kentucky 811system.

A CME 45 truck-mounted drill rig was utilized to complete the SPT borings. The drill rig utilized \(3-1 / 4\) inch hollow stem augers to advance the boreholes. Representative soil samples were secured by means of conventional split-barrel sampling procedures (ASTM D1586). In this procedure, a 2 -inch O.D., split-barrel sampler is driven into the soil a distance of 18 inches by a

140 -pound hammer falling 30 inches. The number of blows required to drive the sampler through the final 12 -inch interval, after initial setting of 6 inches, is termed the Standard Penetration Test (SPT) value or N -value, and is indicated for each sample on the attached boring logs.

The SPT values can be used as a qualitative indication of the in-place relative density of cohesionless soils, and as a relative indication of consistency in cohesive soils. This indication is qualitative, since many factors can affect the standard penetration resistance value and prevent a direct correlation between drill crews, drill rigs, drilling procedures, and hammer-rodsampler assemblies. The drill rig utilized an automatic hammer to drive the sampler.

Field logs of the soil encountered at the borings location were maintained by the drilling crew. After recovery, each soil sample was removed from the sampler and visually classified by the driller. Representative portions of each soil sample were then sealed in plastic bags and transported to our laboratory in Nashville (Franklin), Tennessee, for further visual observation and classification. Observations for groundwater were made during sampling and upon completion of the drilling operations. After completion of the drilling operations, the boreholes were backfilled with auger cuttings and excess soil was mounded at the surface.

\section*{CLASSIFICATION AND LABORATORY TESTING PROCEDURES}

A geotechnical engineer classified each soil sample on the basis of texture and plasticity in accordance with the Unified Soil Classification System (ASTM D 2487). The group symbols for each soil type are indicated in parentheses following the soil descriptions on the boring logs. A brief explanation of the Unified Soil Classification System (USCS) is included with this report. The engineer grouped the various soil types into the major zones noted on the boring logs. The stratification lines designating the interfaces between materials on the exploration records are approximate; in situ, the transitions may be gradual.

The soil samples will be retained in our laboratory for a period of 60 days, after which, they will be discarded unless other instructions are received as to their disposition.

\section*{SITE GEOLOGY}

The USGS Geologic Map of the Wallins Creek Quadrangle (1967) indicates this particular site is underlain by the Hance Formation. This formation is typically comprised of sandstone, shale, siltstone and coal. Interbedded siltstone and shale, medium- to dark-gray commonly contains modules of limestone, concretions, and layers of ironstone, with some fossils. Gray, micaceous, clayey, fine to medium grained sandstone commonly lies in the upper region of this formation.


Figure 1 - USGS Geologic Map of the Wallins Creek Quadrangle (approximate site location highlighted)

\section*{SUBSURFACE CONDITIONS}

The subsurface conditions discussed in the following paragraphs, and those shown on the boring logs, represent an estimate of the subsurface conditions based on interpretation of the exploration data using normally accepted geotechnical engineering judgments. It should be noted that the transition between different soil strata is often less distinct than what is shown on the exploration records.

In general, the exploration revealed an approximate 6-inch thick layer of topsoil at all the boring locations. Below the layer of topsoil in Borings B-2 and B-3, lean clay was encountered to depths of approximately 6 to \(19-1 / 2\) feet. No clay material was encountered at Boring B-1. Auger refusal occurred at boring B-1 at the depth of 1 foot below the existing ground surface. The drillers offset the boring by 5 feet per the instructions of the geotechnical engineer and encountered auger refusal once again at the depth of 1 foot. SPT N -values for the clay materials varied from 11 to 33 blows per foot (bpf). The encountered conditions are shown on the attached boring logs.

Groundwater was not encountered at the time of our exploration. It should be noted that groundwater can vary on a seasonal basis due to precipitation, evaporation, surface run-off, area stream levels and other factors not immediately apparent at the time of this exploration. It is also possible for groundwater to exist in a perched condition within the soil overburden or at the soil/rock interface.

\section*{ANALYSIS AND RECOMMENDATIONS}

\section*{General}

The following recommendations have been developed on the basis of the previously described project information and subsurface conditions identified during this study. If there are any
changes to the project characteristics, or if differing subsurface conditions are encountered during construction, ECS should be consulted so that the recommendations of this report can be reviewed and revised, as necessary.

\section*{Subgrade Preparation}

Vegetation, and all other soft, unsuitable, or deleterious material should be removed from the existing ground surface at the foundation areas. These operations should extend at least 5 feet beyond the edge of planned structures, where practical. After examining the exposed soils, loose and yielding areas should be identified by proofrolling with an approved piece of equipment, such as a loaded dump truck, having an axle weight of at least 10 tons. Unsuitable or unstable subgrade materials may require moisture conditioning, in-place densification, or removal and replacement with new engineered fill.

It should also be emphasized that based on the relatively shallow depth of shale bedrock encountered and the existing site grades, depending on the grading plan, it is possible that excavation or cuts into the shale may occur. Excavation of the shale bedrock may require special excavation techniques, such as hoe-ramming.

\section*{Engineered Fill}

The first layer of fill should be placed in a relatively uniform horizontal lift and be adequately keyed into the stripped and scarified subgrade soils. Fill materials should be free of organics, wet/frozen materials, or other deleterious materials. Engineered fill materials should consist of low to moderately plastic clays and silts, or coarse grained material such as sand and gravel. Engineered fill should have a maximum Liquid Limit no greater than 50, and a maximum Plasticity Index no greater than 30. In general, we recommend material to be used as engineered fill have a Standard Proctor maximum dry density of at least 90 pcf. Engineered soil fill should be placed in maximum loose lifts of 8 inches and compacted to at least 95 percent of the Standard Proctor (ASTM D698) maximum dry density. Soil engineered fill should be compacted within 3 percentage points of the optimum moisture content determined by the Standard Proctor method. Soil fill should not contain rock material greater than 4 inches in diameter.

Fill operations should be observed on a full-time basis by an experienced engineering technician to check that the required degree of compaction is being achieved. We recommend a minimum of one compaction test per 2,500 square-foot area be performed for each lift of engineered fill for structural areas, and that at least one test per lift per 100 linear feet of utility trench backfill.

\section*{Equipment Shelter Foundation}

Based upon our findings, the equipment shelter may be supported by a turned-down monolithic slab-on-grade with foundation elements bearing on the undisturbed natural residual soils, weathered bedrock, or properly-compacted engineered fill. These foundations can be designed for a maximum net allowable soil bearing pressure of up to 2,500 psf or a weathered rock bearing pressure of \(5,000 \mathrm{psf}\).

Foundations for the equipment shelter or the tower shall be designed to bear all on soil or weathered rock, and not a combination of the two due to the potential of differential settlement. If weathered rock is encountered in only a portion of the foundation area, the foundations should be deepened to bedrock in the other areas, or the rock should be over-excavated by 2 feet, and engineered fill should be placed and compacted back to bottom of foundation elevation.

For footings constructed in accordance with the requirements outlined in this report, maximum total settlement is expected to be less than 1 inch (plus any consolidation settlement from new fill loads). Maximum differential settlement is expected to be half the total settlement. Shallow foundations should be designed to bear at least 24 inches below the final exterior grades. The slab-on-grade may be designed using a modulus of subgrade reaction of 110 pounds per cubic inch ( pci i . A layer of free draining gravel may be used underlying the slab to serve as a leveling pad and provide a capillary break. All slab and foundation subgrades should be evaluated immediately prior to concrete placement by ECS to verify that the exposed subgrades are capable of satisfactorily supporting the design loads.

\section*{Self-support Tower Foundation}

The proposed tower can be supported on drilled shaft (caisson). Based on previous experience with tower structures, we anticipate that wind loading, associated uplift resistance, and lateral loading may control the sizing and depth of the tower foundation. We have provided estimated soil parameters at various depths to aid in drilled shaft foundation design in the attached Geotechnical Data Form.

Uplift forces can be resisted by the factored weight of the shaft and the side shear along the circumference of the shaft (skin friction). The compression forces can be resisted by the side shear along the circumference of the shaft and the end bearing capacity. In determining the dimensions of the drilled shafts, we recommend that a minimum factor of safety of 1.25 with regard to the weight of the concrete should be used in conjunction with the presented allowable side shear values. For uplift and compression, we recommend no contribution to resisting loads be considered from side shear within 5 feet of the ground surface, soft clay or from potentially liquefiable zones.

Casing of the excavation is not expected, but may be required, depending on the condition of the soils and the ground water elevation at the time of construction. Once the bearing level is reached, all loose materials and any accumulated water seepage should be removed prior to placement of drilled shaft reinforcing cage and concrete. Up to 1 inch of water standing in the base of the shaft excavation is acceptable at the time concrete is placed, and an inflow rate of 1 inch per 5 minutes is also acceptable. Higher inflow rates, which could likely be encountered, may require additional control such as temporary casing or that drilled shaft concrete be placed by tremie method. The drilled shaft contractor should be prepared to handle such a condition and to ensure suitable end bearing conditions.

