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	)	
AND TILLMAN INFRASTRUCTURE LLC, A DELAWARE	)	
LIMITED LIABILITY COMPANY	)	
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC	)	CASE NO.: 2021-00398
CONVENIENCE AND NECESSITY TO CONSTRUCT	)	
A WIRELESS COMMUNICATIONS FACILITY	)	
IN THE COMMONWEALTH OF KENTUCKY	)	
IN THE COUNTY OF GRAYSON	)	

SITE NAME: FALLING BRANCH

* * * * * * *

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 and Tillman Infrastructure LLC, a Delaware limited liability company ("Applicants"), by counsel, pursuant to (i) KRS §§ 278.020, 278.040, 278.650, 278.665, and other statutory authority, and the rules and regulations applicable thereto, and (ii) the Telecommunications Act of 1996, respectfully submit 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 Applicants with wireless communications services.

In support of this Application, Applicants respectfully provide and state the following

information:

1. The complete names and addresses of the Applicants are: New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility, having an address of Meidinger Tower, 462 S. 4th Street, Suite 2400, Louisville, Kentucky 40202 and Tillman Infrastructure LLC, a Delaware limited liability company having an address of 152 W 57th Street, New York, NY 10019.

2. Applicants propose construction of an antenna tower for communications services, which is to be located in an area outside the jurisdiction of a planning commission, and Applicants submit 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. AT&T Mobility is a limited liability company organized in the State of Delaware on October 20, 1994. Tillman Infrastructure is a limited liability company organized in the State of Delaware on June 13, 2016.

4. Applicants attest that they are in good standing in the state in which they are organized and further state that they are authorized to transact business in Kentucky.

5. The Certificates of Authority filed with the Kentucky Secretary of State for both Applicants are attached as part of **Exhibit A** pursuant to 807 KAR 5:001: Section 14(3).

6. AT&T Mobility operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. Copies of AT&T Mobility'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.

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

8. To address the above-described service needs, Applicants propose to construct a WCF at 2589 Blue Bird Road, Falls of Rough, KY 40119 (37° 35' 48.02" North latitude, 86° 29' 24.53" 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 Terry L. Newton and Kimberly D. Newton pursuant to a deed recorded at Deed Book 444, Page 461 in the office of the County Clerk. The proposed WCF will consist of a 145-foot tall tower, with an approximately 4-foot tall lightning arrestor attached at the top, for a total height of 149-feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of AT&T Mobility's radio electronics equipment and appurtenant equipment. The Applicants' equipment cabinet or shelter will be approved for use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound will be fenced and all access gate(s) will be secured. A

description of the manner in which the proposed WCF will be constructed is attached as **Exhibit B** and **Exhibit C**.

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

10. The site development plan and a vertical profile sketch of the WCF signed and sealed by a professional engineer registered in Kentucky depicting the tower height, as well as a proposed configuration for AT&T Mobility's antennas has also been included as part of **Exhibit B**.

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

12. Applicants have considered the likely effects of the installation of the proposed WCF on nearby land uses and values and have 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 AT&T Mobility's antennas on an existing structure. When suitable towers or structures exist, AT&T Mobility attempts to co-locate on existing structures such as communications towers or other structures capable of supporting AT&T Mobility's facilities; however, no other suitable or available co-location site was found to be located in the vicinity of the site.

13. A copy of the Determination of No Hazard to Air Navigation issued by the Federal Aviation Administration ("FAA") is attached as **Exhibit E**.

14. A copy of the approval issued by the Kentucky Airport Zoning Commission

("KAZC") is attached as **Exhibit F**.

15. A geotechnical engineering firm has performed soil boring(s) and subsequent geotechnical engineering studies at the WCF site. A copy of the geotechnical engineering report, signed and sealed by a professional engineer registered in the Commonwealth of Kentucky, is attached as **Exhibit G**. The name and address of the geotechnical engineering firm and the professional engineer registered in the Commonwealth of Kentucky who supervised the examination of this WCF site are included as part of this exhibit.

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

17. Tillman Infrastructure, pursuant to a written agreement, has acquired the right to use the WCF site and associated property rights. A copy of the agreements or abbreviated agreements recorded with the County Clerk are attached as **Exhibit I**.