The drilled shaft concrete should be placed in intimate contact with undisturbed natural soil/rock. To reduce the potential for arching, we recommend the drilled shaft concrete mix be designed for a slump of 5 to 7 inches. Provided water seepage is minimal, our experience and current research in the field indicates that the drilled shafts can be constructed by "free fall" placement of concrete without affecting the strength and quality of concrete. The concrete should "free fall" without hitting the sides of the casing or reinforcing steel. The use of a hopper or other suitable device is recommended to control concrete placement and direct it toward the center of the shaft. The placement of concrete in the cased shaft should proceed until the concrete level is above the external fluid level and should be maintained above this level throughout casing removal, if required. However, if significant seepage is present within the excavation or if slurry is used, it will be necessary to place the concrete by tremie method, and we recommend a concrete slump of 7 to 9 inches for this method of concrete placement.

The shaft design and construction procedures should be reviewed with the foundation contractor prior to the start of construction. If you desire, we would be pleased to review the plans and specifications for the project once they are completed so we may have the
opportunity to comment on the impact of the soil/rock and groundwater conditions on the final design.

\section*{Seismic Site Classification}

Based on our interpretation of the International Building Code (IBC) 2012, it is our opinion that a Seismic Site Class "B" is appropriate for this site. In accordance with IBC 2012 and United States Geological Survey's (USGS) Seismic Hazard Curves and Uniform Hazard Response Spectra program, the following parameters may be used in design:
- Latitude: 36.82741, Longitude: - 83.44171
- \(\mathrm{S}_{s}=0.208, \mathrm{~S}_{1}=0.103\)
- \(S_{M S}=0.280, S_{M 1}=0.103\)
- \(S_{D S}=0.187, S_{D 1}=0.068\)
*Spectral accelerations were determined from USGS National Seismic Hazard Maps

\section*{General Construction Considerations}

Positive site drainage should be maintained during earthwork operations, which should help maintain the integrity of the soil. Placement of fill on the near surface soils which have become wet may be difficult. When wet, these soils will degrade quickly with disturbance from contractor operations and will be difficult to stabilize for fill placement.

The surficial soils are considered moderately erodible. All erosion and sedimentation shall be controlled in accordance with Best Management Practices and current County requirements. At the appropriate time, we would be pleased to provide a proposal for NPDES monitoring and construction materials testing related services.

\section*{CLOSING}

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. ECS is not responsible for the conclusions, opinions, or recommendations made by others based on these data. No third party is given the right to rely on this report without express written permission.

The scope of services for this study does not include environmental assessment or investigation for the presence or absence of wetlands, hazardous or toxic materials in the soil or groundwater within or beyond the site studied. Any statements in this report regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of our client.

We appreciate this opportunity to be of service to you during the design phase of this project. If you have any questions with regard to the information and recommendations presented in this report, please do not hesitate to contact us.

Respectfully,

\section*{ES SOUTHEAST, LLD}


Eric M. Gasiecki
Geotechnical Department Manager


Ere

Dan Franklin
Principal Reviewer


Mark D. Luskin, P.E. Engineering Manager

Attachments: Figure 1: Site Location Map
Figure 2: Boring Location Diagrams
Geotechnical Data Form
SPT Boring Logs (B-1 through B-3)
Reference Notes for Boring Logs USGS Summary Report
\begin{tabular}{|lr|}
\hline ENGINEER & \\
\hline SCALE & SC \\
\hline PROJECT NO. & \\
\hline & NTS \\
\hline SHEET & \\
\hline DATE & \(10125-\mathrm{UF} 1\) \\
\hline & \(12 / 29 / 2017\) \\
\hline
\end{tabular}



Estimated Soil Parameters for LPILE
\(\gamma=\ln\)-situ Soil Density
\(\mathrm{S}_{\mathrm{u}}=\) Undrained Shear Strength
\(\phi^{\prime}=\) Effective Friction Angle
\(\mathrm{K}=\) Horizontal Subgrade Reaction
-Parameters estimated from values suggested in LPILE user manual.

\section*{Foundation Recommendations}

For Drilled Shaft Foundations.*
\begin{tabular}{|c|c|}
\hline Depth (ft) & \begin{tabular}{c} 
Allowable End Bearing \\
(KSF)
\end{tabular} \\
\hline \(0-3\) & 2.5 \\
\hline \(3-12\) & 3 \\
\hline \(12+\) & 10 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|}
\hline Depth Interval & \begin{tabular}{c} 
Allowable Average Side Friction \\
(PSF)
\end{tabular} \\
\hline \(0-5\) & - \\
\hline \(5-12\) & 750 \\
\hline \(12+\) & 2,000 \\
\hline
\end{tabular}
*-Ignore in top 5 feet in design, minimum embedment depth of \(10 \%\) tower height applies.
-Paramaters were increased with embedment depth due to anticipated increase in bedrock quality

\section*{Construction Criteria}
1) Proofroll site prior to construction to detect unsuitable soil near the surface.
2) Compact building pads/roadway subgrade and each 8 inch lift of approved fill to \(95 \%\) maximum dry density in accordance with ASTM D698 standard proctor.
3) Approved fill materials are soils with less than \(3 \%\) organics, less than 50 liquid limit and less than 30 plastic index
4) Foundation construction should be observed by Geotechnical Engineer.
5) Drilled shaft foundations should be installed in accordance with the requirements of the Deep Foundation Institute and monitored by the Geotechnical Engineer.




\section*{REFERENCE NOTES FOR BORING LOGS}
ASPHALT
\begin{tabular}{|cl|cl|}
\hline \multicolumn{4}{|c|}{ DRILLING SAMPLING SYMBOLS \& ABBREVIATIONS } \\
\hline SS & Split Spoon Sampler & PM & Pressuremeter Test \\
ST & Shelby Tube Sampler & RD & Rock Bit Drilling \\
WS & Wash Sample & RC & Rock Core, NX, BX, AX \\
BS & Bulk Sample of Cuttings & REC & Rock Sample Recovery \% \\
PA & Power Auger (no sample) & RQD & Rock Quality Designation \% \\
HSA & Hollow Stem Auger & & \\
\hline
\end{tabular}
\begin{tabular}{|l|l|}
\hline \multicolumn{2}{|c|}{ PARTICLE SIZE IDENTIFICATION } \\
\hline Designation & PARTICLE SIZES \\
\hline Boulders & 12 inches ( 300 mm ) or larger \\
Cobbles & 3 inches to 12 inches ( 75 mm to 300 mm ) \\
Gravel: & Coarse \\
& Fine \\
Sand: & Coarse \\
& \(3 / 4\) inch to 3 inches ( 19 mm to 75 mm ) \\
& 4.75 mm to 19 mm (No. 4 sieve to \(3 / 4 \mathrm{inch}\) ) \\
& 2.00 mm to 4.75 mm (No. 10 to No. 4 sieve) \\
Sine & 0.425 mm to 2.00 mm (No. 40 to No. 10 sieve) \\
Silt \& Clay ("Fines") & 0.074 mm to 0.425 mm (No. 200 to No. 40 sieve) \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|}
\hline \multicolumn{3}{|l|}{COHESIVE SILTS \& CLAYS} \\
\hline Unconfined Compressive StRENGTH, \(Q_{p}{ }^{4}\) & \[
\begin{aligned}
& S_{P T}{ }^{5} \\
& (B P F)
\end{aligned}
\] & \begin{tabular}{l}
CONSISTENCY \({ }^{7}\) \\
(COHESIVE)
\end{tabular} \\
\hline \(<0.25\) & <3 & Very Soft \\
\hline \(0.25-<0.50\) & 3-4 & Soft \\
\hline 0.50-<1.00 & 5-8 & Medium Stiff \\
\hline 1.00-<2.00 & 9-15 & Stiff \\
\hline \(2.00-<4.00\) & 16-30 & Very Stiff \\
\hline 4.00-8.00 & 31-50 & Hard \\
\hline >8.00 & >50 & Very Hard \\
\hline
\end{tabular}

\begin{tabular}{|c|c|c|}
\hline RELATIVE AMOUNT \({ }^{7}\) & COARSE GRAINED
\[
(\%)^{8}
\] & \[
\begin{aligned}
& \text { FINE } \\
& \text { GRAINED } \\
& (\%)^{8}
\end{aligned}
\] \\
\hline Trace & \(\leq 5\) & \(\leq 5\) \\
\hline Dual Symbol (ex: SW-SM) & 10 & 10 \\
\hline With & 15-20 & 15-25 \\
\hline Adjective (ex: "Silty") & \(\geq 25\) & \(\geq 30\) \\
\hline \multicolumn{3}{|c|}{WATER LEVELS \({ }^{6}\)} \\
\hline \[
\begin{array}{|ll|}
\hline \underline{\nabla} & W L
\end{array}
\] & \multicolumn{2}{|l|}{Water Level (WS)(WD) (WS) While Sampling (WD) While Drilling} \\
\hline \(\stackrel{\text { V }}{\text { V }}\) SHW & \multicolumn{2}{|l|}{Seasonal High WT} \\
\hline \(\underline{V}\) ACR & \multicolumn{2}{|l|}{After Casing Removal} \\
\hline \(\stackrel{\rightharpoonup}{\nabla}\) - SWT & \multicolumn{2}{|l|}{Stabilized Water Table} \\
\hline DCI & \multicolumn{2}{|l|}{Dry Cave-In} \\
\hline WCI & \multicolumn{2}{|l|}{Wet Cave-In} \\
\hline
\end{tabular}