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

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

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

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

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

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

24. Notice signs meeting the requirements prescribed by 807 KAR 5:063, Section

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

25. The general area where the proposed facility is to be located is rural in character. The area where the proposed tower will be located is heavily wooded.

26. The process that was used by AT&T Mobility'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. AT&T Mobility'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 Applicants when searching for sites for its antennas that would provide the coverage deemed necessary by AT&T Mobility. A map of the area in which the tower is proposed to be located which is drawn to scale and clearly depicts the necessary search area within which the site should be located pursuant

to radio frequency requirements is attached as **Exhibit N**.

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

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

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

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

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

Respectfully submitted,

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 Applicants

LIST OF EXHIBITS

A - Certificate of Authority & FCC License Documentation

B - Site Development Plan:

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

C - Tower and Foundation Design

D - Competing Utilities, Corporations, or Persons List

E - FAA

F - Kentucky Airport Zoning Commission

G - Geotechnical Report

H - Directions to WCF Site

I - Copy of Real Estate Agreement

J - Notification Listing

K - Copy of Property Owner Notification

L - Copy of County Judge/Executive Notice

M - Copy of Posted Notices and Newspaper Notice Advertisement

N - Copy of Radio Frequency Design Search Area

EXHIBIT A
CERTIFICATE OF AUTHORITY & FCC LICENSE DOCUMENTATION

Commonwealth of Kentucky
Alison Lundergan Grimes, Secretary of State

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

Certificate of Authorization

Authentication number: 216299
Visit https://app.sos.ky.gov/ftshow/certvalidate.aspx to authenticate this certificate.

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

NEW CINGULAR WIRELESS PCS, LLC

, a limited liability company authorized under the laws of the state of Delaware, is authorized to transact business in the Commonwealth of Kentucky, and received the authority to transact business in Kentucky on October 14, 1999.

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

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 28th day of May, 2019, in the 227th year of the Commonwealth.

Alison Lundergan Grimes
Secretary of State
Commonwealth of Kentucky
216299/0481848

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF FORMATION OF "TILLMAN INFRASTRUCTURE LLC", FILED IN THIS OFFICE ON THE THIRTEENTH DAY OF JUNE, A.D. 2016, AT 11:07 O`CLOCK A.M.

Jeffrey W. Bullock, Secretary of State

6067508 8100
SR# 20164424697

Authentication: 202480828
Date: 06-13-16

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 11:07 AM 06/13/2016
FILED 11:07 AM 06/13/2016
SR 20164424697 - File Number 6067508

CERTIFICATE OF FORMATION

of

TILLMAN INFRASTRUCTURE LLC

A LIMITED LIABILITY COMPANY

Pursuant to Section 18-201:

FIRST: The name of the limited liability company is:
TILLMAN INFRASTRUCTURE LLC

SECOND: Its registered office in the State of Delaware is to be located at: 1013 Centre Road, Suite 403S, Wilmington, DE 19805, County of New Castle and its registered agent at such address is: BlumbergExcelsior Corporate Services, Inc.

THIRD: The duration of the limited liability company is perpetual.

IN WITNESS WHEREOF, the undersigned, being the individual forming the limited liability company, has executed, signed and acknowledged this Certificate of Formation this 13th day of June, 2016

/s/ Jose Mojica
Jose Mojica
Organizer

Statement of Organizers Action

of

TILLMAN INFRASTRUCTURE LLC

The undersigned, being the initial authorized person of the within named limited liability company does hereby state that:

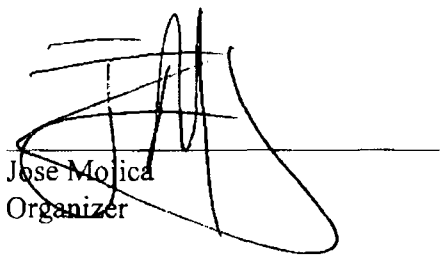
1. The Certificate of Formation of the Limited Liability Company (herein known as the "LLC") was filed by the State of Delaware on June 13, 2016. The Certificate of Formation is annexed hereto. The same hereby, is ordered filed with the Operating Agreement of the LLC.