\footnotetext{
\({ }^{1}\) Classifications and symbols per ASTM D 2488-09 (Visual-Manual Procedure) unless noted otherwise.
\({ }^{2}\) To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.
\({ }^{3}\) Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].
\({ }^{4}\) Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).
\({ }^{5}\) Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb . hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). " \(N\)-value" is another term for "blow count" and is expressed in blows per foot (bpf).
\({ }^{6}\) The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.
\({ }^{7}\) Minor deviation from ASTM D 2488-09 Note 16.
\({ }^{8}\) Percentages are estimated to the nearest 5\% per ASTM D 2488-09.
}

\section*{©USGS Design Maps Summary Report}

User-Specified Input
Building Code Reference Document 2012/2015 International Building Code
(which utilizes USGS hazard data available in 2008)
Site Coordinates \(36.82741^{\circ} \mathrm{N}, 83.44171^{\circ} \mathrm{W}\)
Site Soil Classification Site Class B - "Rock"
Risk Category I/II/III


\section*{USGS-Provided Output}
\begin{tabular}{lll}
\(\mathbf{S}_{\mathrm{s}}=0.280 \mathrm{~g}\) & \(\mathbf{S}_{\mathrm{Ms}}=0.280 \mathrm{~g}\) & \(\mathbf{S}_{\mathrm{DS}}=0.187 \mathrm{~g}\) \\
\(\mathbf{S}_{1}=0.103 \mathrm{~g}\) & \(\mathbf{S}_{\mathrm{M} 1}=0.103 \mathrm{~g}\) & \(\mathbf{S}_{\mathrm{D} 1}=0.068 \mathrm{~g}\)
\end{tabular}

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the " 2009 NEHRP" building code reference document.


Although this information is a product of the U.S. Geological Survey, we provide no warranty, expressed or implied, as to the accuracy of the data contained therein. This tool is not a substitute for technical subject-matter knowledge.

\section*{EXHIBIT H} DIRECTIONS TO WCF SITE

\section*{Driving Directions to Proposed Tower Site}
1. Beginning at the offices of the Harlan County Clerk located at 210 E. Central Street, Harlan, KY, head west on E. Central Street and travel approximately 0.2 miles.
2. Turn right onto US-421 N and travel approximately 1.0 miles.
3. Turn left onto US-119 S and travel approximately 9.0 miles.
4. Turn left onto Old Pike Highway and travel approximately 0.4 miles.
5. Turn left onto State Hwy 2007 and travel approximately 0.5 miles.
6. Turn left onto Abe Hill Road and travel approximately 0.2 miles.
7. Turn left onto Abe Lane and travel approximately 0.4 miles.
8. The site is on the left after Abe Lane ends.
9. The site coordinates are
a. North 36 deg 49 min 42.31 sec
b. West 83 deg 26 min 24.19 sec


Prepared by:
Aaron Roof
Pike Legal Group PLLC
1578 Highway 44 East, Suite 6
P.O. Box 369

Shepherdsville, KY 40165-3069
Telephone: 502-955-4400 or 800-516-4293

\section*{EXHIBIT I} COPY OF REAL ESTATE AGREEMENT

\section*{OPTION AND LEASE AGREEMENT}

THIS OPTION AND LEASE AGREEMENT ("Agreement"), dated as of the latter of the signature dates below (the "Effective Date"), is entered into by Stacy Travis Hensley and Amy Hensley, his wife, having a mailing address of 69 Ring Eye Lane, Wallins Creek, KY 40873 ("Landlord") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 575 Morosgo Drive NE, Atlanta, GA 30324 ("Tenant").

\section*{BACKGROUND}

Landlord owns or controls that certain plot, parcel or tract of land, as described on Exhibit 1, together with all rights and privileges arising in connection therewith, located at Hwy 2007-Abe Hill 0, Coldiron, 40873, in the County of Harlan, State of Kentucky (collectively, the "Property"). Tenant desires to use a portion of the Property in connection with its federally licensed communications business. Landlord desires to grant to Tenant the right to use a portion of the Property in accordance with this Agreement.

The parties agree as follows:

\section*{1. OPTION TOLEASE.}
(a) Landlord grants to Tenant an option (the "Option") to lease a certain portion of the Property containing approximately 10,000 square feet including the air space above such ground space, as described on attached Exhibit 1 (the "Premises"), for the placement of Tenant's Communication Facility.
(b) During the Option Term, and during the term of this Agreement, Tenant and its agents, engineers, surveyors and other representatives will have the right to enter upon the Property to inspect, examine, conduct soil borings, drainage testing, material sampling, radio frequency testing and other geological or engineering tests or studies of the Property (collectively, the "Tests"), to apply for and obtain licenses, permits, approvals, or other relief required of or deemed necessary or appropriate at Tenant's sole discretion for its use of the Premises and include, without limitation, applications for zoning variances, zoning ordinances, amendments, special use permits, and construction permits (collectively, the "Government Approvals"), initiate the ordering and/or scheduling of necessary utilities, and otherwise to do those things on or off the Property that, in the opinion of Tenant, are necessary in Tenant's sole discretion to determine the physical condition of the Property, the environmental history of the Property, Landlord's title to the Property and the feasibility or suitability of the Property for Tenant's Permitted Use. all at Tenant's expense. Tenant will not be liable to Landlord or any third party on account of any pre-existing defect or condition on or with respect to the Property, whether or not such defect or condition is disclosed by Tenant's inspection. Tenant will restore the Property to its condition as it existed at the commencement of the Option Term, reasonable wear and tear and loss by casualty or other causes beyond Tenant's control excepted.
(c) In consideration of Landlord oranting Tenant the Option, Tenant agrees to pay Landlord the sum of The Option will be tor an initial term of one (1) vear commencing on the Effective Date (the "Initial Option Term") and may be renewed by Tenant for an additional one (1) year (the "Renewal Option Term") unon written notification to Landlord and the payment of an additional no later than five (5) days prior to the expiration date of the Initiaruption Ierm. The Initial Option lerm and any Renewal Option Term are collectively referred to as the "Option Term."
(d) The Option may be sold, assigned or transferred at any time by Tenant to an Affiliate (as that term is hereinafter defined) of Tenant or to any third party agreeing to be subject to the terms hereof. Otherwise,
the Option may not be sold, assigned or transferred without the written consent of Landlord, such consent not to be unreasonably withheld, conditioned or delayed. From and after the date the Option has been sold, assigned or transferred by Tenant to an Affiliate or a third party agreeing to be subject to the terms hereof, Tenant shall immediately be released from any and all liability under this Agreement, including the payment of any rental or other sums due, without any further action.
(e) During the Option Term, Tenant may exercise the Option by notifying Landlord in writing. If Tenant exercises the Option then Landlord leases the Premises to Tenant subject to the terms and conditions of this Agreement. If Tenant does not exercise the Option during the Initial Option Term or any extension thereof, this Agreement will terminate and the parties will have no further liability to each other.
(f) If during the Option Term, or during the term of this Agreement the Option is exercised, Landlord decides to subdivide, sell, or change the status of the zoning of the Premises, Property or any of Landlord's contiguous, adjoining or surrounding property (the "Surrounding Property,") or in the event of foreclosure, Landlord shall immediately notify Tenant in writing. Landlord agrees that during the Option Term, or during the Term of this Agreement if the Option is exercised, Landlord shall not initiate or consent to any change in the zoning of the Premises, Property or Surrounding Property or impose or consent to any other use or restriction that would prevent or limit Tenant from using the Premises for the Permitted Use. Any and all terms and conditions of this Agreement that by their sense and context are intended to be applicable during the Option Term shall be so applicable.
2. PERMITTED USE. Tenant may use the Premises for the transmission and reception of communications signals and the installation, construction, maintenance, operation, repair, replacement and upgrade of its communications fixtures and related equipment, cables, accessories and improvements, which may include a suitable support structure, associated antennas, equipment shelters or cabinets and fencing and any other items necessary to the successful and secure use of the Premises (collectively, the "Communication Facility"), as well as the right to test, survey and review title on the Property; Tenant further has the right but not the obligation to add, modify and/or replace equipment in order to be in compliance with any current or future federal, state or local mandated application, including, but not limited to, emergency 911 communication services, at no additional cost to Tenant or Landlord (collectively, the "Permitted Use"). Landlord and Tenant agree that any portion of the Communication Facility that may be conceptually described on Exhibit 1 will not be deemed to limit Tenant's Permitted Use. If Exhibit 1 includes drawings of the initial installation of the Communication Facility, Landlord's execution of this Agreement will signify Landlord's approval of Exhibit 1. For a period of ninety (90) days following the start of construction, Landlord grants Tenant, its subtenants, licensees and sublicensees, the right to use such portions of Landlord's contiguous, adjoining or Surrounding Property as described on Exhibit 1 as may reasonably be required during construction and installation of the Communication Facility. Tenant has the right to install and operate transmission cables from the equipment shelter or cabinet to the antennas, electric lines from the main feed to the equipment shelter or cabinet and communication lines from the Property's main entry point to the equipment shelter or cabinet, and to make other improvements, alterations, upgrades or additions appropriate for Tenant's Permitted Use, including the right to construct a fence around the Premises and undertake any other appropriate means to secure the Premises at Tenant's expense. Tenant has the right to modify, supplement, replace, upgrade, expand the equipment, increase the number of antennas or relocate the Communication Facility within the Premises at any time during the term of this Agreement. Tenant will be allowed to make such alterations to the Property in order to ensure that Tenant's Communication Facility complies with all applicable federal, state or local laws, rules or regulations. In the event Tenant desires to modify or upgrade the Communication Facility, in a manner that requires an additional portion of the Property (the "Additional Premises") for such modification or upgrade, Landlord agrees to lease to Tenant the Additional Premises, upon the same terms and conditions set forth herein, except that the Rent shall increase, in conjunction with the lease of the Additional Premises by the amount equivalent to the then-current per square foot rental rate charged by Landlord to Tenant times the square footage of the Additional Premises. Landlord agrees to take such actions and enter into and deliver to Tenant such documents as Tenant reasonably requests in order to effect and memorialize the lease of the Additional Premises to Tenant.

\section*{3. TERM.}
(a) The initial lease tern will be five (5) years (the "Initial Term"), commencing on the effective date of written notification by Tenant to Landlord of Tenant's exercise of the Option (the "Term Commencement Date"). The Initial Term will terminate on the fifth ( \(5^{\text {th) }}\) ) amiversary of the Term Commencement Date
(b) This Agreement will automatically renew for four (4) additional five (5) year term(s) (each five (5) year term shall be defined as an "Extension Term"), upon the same terms and conditions unless Tenant notifies Landlord in writing of Tenant's intention not to renew this Agreement at least sixty (60) days prior to the expiration of the Initial Term or then-existing Extension Term.
(c) Unless (i) Landlord or Tenant notifies the other in writing of its intention to terminate this Agreement at least six (6) months prior to the expiration of the final Extension Term, or (ii) the Agreement is terminated as otherwise permitted by this Agreement prior to the end of the final Extension Term, then upon the expiration of the final Extension Term, this Agreement shall contmue in force upon the same covenants, terms and conditions for a further term of one (1) year, and for anmual terms thereafter ("Annual Term") until terminated by either party by giving to the other written notice of its intention to so terminate at least six (0) months prior to the end of any such Annual Term. Monthly rental during such Annual Terms shall be equal to the Rent paid for the last month of the final Extension Term. If Tenant remains in possession of the Premises after the termination of this Agreement, then Tenant will be deemed to be occupying the Premises on a month-to-month basis (the "Holdover Term"), subject to the terms and conditions of this Agreement.
(d) The Initial Term, any Extension Terms, any Annual Terms and any Holdover Term are collectively referred to as the Term (the "Term").

\section*{4. RENT.}
(a) Commencing on the first day of the month following the date that Tenant commences construction (the "Rent Commencement Date"). Tenant will pay Landlord on or before the fifth ( \(5^{\text {th }}\) ) day of each calendar month in advance (the "Rent"), at the address set forth above. In any partial month occurring after the Rent Commencement Date, Rent will be prorated. The initial Rent payment will be forwarded by Tenant to Landlord within forty-five (45) days after the Rent Commencement Datc.
(b) In year onc (1) of each Extension Term, the monthly Rent will increase by ver the Rent paid during the previous five (5) year term.
(c) All charges payable under this Agreement such as utilitics and taxes shall be billed by Landlord within one (1) year from the end of the calendar year in which the charges were incurred; any charges beyond such period shall not be billed by Landlord, and shall not be payable by Tenant. The foregoing shall not apply to monthly Rent which is due and payable without a requirement that it be billed by Landlord. The provisions of this subsection shall survive the termination or expiration of this Agreement.

\section*{5. APPROVALS.}
(a) Landlord agrees that Tenant's ability to use the Premises is contingent upon the suitability of the Premises and Property for Tenant's Permitted Use and Tenant's ability to obtain and maintain all Government Approvals. Landlord authorizes Tenant to prepare, execute and file all required applications to obtain Government Approvals for Tenant's Permitted Use under this Agreement and agrees to reasonably assist Tenant with such applications and with obtaining and maintaining the Government Approvals.
(b) Tenant has the right to obtain a title report or commitment for a leasehold title policy from a (itle insurance company of its choice and to have the Property surveyed by a surveyor of its choice.
(c) Tenant may also perform and obtain, at Tenant's sole cost and expense, soil borings, percolation tests, engineering procedures, environmental investigation or other tests or reports on, over, and under the Property, necessary to determine if Tenant's use of the Premises will be compatible with Tenant's engineering specifications, system, design, operations or Government Approvals.
6. TERMINATION. This Agreement may be terminated, without penalty or further liability, as follows:
(a) by either party on thirty (30) days prior written notice, if the other party remains in default under Section 15 of this Agreement after the applicable cure periods;
(b) by Tenant upon written notice to Landlord, if Tenant is unable to obtain or maintain, any required approval(s) or the issuance of a license or permit by any agency, board, court or other governmental authority necessary for the construction or operation of the Communication Facility as now or hereafter intended by Tenant; or if Tenant determines. in its sole discretion that the cost of or delay in obtaining or retaining the same is commercially unreasonable;
(c) by Tenant, upon written notice to Landlord, if Tenant determines, in its sole discretion, due to the title report results or survey results. that the condition of the Premises is unsatisfactory for its intended uses;
(d) by Tenant upon written notice to Landlord for any reason or no reason, at any time prior to commencement of construction by Tenant; or
(e) by lenant upon sixty (60) days prior written notice to Landlord for any reason or no reason, so long as Tenant pays Landlord a termination fee equal to three (3) months' Rent, at the then-current rate, provided, however, that no such termination fee will be payable on account of the termination of this Agreement by Tenant under any temination provision contained in any other Section of this Agreement, including the following: 5 Approvals, 6 (a) Termination, 6 (b) Termination, \(6(\mathrm{c})\) Termination, 6 (d) Termination, 11 (d) Environmental. 18 Condemmation, or 19 Casualty.

\section*{7. INSURANCE.}
(a) During the Term, Tenant will carry, at its own cost and expense, the following insurance: (i) workers' compensation insurance as required by law; and (ii) commercial general liability (CGL) insurance with respect to its activities on the Property, such insurance to afford protection of up to Services Office (ISO) Fom CG 00 01 or a substitute form providing substantially equivalent coverage. Tenant's CGL insurance shall contain a provision including Landlord as an additional insured. Such additional insured coverage:
(i) shall be limited to bodily injury, property damage or personal and advertising injury caused, in whole or in part, by Tenant, its employees, agents or independent contractors;
(ii) shall not extend to claims for punitive or exemplary damages arising out of the acts or omissions of Landlord, its employees, agents or independent contractors or where such coverage is prohibited by law or to claims arising out of the gross negligence of Landlord, its employees, agents or independent contractors; and
(iii) shall not exceed Tenant's indemnification obligation under this Agreement, if any.
(b) Notwithstanding the foregoing, Tenant shall have the right to self-insure the coverages required in subsection (a). In the event Tenant elects to self-insure its obligation to include Landlord as an additional insured, the following provisions shall apply (in addition to those set forth in subsection (a)):
(i) Landlord shall promptly and no later than thirty (30) days after notice thereof provide Tenant with written notice of any claim, demand, lawsuit, or the like for which it seeks coverage pursuant to this Section and provide Tenant with copies of any demands, notices, summonses, or legal papers received in connection with such claim, demand, lawsuit, or the like:
(ii) Landlord shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of Tenant; and
(iii) Landlord shall fully cooperate with Tenant in the defense of the claim, demand, lawsuit. or the like.

\section*{8. INTERFERENCE.}
(a) Prior to or concurrent with the execution of this Agreement, Landlord has provided or will provide Tenant with a list of radio frequency user(s) and frequencies used on the Property as of the Effective Date. Tenant warrants that its use of the Premises will not interfere with those existing radio frequency uses on the Property, as long as those existing radio frequency user(s) operate and continue to operate within their respective frequencies and in accordance with all applicable laws and regulations.
(b) Landlord will not grant, after the date of this Agreement, a lease, license or any other right to any third party, if the exercise of such grant may in any way adversely affect or interfere with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will notify Tenant in writing prior to granting any third party the right to install and operate communications equipment on the Property.
(c) Landlord will not, nor will Landlord permit its employees, tenants, licensees, invitees, agents or independent contractors to, interfere in any way with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will cause such interference to cease within twenty-four (24) hours after receipt of notice of interference from Tenant. In the event any such interference does not cease within the aforementioned cure period, Landlord shall cease all operations which are suspected of causing interference (except for intermittent testing to determine the cause of such interference) until the interference has been corrected.
(d) For the purposes of this Agreement, "interference" may include, but is not limited to, any use on the Property or Surrounding Property that causes electronic or physical obstruction with, or degradation of, the communications signals from the Communication Facility.