2. At the time of its formation, the LLC had at least one member/manager, to wit: Sanjiv Ahuja, Anju Ahuja, Sachit Ahuja and Suruchi Ahuja

3. The initial organizer herein is neither a member nor a manager of the LLC.

4. From this date hence, the undersigned, effective this date, has fulfilled the duties as the initial organizer of LLC and herewith relinquishes all further duties to the LLC.

IN WITNESS WHEREOF, I have made and subscribed this Initial Election of Members, this 13th day of June, 2016



Jose Mojica
Organizer

0998026.06 Dcornish ADD

Alison Lundergan Grimes
Kentucky Secretary of State
Received and Filed:
9/27/2017 3:44 PM
Fee Receipt: $90.00

COMMONWEALTH OF KENTUCKY
ALISON LUNDERGAN GRIMES, SECRETARY OF STATE

Division of Business Filings Business Filings PO Box 718, Frankfort, KY 40602 (502) 564-3490 www.sos.ky.gov	**Certificate of Authority** **(Foreign Business Entity)**	**FBE**

Pursuant to the provisions of KRS 14A and KRS 271B, 273, 274,275, 362 and 386 the undersigned hereby applies for authority to transact business in Kentucky on behalf of the entity named below and, for that purpose, submits the following statements:

1. The entity is a: ☐ profit corporation (KRS 271B) ☐ nonprofit corporation (KRS 273) ☐ professional service corporation (KRS 274)
☐ business trust (KRS 386). ☒ limited liability company (KRS 275) ☐ professional limited liability company (KRS 275)
☐ limited partnership (KRS 362). ☐ ltd cooperative assn. (KRS) ☐ statutory trust
☐ non-profit llc (KRS 275) ☐ cooperative assn. (KRS)

2. The name of the entity is Tillman Infrastructure LLC
(The name must be identical to the name on record with the Secretary of State.)

3. The name of the entity to be used in Kentucky is (if applicable): _____
(Only provide if "real name" is unavailable for use; otherwise, leave blank.)

4. The state or country under whose law the entity is organized is Delaware.

5. The date of organization is June 13 2016 and the period of duration is Perpetual.
(If left blank, the period of duration is considered perpetual.)

6. The mailing address of the entity's principal office is

152 W 57th Street	New York	NY	10019
Street Address	City	State	Zip Code

7. The street address of the entity's registered office in Kentucky is

421 WEST MAIN ST.	FRANKFORT	KY	40601
Street Address (No P.O. Box Numbers)	City	State	Zip Code

and the name of the registered agent at that office is S&H FRANKFORT, LLC

8. The names and business addresses of the entity's representatives (secretary, officers and directors, managers, trustees or general partners):

Name	Street or P.O. Box	City	State	Zip Code
Suruchi Ahuja	152 W 57th Street	New York	NY	10019

9. If a professional service corporation, all the individual shareholders, not less than one half (1/2) of the directors, and all of the officers other than the secretary and treasurer are licensed in one or more states or territories of the United States or District of Columbia to render a professional service described in the statement of purpose of the corporation.

10. I certify that, as of the date of filing this application, the above-named entity validly exists under the laws of the jurisdiction of its formation.

11. If a limited partnership, it elects to be a limited liability limited partnership. Check the box if applicable: ☐

12. If a limited liability company, check box if manager-managed: ☑

13. This application will be effective upon filing, unless a delayed effective date and/or time is provided.
The effective date or the delayed effective date cannot be prior to the date the application is filed. The date and/or time is _____.

Please indicate the Kentucky county in which your business operates:
County: _____

To complete the following, please shade the box completely.