\section*{9. INDEMNIFICATION.}
(a) Tenant agrees to indemnify, defend and hold Landlord harmless from and against any and all injury, loss, damage or liability (or any claims in respect of the foregoing), costs or expenses (including reasonable attorneys' fees and court costs) arising directly from the installation, use, maintenance, repair or removal of the Communication Facility or Tenant's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Landlord, its employees, agents or independent contractors.
(b) Landlord agrees to indemnify, defend and hold Tenant harmless from and against any and all injury, loss, damage or liability (or any claims in respect of the foregoing), costs or expenses (including reasonable attomeys' fees and court costs) arising directly from the actions or failure to act of Landlord, its employees or agents, or Landlord's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Tenant, its employees, agents or independent contractors.
(c) The indemnified party: (i) shall promptly provide the indemnifying party with written notice of any claim, demand, lawsuit, or the like for which it seeks indemnification pursuant to this Section and provide the indemnifying party with copies of any demands, notices, summonses, or legal papers received in connection with such claim, demand, lawsuit, or the like; (ii) shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of the indemnifying party; and (iii) shall fully cooperate with the indemnifying party in the defense of the claim, demand, lawsuit, or the like. A delay in notice shall not relieve the indemnifying party of its indemnity obligation, except (1) to the extent the indemnifying party can show it was prejudiced by the delay; and (2) the indemnifying party shall not be liable for any settlement or litigation expenses incurred before the time when notice is given.

\section*{10. WARRANTIES.}
(a) Tenant and Landlord each acknowledge and represent that it is duly organized, validly existing and in good standing and has the right, power and authority to enter into this Agreement and bind itself hereto through the party set forth as signatory for the party below.
(b) Landlord represents, warrants and agrees that: (i) Landlord solely owns the Property as a legal lot in fee simple, or controls the Property by lease or license; (ii) the Property is not and will not be encumbered by any liens, restrictions, mortgages, covenants, conditions, easements, leases, or any other agreements of record or not of record, which would adversely affect Tenant's Permitted Use and enjoyment of the Premises under this

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

\section*{11. ENVIRONMENTAL.}
(a) Landlord represents and warrants that, except as may be identified in Exhibit 11 attached to this Agreement, (i) the Property, as of the date of this Agreement, is free of hazardous substances, including asbestos-containing materials and lead paint, and (ii) the Property has never been subject to any contamination or hazardous conditions resulting in any environmental investigation, inquiry or remediation. Landlord and Tenant agree that each will be responsible for compliance with any and all applicable governmental laws, rules, statutes, regulations, codes, ordinances, or principles of common law regulating or imposing standards of liability or standards of conduct with regard to protection of the environment or worker health and safety, as may now or at any time hereafter be in effect, to the extent such apply to that party's activity conducted in or on the Property.
(b) Landlord and Tenant agree to hold harmless and indemnify the other from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of the indemnifying party for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding ("Claims"), to the extent arising from that party's breach of its obligations or representations under Section 11(a). Landlord agrees to hold harmless and indemnify Tenant from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Landlord for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from subsurface or other contamination of the Property with hazardous substances prior to the effective date of this Agreement or from such contamination caused by the acts or omissions of Landlord during the Term. Tenant agrees to hold harmless and indemnify Landlord from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Tenant for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from hazardous substances brought onto the Property by Tenant.
(c) The indemnifications of this Section 11 specifically include reasonable costs, expenses and fees incurred in connection with any investigation of Property conditions or any clean-up, remediation, removal or restoration work required by any governmental authority. The provisions of this Section 11 will survive the expiration or termination of this Agreement.
(d) In the event Tenant becomes aware of any hazardous substances on the Property, or any environmental, health or safety condition or matter relating to the Property, that, in Tenant's sole determination, renders the condition of the Premises or Property unsuitable for Tenant's use, or if Tenant believes that the leasing or continued leasing of the Premises would expose Tenant to undue risks of liability to a government agency or other third party, Tenant will have the right, in addition to any other rights it may have at law or in equity, to terminate this Agreement upon written notice to Landlord.
12. ACCESS. At all times throughout the Term of this Agreement, and at no additional charge to Tenant, Tenant and its employees, agents, and subcontractors, will have twenty-four (24) hour per day, seven (7) day per week pedestrian and vehicular access ("Access") to and over the Property, from an open and improved public road to the Premises, for the installation, maintenance and operation of the Communication Facility and any utilities serving the Premises. As may be described more fully in Exhibit 1, Landlord grants to Tenant an easement for such Access and Landlord agrees to provide to Tenant such codes, keys and other instruments necessary for such Access at no additional cost to Tenant. Upon Tenant's request, Landlord will execute a separate recordable easement evidencing this right. Landlord shall execute a letter granting Tenant Access to the Property substantially in the form attached as Exhibit 12; upon Tenant's request, Landlord shall execute
additional letters during the Term. Landlord acknowledges that in the event Tenant cannot obtain Access to the Premises, Tenant shall incur significant damage. If Landlord fails to provide the Access granted by this Section 12, such failure shall be a default under this Agreement. In connection with such default, in addition to any other rights or remedies available to Tenant under this Agreement or at law or equity, Landlord shall pay Tenant, as liquidated damages and not as a penalty, \(n\) consideration of Tenant's damages until Landlord cures such default. Landlord and Tenant agree that Tenant's damages in the event of a denial of Access are difficult, if not impossible, to ascertain, and the liquidated damages set forth above are a reasonable approximation of such damages.
13. REMOVAL/RESTORATION. All portions of the Communication Facility brought onto the Property by Tenant will be and remain Tenant's personal property and, at Tenant's option, may be removed by Tenant at any time during or after the Term. Landlord covenants and agrees that no part of the Communication Facility constructed, erected or placed on the Premises by Tenant will become, or be considered as being affixed to or a part of, the Property, it being the specific intention of Landlord that all improvements of every kind and nature constructed, erected or placed by Tenant on the Premises will be and remain the property of Tenant and may be removed by Tenant at any time during or after the Term. Tenant will repair any damage to the Property resulting from Tenant's removal activities. Any portions of the Communication Facility that Tenant does not remove within one hundred twenty (120) days after the later of the end of the Term and cessation of Tenant's operations at the Premises shall be deemed abandoned and owned by Landlord. However, to the extent required by law, Tenant will remove the above-ground portions of the Communications Facility within such one hundred twenty (120) day period. Notwithstanding the foregoing, Tenant will not be responsible for the replacement of any trees, shrubs or other vegetation.

\section*{14. MAINTENANCE/UTILITIES.}
(a) Tenant will keep and maintain the Premises in good condition, reasonable wear and tear and damage from the elements excepted. Landlord will maintain and repair the Property and access thereto and all areas of the Premises where Tenant does not have exclusive control, in good and tenantable condition, subject to reasonable wear and tear and damage from the elements. Landlord will be responsible for maintenance of landscaping on the Property, including any landscaping installed by Tenant as a condition of this Agreement or any required permit.
(b) Tenant will be responsible for paying on a monthly or quarterly basis all utilities charges for electricity, telephone service or any other utility used or consumed by Tenant on the Premises. In the event Tenant cannot secure its own metered electrical supply. Tenant will have the right, at its own cost and expense, to submeter from Landlord. When submetering is required under this Agreement, Landlord will read the meter and provide Tenant with an invoice and usage data on a monthly basis. Landlord agrees that it will not include a markup on the utility charges. Landlord further agrees to provide the usage data and invoice on forms provided by Tenant and to send such forms to such address and/or agent designated by Tenant. Tenant will remit payment within forty-five (45) days of receipt of the usage data and required forms. As noted in Section 4(c) above, any utility fee recovery by Landlord is limited to a twelve (12) month period. If Tenant submeters electricity from Landlord, Landlord agrees to give Tenant at least twenty-four (24) hours advance notice of any planned interruptions of said electricity. Landlord acknowledges that Tenant provides a communication service which requires electrical power to operate and must operate twenty-four (24) hours per day, seven (7) days per week. If the interruption is for an extended period of time, in Tenant's reasonable determination, Landlord agrees to allow Tenant the right to bring in a temporary source of power for the duration of the interruption. Landlord will not be responsible for interference with, interruption of or failure, beyond the reasonable control of Landlord, of such services to be furnished or supplied by Landlord.
(c) Landlord hereby grants to any company providing utility or similar services, including electric power and telecommunications, to Tenant an easement over the Property, from an open and improved public road to the Premises, and upon the Premises, for the purpose of constructing, operating and maintaining such lines, wires, circuits, and conduits, associated equipment cabinets and such appurtenances thereto, as such companies may from time to time require in order to provide such services to the Premises. Upon Tenant's or the service company's request, Landlord will execute a separate recordable easement evidencing this grant, at no cost to Tenant or the service company.