Please indicate the size of your business:
☐ Small (Fewer than 50 employees)
☐ Large (50 or more employees)

Please indicate whether any of the following make up more than fifty percent (50%) of your business ownership:
☐ Women-Owned ☐ Veteran Owned ☐ Minority Owned

Please indicate which of the following best describes your business:
☐ Agriculture ☐ Mining ☐ Services ☐ Construction
☐ Wholesale Trade ☐ Retail Trade ☐ Manufacturing ☐ Finance, Insurance, Real Estate
☐ Public Administration ☐ Transportation, Communications, Electric, Gas, Sanitary Services
☐ Other

X _____ Suruchi Ahuja, Manager X 9/26/2017
Signature of Authorized Representative — Printed Name & Title — Date

I, S&H FRANKFORT, LLC, consent to serve as the registered agent on behalf of the business entity.
Typed/Printed Name of Registered Agent

_____ S&H FRANKFORT, LLC Member 9/27/17
Signature of Registered Agent — Printed Name — Title — Date

(06/17)

Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: FCC GROUP
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 2100
DALLAS, TX 75202

Call Sign	File Number
KNKN748	0009619187
Radio Service CL - Cellular	
Market Numer CMA445	**Channel Block** A
Sub-Market Designator 0	

FCC Registration Number (FRN): 0003291192

Market Name
Kentucky 3 - Meade

Grant Date	Effective Date	Expiration Date	Five Yr Build-Out Date	Print Date
09-08-2021	09-08-2021	10-01-2031		09-08-2021

Site Information:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
2	36-49-19.8 N	086-40-30.2 W	283.5	59.4	1043423

Address: 2070 PILOT KNOB CELL ROAD (76159)
City: FRANKLIN **County:** SIMPSON **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	149.700	154.000	142.400	134.600	134.000	144.000	132.800	132.800
Transmitting ERP (watts)	127.704	122.022	156.166	85.681	30.393	22.550	27.951	41.372

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	149.700	154.000	142.400	134.600	134.000	144.000	132.800	132.800
Transmitting ERP (watts)	0.303	19.967	70.900	141.164	91.184	151.327	56.166	39.846

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	149.700	154.000	142.400	134.600	134.000	144.000	132.800	132.800
Transmitting ERP (watts)	165.855	47.655	35.065	13.085	19.027	126.639	254.086	264.756

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

FCC 601-C
March 2018

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
5	36-47-00.6 N	086-17-12.4 W	242.6	109.4	1043428

Address: 6131 Bowling Green Road (76163)

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

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	172.400	151.800	131.600	118.100	137.600	143.600	150.000	172.700
Transmitting ERP (watts)	29.587	17.631	2.143	0.106	0.120	0.108	1.702	15.717

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	172.400	151.800	131.600	118.100	137.600	143.600	150.000	172.700
Transmitting ERP (watts)	0.567	8.309	54.332	71.176	21.736	1.489	0.142	0.158

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	172.400	151.800	131.600	118.100	137.600	143.600	150.000	172.700
Transmitting ERP (watts)	0.270	0.100	0.100	0.719	8.327	27.930	25.164	4.852

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	37-57-06.1 N	086-24-38.3 W	260.0	96.3	1043429

Address: HWY 144 (76157)

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

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	163.100	141.100	130.700	148.200	162.700	183.900	186.100	179.000
Transmitting ERP (watts)	60.057	209.658	152.570	20.969	2.687	0.418	0.941	4.434

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	163.100	141.100	130.700	148.200	162.700	183.900	186.100	179.000
Transmitting ERP (watts)	0.489	0.727	12.997	103.833	245.059	92.615	9.426	2.404

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	163.100	141.100	130.700	148.200	162.700	183.900	186.100	179.000
Transmitting ERP (watts)	45.626	4.863	1.713	0.627	1.375	31.023	156.388	214.520

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
19	37-14-22.1 N	086-15-59.7 W	229.8	123.4	1025100

Address: 1400 POPLAR SPRINGS RD. (76169)
City: BROWNSVILLE **County:** EDMONSON **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	150.600	151.200	130.600	151.300	175.800	170.100	181.100	173.000
Transmitting ERP (watts)	52.262	182.266	132.676	18.211	2.334	0.364	0.819	3.844

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	150.600	151.200	130.600	151.300	175.800	170.100	181.100	173.000
Transmitting ERP (watts)	0.425	0.633	11.292	90.388	212.968	80.505	8.178	2.094

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	150.600	151.200	130.600	151.300	175.800	170.100	181.100	173.000
Transmitting ERP (watts)	39.661	4.221	1.487	0.543	1.196	26.979	135.691	186.462

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
22	37-52-17.8 N	086-16-03.5 W	224.3	152.1	1043896

Address: SAM DOWELL ROAD (76182)
City: IRVINGTON **County:** BRECKINRIDGE **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	121.400	111.900	93.000	94.700	111.800	114.200	143.100	107.600
Transmitting ERP (watts)	59.129	206.186	150.253	20.668	2.640	0.412	0.928	4.356

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	121.400	111.900	93.000	94.700	111.800	114.200	143.100	107.600
Transmitting ERP (watts)	0.482	0.716	12.797	102.360	241.122	91.084	9.268	2.368

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	121.400	111.900	93.000	94.700	111.800	114.200	143.100	107.600
Transmitting ERP (watts)	44.832	4.778	1.689	0.615	1.355	30.513	153.797	211.457

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
23	36-42-08.6 N	086-33-19.0 W	217.0	114.3	1200032

Address: 297A TURNER FORD ROAD (79470)

City: Franklin **County:** SIMPSON **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	115.100	113.900	95.200	90.700	79.000	97.800	103.600	98.200
Transmitting ERP (watts)	**12.529**	51.909	43.680	6.792	0.306	0.104	0.104	0.871

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	**115.100**	113.900	95.200	90.700	79.000	97.800	103.600	98.200
Transmitting ERP (watts)	0.126	**0.114**	1.788	16.431	30.950	18.425	2.247	0.111

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	115.100	**113.900**	**95.200**	90.700	79.000	97.800	103.600	98.200
Transmitting ERP (watts)	64.739	**3.664**	**0.447**	0.530	1.414	26.223	172.206	223.125

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	36-50-29.5 N	087-07-55.8 W	**237.7**	59.7	

Address: 360 C STOKES ROAD (76158)

City: ELKTON **County:** TODD **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	88.600	106.300	98.000	103.**600**	113.600	107.900	90.000	83.900
Transmitting ERP (watts)	59.416	267.210	296.881	53.**793**	**5.8**46	1.888	1.202	3.110

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	88.600	106.300	98.000	103.600	113.600	107.900	90.000	83.900
Transmitting ERP (watts)	0.355	2.851	12.889	51.983	75.907	**82.46**6	21.953	4.744

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	88.600	106.300	98.000	103.600	113.**600**	107.9**00**	90.000	83.900
Transmitting ERP (watts)	62.796	11.059	4.662	1.147	2.4**77**	23.358	65.087	76.580

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
28	37-14-33.4 N	087-19-57.9 W	128.6	96.9	1217687

Address: 1020 HENRY OATS ROAD (76201)

City: Graham **County:** MUHLENBERG **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	91.700	68.800	64.200	74.700	79.100	81.600	85.800	91.900
Transmitting ERP (watts)	**35.026**	195.687	216.768	54.685	2.636	0.432	0.445	1.843

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	**91.700**	68.800	64.200	74.700	79.100	81.600	85.800	91.900
Transmitting ERP (watts)	0.121	**0.121**	2.272	26.014	60.527	29.180	2.862	0.121

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	91.700	68.800	64.200	74.700	79.100	81.600	85.800	91.900
Transmitting ERP (watts)	35.896	**3.378**	**0.159**	0.237	0.301	5.075	44.704	79.171

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
34	37-04-12.2 N	086-05-07.1 W	198.1	99.1	1211505

Address: 622 CRUMP ROAD (37518)

City: Smiths Grove **County:** EDMONSON **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	53.800	63.200	49.600	57.**000**	**59**.000	84.600	86.400	61.200
Transmitting ERP (watts)	27.629	87.373	66.058	8.**970**	**0.**709	0.175	0.179	3.181

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	53.800	63.200	49.600	57.000	59.000	84.600	86.400	61.200
Transmitting ERP (watts)	0.101	0.305	1.436	1.860	2.041	**0.788**	0.130	0.100

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	53.800	63.200	49.600	57.000	59.**000**	84.6**00**	86.400	61.200
Transmitting ERP (watts)	0.192	0.100	0.160	0.224	1.**075**	2.050	1.930	1.184

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
35	37-29-36.0 N	086-11-16.5 W	221.9	83.8	1217206