\section*{15. DEFAULT AND RIGHT TO CURE.}
(a) The following will be deemed a default by Tenant and a breach of this Agreement: (i) nonpayment of Rent if such Rent remains unpaid for more than thirty (30) days after written notice from Landlord of such failure to pay; or (ii) Tenant's failure to perform any other term or condition under this Agreement within forty-five (45) days after written notice from Landlord specifying the failure. No such failure, however, will be deemed to exist if Tenant has commenced to cure such default within such period and provided that such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Tenant. If Tenant remains in default beyond any applicable cure period, Landlord will have the right to exercise any and all rights and remedies available to it under law and equity.
(b) The following will be deemed a default by Landlord and a breach of this Agreement: (i) Landlord's failure to provide Access to the Premises as required by Section 12 of this Agreement within twentyfour (24) hours after written notice of such failure; (ii) Landlord's failure to cure an interference problem as required by Section 8 of this Agreement within twenty-four (24) hours after written notice of such failure; or (iii) Landlord's failure to perform any term, condition or breach of any warranty or covenant under this Agreement within forty-five (45) days after written notice from Tenant specifying the failure. No such failure, however, will be deemed to exist if Landlord has commenced to cure the default within such period and provided such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Landlord. If Landlord remains in default beyond any applicable cure period, Tenant will have: (i) the right to cure Landlord's default and to deduet the costs of such cure from any monies due to Landlord from Tenant, and (ii) any and all other rights available to it under law and equity.
16. ASSIGNMENT/SUBLEASE. Tenant will have the right to assign this Agreement or sublease the Premises and its rights herein, in whole or in part, without Landlord's consent. Upon notification to Landlord of such assignment, Tenant will be relieved of all future performance, liabilities and obligations under this Agreement to the extent of such assignment.
17. NOTICES. All notices, requests and demands hereunder will be given by first class certified or registered mail, return receipt requested, or by a nationally recognized overnight courier, postage prepaid, to be effective when properly sent and received, refused or returned undelivered. Notices will be addressed to the parties as follows:

If to Tenant: New Cingular Wireless PCS, LLC
Attn: Network Real Estate Administration
Re: Cell Site \#KYL06091; Cell Site Name: Coldiron (KY)
Fixed Asset No.: 13800707
575 Morosgo Drive NE
Atlanta, GA 30324
With a copy to:
New Cingular Wireless PCS, LLC
Attn: Legal Department
Re: Cell Site \#KYL06091; Cell Site Name: Coldiron (KY)
Fixed Asset No.: 13800707
208 S. Akard Street
Dallas, TX 75202-4206

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

If to Landlord: Stacy Travis Hensley
69 Ring Eye Lane
Wallins Creek, KY 40873
Either party hereto may change the place for the giving of notice to it by thirty (30) days' prior written notice to the other as provided herein.
18. CONDEMNATION. In the event Landlord receives notification of any condemnation proceedings affecting the Property, Landlord will provide notice of the proceeding to Tenant within forty-eight (48) hours. If a condemning authority takes all of the Property, or a portion sufficient, in Tenant's sole determination, to render the Premises unsuitable for Tenant, this Agreement will terminate as of the date the title vests in the condemning authority. The parties will each be entitled to pursue their own separate awards in the condemnation proceeds, which for Tenant will include, where applicable, the value of its Communication Facility, moving expenses, prepaid Rent, and business dislocation expenses. Tenant will be entitled to reimbursement for any prepaid Rent on a prorata basis.
19. CASUALTY. Landlord will provide notice to Tenant of any casualty or other harm affecting the Property within forty-eight (48) hours of the casualty or other harm. If any part of the Communication Facility or Property is damaged by casualty or other harm as to render the Premises unsuitable, in Tenant's sole determination, then Tenant may terminate this Agreement by providing written notice to Landlord, which termination will be effective as of the date of such casualty or other harm. Upon such termination, Tenant will be entitled to collect all insurance proceeds payable to Tenant on account thereof and to be reimbursed for any prepaid Rent on a prorata basis. Landlord agrees to permit Tenant to place temporary transmission and reception facilities on the Property, but only until such time as Tenant is able to activate a replacement transmission facility at another location; notwithstanding the termination of the Agreement, such temporary facilities will be governed by all of the terms and conditions of this Agreement, including Rent. If Landlord or Tenant undertakes to rebuild or restore the Premises and/or the Communication Facility, as applicable, Landlord agrees to permit Tenant to place temporary transmission and reception facilities on the Property at no additional Rent until the reconstruction of the Premises and/or the Communication Facility is completed. If Landlord determines not to rebuild or restore the Property, Landlord will notify Tenant of such determination within thirty (30) days after the casualty or other harm. If Landlord does not so notify Tenant, and Tenant decides not to terminate under this Section, then Landlord will promptly rebuild or restore any portion of the Property interfering with or required for Tenant's Permitted Use of the Premises to substantially the same condition as existed before the casualty or other harm. Landlord agrees that the Rent shall be abated until the Property and/or the Premises are rebuilt or restored, unless Tenant places temporary transmission and reception facilities on the Property.
20. WAIVER OF LANDLORD'S LIENS. Landlord waives any and all lien rights it may have, statutory or otherwise, concerning the Communication Facility or any portion thereof. The Communication Facility shall be deemed personal property for purposes of this Agreement, regardless of whether any portion is deemed real or personal property under applicable law; Landlord consents to Tenant's right to remove all or any portion of the Communication Facility from time to time in Tenant's sole discretion and without Landlord's consent.

\section*{21. TAXES.}
(a) Landlord shall be responsible for timely payment of all taxes and assessments levied upon the lands, improvements and other property of Landlord, including any such taxes that may be calculated by the taxing authority using any method, including the income method. Tenant shall be responsible for any taxes and assessments attributable to and levied upon Tenant's leasehold improvements on the Premises if and as set forth in this Section 21. Nothing herein shall require Tenant to pay any inheritance, franchise, income, payroll,
excise, privilege, rent, capital stock, stamp, documentary, estate or profit tax, or any tax of similar nature, that is or may be imposed upon Landlord.
(b) In the event Landlord receives a notice of assessment with respect to which taxes or assessments are imposed on Tenant's leasehold improvements on the Premises, Landlord shall provide Tenant with copies of each such notice immediately upon receipt, but in no event later than thirty (30) days after the date of such notice of assessment. If Landlord does not provide such notice or notices to Tenant within such time period, Landlord shall be responsible for payment of the tax or assessment set forth in the notice, and Landlord shall not have the right to reimbursement of such amount from Tenant. If Landlord provides a notice of assessment to Tenant within such time period and requests reimbursement from Tenant as set forth below, then Tenant shall reimburse Landlord for the tax or assessments identified on the notice of assessment on Tenant's leasehold improvements, which has been paid by Landlord. If Landlord seeks reimbursement from Tenant, Landlord shall, no later than thirty (30) days after Landlord's payment of the taxes or assessments for the assessed tax year, provide Tenant with written notice including evidence that Landlord has timely paid same, and Landlord shall provide to Tenant any other documentation reasonably requested by Tenant to allow Tenant to evaluate the payment and to reimburse Landlord.
(c) For any tax amount for which Tenant is responsible under this Agreement, Tenant shall have the right to contest, in good faith, the validity or the amount thereof using such administrative, appellate or other proceedings as may be appropriate in the jurisdiction, and may defer payment of such obligations, pay same under protest, or take such other steps as Tenant may deem appropriate. This right shall include the ability to institute any legal, regulatory or informal action in the name of Landlord, Tenant, or both, with respect to the valuation of the Premises. Landlord shall cooperate with respect to the commencement and prosecution of any such proceedings and will execute any documents required therefor. The expense of any such proceedings shall be borne by Tenant and any refunds or rebates secured as a result of Tenant's action shall belong to Tenant, to the extent the amounts were originally paid by Tenant. In the event Tenant notifies Landlord by the due date for assessment of Tenant's intent to contest the assessment, Landlord shall not pay the assessment pending conclusion of the contest, unless required by applicable law.
(d) Landlord shall not split or cause the tax parcel on which the Premises are located to be split, bifurcated, separated or divided without the prior written consent of Tenant.
(e) Tenant shall have the right but not the obligation to pay any taxes due by Landlord hereunder if Landlord fails to timely do so, in addition to any other rights or remedies of Tenant. In the event that Tenant exercises its rights under this Section 21 (c) due to such Landlord default, Tenant shall have the right to deduct such tax amounts paid from any monies due to Landlord from Tenant as provided in Section \(15(\mathrm{~b})\), provided that Tenant may exercise such right without having provided to Landlord notice and the opportunity to cure per Section 15(b).
(f) Any tax-related notices shall be sent to Tenant in the manner set forth in Section 17 and, in addition, of a copy of any such notices shall be sent to the following address. Promptly after the Effective Date of this Agreement, Landlord shall provide the following address to the taxing authority for the authority's use in the event the authority needs to communicate with Tenant. In the event that Tenant's tax addresses changes by notice to Landlord, Landlord shall be required to provide Tenant's new tax address to the taxing authority or authorities.

New Cingular Wireless PCS, LLC
Attn: Network Real Estate Administration -- Taxes
Re: Cell Site \#KYL06091; Cell Site Name: Coldiron (KY)
Fixed Asset No: 13800707
575 Morosgo Drive NE
Atlanta, GA 30324
(g) Notwithstanding anything to the contrary contained in this Section 21, Tenant shall have no obligation to reimburse any tax or assessment for which the Landlord is reimbursed or rebated by a third party.

\section*{22. SALE OF PROPERTY}
(a) Landlord shall not be prohibited from the selling, leasing or use of any of the Property or the Surrounding Property except as provided below
(b) If Landlord, at any time during the Term of this Agreement, decides to rezone or sell, subdivide or otherwise transfer all or any part of the Premises, or all or any part of the Property or Surrounding Property, to a purchaser other than Tenant, Landlord shall promptly notify Tenant in writing, and such rezoning, sale, subdivision or transfer shall be subject to this Agreement and Tenant's rights hereunder. In the event of a change in ownership, transfer or sale of the Property, within ten (10) days of such transfer, Landlord or its successor shall send the documents listed below in this subsection (b) to Tenant. Until Tenant receives all such documents, Tenant shall not be responsible for any failure to make payments under this Agreement and reserves the right to hold payments due under this Agreement.
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i. Old deed to Property
ii. New deed to Property
iii. Bill of Sale or Transfer
iv. Copy of current Tax Bill
v. New IRS Form W-9
vi. Completed and Signed AT\&T Payment Direction Form
vii. Full contact information for new Landlord including phone number(s)

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(c) Landlord agrees not to sell, lease or use any areas of the Property or Surrounding Property for the installation, operation or maintenance of other wireless communications facilities if such installation, operation or maintenance would interfere with Tenant's Permitted Use or communications equipment as determined by radio propagation tests performed by Tenant in its sole discretion. Landlord or Landlord's prospective purchaser shall reimburse Tenant for any costs and expenses of such testing. If the radio frequency propagation tests demonstrate levels of interference unacceptable to Tenant, Landlord shall be prohibited from selling, leasing or using any areas of the Property or the Surrounding Property for purposes of any installation, operation or maintenance of any other wireless communications facility or equipment.
(d) The provisions of this Section shall in no way limit or impair the obligations of Landlord under this Agreement, including interference and access obligations.
23. RENTAL STREAM OFFER. If at any time after the date of this Agreement, Landlord receives a bona fide written offer from a third party seeking an assignment or transfer of Rent payments associated with this Agreement ("Rental Stream Offer"), Landlord shall immediately furnish Tenant with a copy of the Rental Stream Offer. Tenant shall have the right within twenty (20) days after it receives such copy to match the Rental Stream Offer and agree in writing to match the terms of the Rental Stream Offer. Such writing shall be in the form of a contract substantially similar to the Rental Stream Offer. If Tenant chooses not to exercise this right or fails to provide written notice to Landlord within the twenty (20) day period, Landlord may assign the right to receive Rent payments pursuant to the Rental Stream Offer, subject to the terms of this Agreement. If Landlord attempts to assign or transfer Rent payments without complying with this Section, the assignment or transfer shall be void. Tenant shall not be responsible for any failure to make payments under this Agreement and reserves the right to hold payments due under this Agreement until Landlord complies with this Section.

\section*{24. MISCELLANEOUS.}
(a) Amendment/Waiver. This Agreement cannot be amended, modified or revised unless done in writing and signed by Landlord and Tenant. No provision may be waived except in a writing signed by both parties. The failure by a party to enforce any provision of this Agreement or to require performance by the other
party will not be construed to be a waiver, or in any way affect the right of either party to enforce such provision thereafter.
(b) Memorandum/Short Form Lease. Contemporaneously with the execution of this Agreement, the parties will execute a recordable Memorandum or Short Form of Lease substantially in the form attached as Exhibit 24b. Either party may record this Memorandum or Short Form of Lease at any time during the Term, in its absolute discretion. Thereafter during the Term of this Agreement, either party will, at any time upon fifteen (15) business days' prior written notice from the other, execute, acknowledge and deliver to the other a recordable Memorandum or Short Form of Lease.
(c) Limitation of Liability. Except for the indemnity obligations set forth in this Agreement, and otherwise notwithstanding anything to the contrary in this Agreement, Tenant and Landlord each waives any claims that each may have against the other with respect to consequential, incidental or special damages, however caused, based on any theory of liability.
(d) Compliance with Law. Tenant agrees to comply with all federal, state and local laws, orders, rules and regulations ("Laws") applicable to Tenant's use of the Communication Facility on the Property. Landlord agrees to comply with all Laws relating to Landlord's ownership and use of the Property and any improvements on the Property.
(e) Bind and Benefit. The terms and conditions contained in this Agreement will run with the Property and bind and inure to the benefit of the parties, their respective heirs, executors, administrators, successors and assigns.
(f) Entire Agreement. This Agreement and the exhibits attached hereto, all being a part hereof, constitute the entire agreement of the parties hereto and will supersede all prior offers, negotiations and agreements with respect to the subject matter of this Agreement. Exhibits are numbered to correspond to the Section wherein they are first referenced. Except as otherwise stated in this Agreement, each party shall bear its own fees and expenses (including the fees and expenses of its agents, brokers, representatives, attorneys, and accountants) incurred in connection with the negotiation, drafting, execution and performance of this Agreement and the transactions it contemplates.
(g) Governing Law. This Agreement will be governed by the laws of the state in which the Premises are located, without regard to conflicts of law.
(h) Interpretation. Unless otherwise specified, the following rules of construction and interpretation apply: (i) captions are for convenience and reference only and in no way define or limit the construction of the terms and conditions hereof; (ii) use of the term "including" will be interpreted to mean "including but not limited to"; (iii) whenever a party's consent is required under this Agreement, except as otherwise stated in this Agreement or as same may be duplicative, such consent will not be unreasonably withheld, conditioned or delayed; (iv) exhibits are an integral part of this Agreement and are incorporated by reference into this Agreement; (v) use of the terms "termination" or "expiration" are interchangeable; (vi) reference to a default will take into consideration any applicable notice, grace and cure periods: (vii) to the extent there is any issue with respect to any alleged, perceived or actual ambiguity in this Agreement, the ambiguity shall not be resolved on the basis of who drafted the Agreement; (viii) the singular use of words includes the plural where appropriate and (ix) if any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions of this Agreement shall remain in full force if the overall purpose of the Agreement is not rendered impossible and the original purpose, intent or consideration is not materially impaired.
(i) Affiliates. All references to "Tenant" shall be decmed to include any Affiliate of New Cingular Wireless PCS, LLC using the Premises for any Permitted Use or otherwise exercising the rights of Tenant pursuant to this Agreement. "Affiliate" means with respect to a party to this Agreement, any person or entity that (directly or indirectly) controls, is controlled by, or under common control with, that party. "Control" of a person or entity means the power (directly or indirectly) to direct the management or policies of that person or entity, whether through the ownership of voting securities, by contract, by agency or otherwise.
(j) Survival. Any provisions of this Agreement relating to indemnification shall survive the termination or expiration hereof. In addition, any terms and conditions contained in this Agreement that by their sense and context are intended to survive the termination or expiration of this Agreement shall so survive.
(k) W-9. As a condition precedent to payment, Landlord agrees to provide Tenant with a completed IRS Form W-9, or its equivalent, upon execution of this Agreement and at such other times as may be reasonably requested by Tenant, including, any change in Landlord's name or address.
(1) Execution/No Option. The submission of this Agreement to any party for examination or consideration does not constitute an offer, reservation of or option for the Premises based on the terms set forth herein. This Agreement will become effective as a binding Agreement only upon the handwritten legal execution, acknowledgment and delivery hereof by Landlord and Tenant. This Agreement may be executed in two (2) or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties. All parties need not sign the same counterpart.
(m) Attorneys' Fees. In the event that any dispute between the parties related to this Agreement should result in litigation, the prevailing party in such litigation shall be entitled to recover from the other party all reasonable fees and expenses of enforcing any right of the prevailing party, including without limitation, reasonable attomeys' fees and expenses. Prevailing party means the party determined by the court to have most nearly prevailed even if such party did not prevail in all matters. This provision will not be construed to entitle any party other than Landlord, Tenant and their respective Affiliates to recover their fees and expenses.
(n) WAIVER OF JURY TRIAL. EACH PARTY, TO THE EXTENT PERMITTED BY LAW, KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES ITS RIGHT TO A TRLAL BY JURY IN ANY ACTION OR PROCEEDING UNDER ANY THEORY OF LIABILITY ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR THE TRANSACTIONS IT CONTEMPLATES.
[SIGNATURES AND ACKNOWLEDGMENTS APPEAR ON NEXT PAGES]

IN WITNESS WHEREOF, the parties have caused this Agreement to be effective as of the last date written below.
"LANDLORD"
Stacy Travis Hensley
By: tacy Y Nand
Print Name: Sucy Travis Hensley
Its: Owner
Date: \(\quad\) a \(30-16\)

Amy Hensley
By: Axuly yrexslegn
Its: Owner
Date: \(\qquad\)

\section*{LANDLORD ACKNOWLEDGMENT}

\section*{STATE OF KENTUCKY)}
) ss:

COUNTY OF HARLAN)
On the 30 day of Sept , 2016 before me, personally appeared Stacy Travis Hensley and Amy Hensley, who acknowledged under oath, that he/she/they is/are the person/officer named in the within instrument, and that he/she/they executed the same in his/her/their stated capacity as the voluntary act and deed of the Landlord for the purposes therein contained.



\section*{TENANT ACKNOWLEDGMENT}

\section*{STATE OF ALABAMA}
)
) \(s s:\)
COUNTY OF JEFFERSON
)
On the it day of \(S\) eppteruber. 2017, before me personally appeared Bryan Coleman and acknowledged under oath that he is the Area Manager Network Engineering - Gulf States/TNKY Site Acquisition of AT\&T Mobility Corporation, the Manager of New Cingular Wireless PCS, LLC, the Tenant named in the attached instrument, and as such was authorized to execute this instrument on behalf of the Tenant.