Address: 694 BRATON ROAD (81461)
City: Clarkson **County:** GRAYSON **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	92.400	66.200	82.600	83.200	92.600	111.600	90.000	105.400
Transmitting ERP (watts)	57.018	192.165	145.827	15.733	1.898	0.385	0.383	6.862

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	92.400	66.200	82.600	83.200	92.600	111.600	90.000	105.400
Transmitting ERP (watts)	0.252	0.276	8.928	64.700	126.176	53.814	5.506	0.302

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	92.400	66.200	82.600	83.200	92.600	111.600	90.000	105.400
Transmitting ERP (watts)	54.629	3.519	0.818	0.541	4.115	41.499	223.658	269.303

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
36	37-56-59.6 N	086-04-57.8 W	200.0	77.7	1230213

Address: 340 HAYES ROAD (37683)
City: Bradenburg **County:** MEADE **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	85.400	108.200	75.400	73.700	40.000	69.400	81.900	112.400
Transmitting ERP (watts)	126.151	53.803	5.511	0.302	0.252	0.277	8.920	64.703

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	85.400	108.200	75.400	73.700	40.000	69.400	81.900	112.400
Transmitting ERP (watts)	0.293	3.183	18.727	24.271	10.402	0.832	0.126	0.180

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	85.400	108.200	75.400	73.700	40.000	69.400	81.900	112.400
Transmitting ERP (watts)	0.954	0.235	0.241	4.294	37.262	117.843	89.269	12.068

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
39	37-36-06.5 N	087-23-53.6 W	190.2	72.8	1049228

Address: 8720 STATE HIGHWAY 256 (100726)
City: Calhoun **County:** MCLEAN **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	132.100	127.700	130.400	139.700	139.200	127.700	123.000	127.400
Transmitting ERP (watts)	8.604	24.150	21.298	3.973	0.289	0.100	0.110	0.868

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	132.100	127.700	130.400	139.700	139.200	127.700	123.000	127.400
Transmitting ERP (watts)	0.100	0.145	0.714	2.721	2.030	2.664	0.581	0.100

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	132.100	127.700	130.400	139.700	139.200	127.700	123.000	127.400
Transmitting ERP (watts)	16.740	1.264	0.201	0.172	0.717	9.668	50.766	60.487

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
40	38-00-08.4 N	086-19-20.3 W	237.4	103.9	1049227

Address: 1002 Paynesville Rd (100721)
City: PAYNEVILLE **County:** MEADE **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	136.200	133.100	139.800	109.200	119.400	125.600	140.200	137.800
Transmitting ERP (watts)	80.625	243.519	176.744	18.512	1.434	0.489	0.488	6.707

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	136.200	133.100	139.800	109.200	119.400	125.600	140.200	137.800
Transmitting ERP (watts)	0.510	0.882	16.525	137.024	255.663	104.000	5.452	1.040

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	136.200	133.100	139.800	109.200	119.400	125.600	140.200	137.800
Transmitting ERP (watts)	49.820	2.170	0.508	0.496	2.867	39.546	197.992	232.753

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
45	36-47-11.0 N	086-08-35.3 W	253.3	91.1	1043039

Address: 3499 OLD GLASCOW ROAD (76160)
City: SCOTTSVILLE **County:** ALLEN **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	141.000	115.500	104.500	105.100	65.600	99.100	114.200	122.300
Transmitting ERP (watts)	69.057	33.233	3.269	0.138	0.138	0.139	2.591	29.564

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	141.000	115.500	104.500	105.100	65.600	99.100	114.200	122.300
Transmitting ERP (watts)	0.695	10.164	66.502	87.307	26.647	1.827	0.175	0.193

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	141.000	115.500	104.500	105.100	65.600	99.100	114.200	122.300
Transmitting ERP (watts)	0.331	0.100	0.100	0.877	10.209	34.235	30.831	5.937

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
47	36-59-46.4 N	087-08-24.4 W	253.3	84.7	1052933

Address: 14010 Greenville Rd (114156)
City: CLIFTY **County:** TODD **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	140.300	148.600	164.300	137.900	115.200	131.900	156.200	154.200
Transmitting ERP (watts)	90.933	49.427	5.614	0.231	0.294	0.248	4.251	44.027