\section*{EXHIBIT 1}

\section*{DESCRIPTION OF PREMISES}

\section*{Page 1 of 2}
to the Option and Lease Agreement dated \(\frac{1 / 25 / 2 / 8,2017 \text { ，by and between Stacy Travis Hensley }}{2}\) and Amy Hensley，his wife，as Landlord，and New Cingular Wireless PCS，LLC，a Delaware limited liability company，as Tenant．

The Property is legally described as follows：DB 464，PG 758

\section*{TRACTI}

> BEGINNING neat a spring at a slake on the Claude Hengley and Johnny B Saytor cormer thenow going wth a dran up the mountain in a northeast direction with the Claude Hensley line to the Bull Howard line, thence going with the Bull Howard ine in a westerty direction to a stone matred " \(X\) ' on lia Otis tiensley line at a fambly cemetary: thence going cown the mountam with the Ovs Hensleyare in a southerly direction to 自 store marked \(x\) to the Minna Russel ling thenco west to the Otis Henslery and Jir Brock corner thenca south to the Jonnny 8 Saytor line thence in an easterty direction with the Johnny \(B\) Saylor lime cack to the point of BEGINNING

\section*{TRACT II}

A certain troct of parcel of land iving in Hartan County and state of Kentucky，on Cumberiand River and bounded as follows． 10 wit BEGINNING on a stome a corner of Marthe Russell＇s line at Andrew Osbourne line：thence with Andrew Osocurne kre and fence to Bul Howard：thence with Bill Howards line to a stone marked \(X\) in Bill Howard＇s line，thence 当 south course about 200 ＇est to a slone in the swag．Trarked \(\times\) to Mintie Russel＇s hre，thence with Mintie Russelfs to a stone in Martha Russell＇s comer，thence wht Martha Russell s line to the Beginning ac as to include all the land in said boundary．
Party of Second Part is to have soal out of the mines for their personal use only．Parties of Second Part is to have a 10 toct right of way over Parties of the Furst Pan


\section*{EXHIBIT 11}

\section*{ENVIRONMENTAL DISCLOSURE}

Landlord represents and warrants that the Property, as of the date of this Agreement, is free of hazardous substances except as follows:
1. NONE.

\section*{EXHIBIT 12}

STANDARD ACCESS LETTER
[FOLLOWS ON NEXT PAGE]

\title{
[Landlord Letterhead]
}

DATE

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

\section*{Re: Authorized Access granted to AT\&T}

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

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

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

Landlord Signature

\section*{EXHIBIT J NOTIFICATION LISTING}

\section*{Coldiron - Notice List}
Hensley Stacy Travis \& Amy Hensley
PO Box 857
Wallins KY 40873
Blevins Vernis \& William Blevins
PO Box 27
Coldiron, KY 40819
Hensley Claude - Heirs-
c/o Otis HensleyPO Box 589Wallins, KY 40873
Brucker Marvin
577 Abe Lane
Coldiron, KY 40819
Collett James \& Rhonda Collett
PO Box 286
Coldiron, KY 40819
Thomas Tanya \& Jerry
PO Box 284
Coldiron, KY 40819
Baker Elva
Hwy 522 Box 7710
Totz, KY 40870
Green Bernadine
PO Box 617
Wallins, KY 40873
Hensley Otis Sr \& Rochella
c/o Otis Jr \& Mae Hensley
PO Box 589
Wallins, KY 40873
Hensley Family Cemetery
c/o Otis Hensley
PO Box 589
Wallins, KY 40873
Stephens John
c/o Nicholas Stephens
PO Box 119
Coldliron, KY 40819
Stephens John c/o Priscilla Stephens James Keith Saylor
PO Box 581
Wallins, KY 40873
Stephens Greg
PO Box 80
Coldiron, KY 40819
Hensley Jack \& Regina
PO Box 246
Coldiron, KY 40819

EXHIBIT K
COPY OF PROPERTY OWNER NOTIFICATION

\title{
Notice of Proposed Construction of Wireless Communications Facility Site Name: Coldiron
}

Dear Landowner:
New Cingular Wireless PCS, LLC, a Delaware Limited Liability Company, d/b/a AT\&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at Hwy 2007 - Abe Hill 0, Coldiron, KY 40873 ( \(36^{\circ} 49^{\prime} 42.31^{\prime \prime}\) North latitude, \(83^{\circ} 26^{\prime} 24.19^{\prime \prime}\) West longitude). The proposed facility will include a 255 -foot tall antenna tower, plus a 10-15 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 2018-00067 in any correspondence sent in connection with this matter.

In addition to expanding and improving voice and data service for AT\&T mobile customers, this site will also provide wireless local loop ("WLL") broadband internet service to homes and businesses in the area. WLL will support internet access at the high speeds required to use and enjoy the most current business, education and entertainment technologies.

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

Sincerely,
David A. Pike
Attorney for Applicant
enclosure

\section*{Driving Directions to Proposed Tower Site}
1. Beginning at the offices of the Harlan County Clerk located at 210 E. Central Street, Harlan, KY, head west on E. Central Street and travel approximately 0.2 miles.
2. Turn right onto US-421 N and travel approximately 1.0 miles.
3. Turn left onto US-119 S and travel approximately 9.0 miles.
4. Turn left onto Old Pike Highway and travel approximately 0.4 miles.
5. Turn left onto State Hwy 2007 and travel approximately 0.5 miles.
6. Turn left onto Abe Hill Road and travel approximately 0.2 miles.
7. Turn left onto Abe Lane and travel approximately 0.4 miles.
8. The site is on the left after Abe Lane ends.
9. The site coordinates are
a. North 36 deg 49 min 42.31 sec
b. West 83 deg 26 min 24.19 sec


Prepared by:
Aaron Roof
Pike Legal Group PLLC
1578 Highway 44 East, Suite 6
P.O. Box 369

Shepherdsville, KY 40165-3069
Telephone: 502-955-4400 or 800-516-4293


\section*{EXHIBIT L}

COPY OF COUNTY JUDGE/EXECUTIVE NOTICE

1578 Highway 44 East, Suite 6
P.O. Box 369

Shepherdsville, KY 40165-0369
Phone (502) 955-4400 or (800) 516-4293
Fax (502) 543-4410 or (800) 541-4410

Hon. Dan Mosley
County Judge Executive
PO Box 956
Harlan, KY 40831
RE: Notice of Proposal to Construct Wireless Communications Facility Kentucky Public Service Commission Docket No. 2018-00067 Site Name: Coldiron

Dear Judge/Executive:
New Cingular Wireless PCS, LLC, a Delaware Limited Liability Company, d/b/a AT\&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at Hwy 2007 - Abe Hill 0, Coldiron, KY 40873 ( \(36^{\circ} 49^{\prime} 42.31^{\prime \prime}\) North latitude, \(83^{\circ} 26^{\prime} 24.19^{\prime \prime}\) West longitude). The proposed facility will include a 255 -foot tall antenna tower, plus a 10-15 foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00067 in any correspondence sent in connection with this matter.

In addition to expanding and improving voice and data service for AT\&T mobile customers, this site will also provide wireless local loop ("WLL") broadband internet service to homes and businesses in the area. WLL will support internet access at the high speeds required to use and enjoy the most current business, education and entertainment technologies.

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 with any comments or questions you may have.

Sincerely,
David A. Pike
Attorney for Applicant
enclosures

\section*{Driving Directions to Proposed Tower Site}
1. Beginning at the offices of the Harlan County Clerk located at 210 E. Central Street, Harlan, KY, head west on E. Central Street and travel approximately 0.2 miles.
2. Turn right onto US-421 N and travel approximately 1.0 miles.
3. Turn left onto US-119 S and travel approximately 9.0 miles.
4. Turn left onto Old Pike Highway and travel approximately 0.4 miles.
5. Turn left onto State Hwy 2007 and travel approximately 0.5 miles.
6. Turn left onto Abe Hill Road and travel approximately 0.2 miles.
7. Turn left onto Abe Lane and travel approximately 0.4 miles.
8. The site is on the left after Abe Lane ends.
9. The site coordinates are
a. North 36 deg 49 min 42.31 sec
b. West 83 deg 26 min 24.19 sec


Prepared by:
Aaron Roof
Pike Legal Group PLLC
1578 Highway 44 East, Suite 6
P.O. Box 369

Shepherdsville, KY 40165-3069
Telephone: 502-955-4400 or 800-516-4293


\section*{EXHIBIT M \\ COPY OF POSTED NOTICES AND NEWSPAPER NOTICE ADVERTISEMENT}

\section*{SITE NAME: COLDIRON NOTICE SIGNS}

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

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT\&T Mobility proposes to construct a telecommunications tower on this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 201800067 in your correspondence.

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT\&T Mobility proposes to construct a telecommunications tower near this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 201800067 in your correspondence.

\title{
VIA TELEFAX: 606-573-0042
}

\author{
Harlan Daily Enterprise
}

PO Box 1155
Harlan, KY 40831
RE: Legal Notice Advertisement
Site Name: Coldiron
Dear Harlan Daily Enterprise:
Please publish the following legal notice advertisement in the next edition of The Harlan Daily Enterprise:

\section*{NOTICE}

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT\&T Mobility has filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at Hwy 2007 - Abe Hill 0 , Coldiron, KY 40873 ( \(36^{\circ} 49^{\prime} 42.31\) " North latitude, \(83^{\circ} 26^{\prime} 24.19^{\prime \prime}\) West longitude). You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2018-00067 in any correspondence sent in connection with this matter.

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

Sincerely,

Aaron L. Roof
Pike Legal Group, PLLC

EXHIBIT N
COPY OF RADIO FREQUENCY DESIGN SEARCH AREA
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