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	140.300	148.600	164.300	137.900	115.200	131.900	156.200	154.200
Transmitting ERP (watts)	1.696	31.376	206.048	266.811	77.333	4.381	0.534	0.634

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	140.300	148.600	164.300	137.900	115.200	131.900	156.200	154.200
Transmitting ERP (watts)	0.365	0.124	0.124	1.043	14.987	62.052	52.143	8.124

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
48	36-39-29.0 N	087-10-56.1 W	168.9	46.9	

Address: 9141 Russellville Rd (116025)
City: Guthrie **County:** TODD **State:** KY **Construction Deadline:** 07-23-2013

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	36.200	41.000	46.500	50.000	51.500	45.300	40.200
Transmitting ERP (watts)	83.826	171.373	91.533	10.341	0.391	0.553	0.470	7.798

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	36.200	41.000	46.500	50.000	51.500	45.300	40.200
Transmitting ERP (watts)	39.359	3.884	0.163	0.164	0.163	3.073	35.149	81.833

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
49	36-49-53.1 N	086-54-51.9 W	253.9	87.8	1043422

Address: 374 SARAH CELL LANE (79468)
City: RUSSELLVILLE **County:** LOGAN **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	147.800	136.900	122.800	139.500	151.400	149.000	137.200	143.600
Transmitting ERP (watts)	13.191	15.375	20.623	9.724	2.241	0.917	1.606	4.394

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	147.800	136.900	122.800	139.500	151.400	149.000	137.200	143.600
Transmitting ERP (watts)	0.302	19.944	70.809	141.157	91.158	151.443	56.229	39.824

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	147.800	136.900	122.800	139.500	151.400	149.000	137.200	143.600
Transmitting ERP (watts)	165.961	47.564	35.048	13.108	19.047	126.532	254.037	264.411

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
50	37-06-13.5 N	086-11-31.9 W	248.4	94.5	1043426

Address: HWY 31 W. 15.5 MILES NORTH OF BOWLING GREEN (76162)
City: BROWNSVILLE **County:** EDMONSON **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	132.900	119.800	121.900	132.500	139.700	156.900	138.100	144.700
Transmitting ERP (watts)	76.433	61.831	10.136	0.490	0.153	0.153	1.751	22.332

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
50	37-06-13.5 N	086-11-31.9 W	248.4	94.5	1043426

Address: HWY 31 W. 15.5 MILES NORTH OF BOWLING GREEN (76162)
City: BROWNSVILLE **County:** EDMONSON **State:** KY **Construction Deadline:**

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	132.900	119.800	121.900	132.500	139.700	156.900	138.100	144.700
Transmitting ERP (watts)	0.140	2.140	18.403	33.047	18.411	2.087	0.101	0.132

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	132.900	119.800	121.900	132.500	139.700	156.900	138.100	144.700
Transmitting ERP (watts)	0.717	0.100	0.100	0.363	4.848	26.904	32.711	9.981

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
51	37-59-01.3 N	086-09-28.7 W	201.5	81.1	1061285

Address: 754 HIGHWAY 448 (76175)
City: BRANDENBURG **County:** MEADE **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	92.900	81.400	121.600	71.000	57.800	78.400	81.600	124.800
Transmitting ERP (watts)	127.297	121.679	155.422	85.508	30.247	22.406	27.837	41.126

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	92.900	81.400	121.600	71.000	57.800	78.400	81.600	124.800
Transmitting ERP (watts)	0.549	6.006	49.925	208.129	273.538	212.776	43.513	17.704

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	92.900	81.400	121.600	71.000	57.800	78.400	81.600	124.800
Transmitting ERP (watts)	165.198	47.446	34.954	13.065	18.961	125.826	253.004	262.909

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
52	37-32-55.4 N	087-16-05.4 W	140.2	93.0	1244911

Address: 235 WEST KY 136 (76190)
City: CALHOUN **County:** MCLEAN **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	93.700	104.200	101.700	109.900	107.300	112.600	113.000	103.500
Transmitting ERP (watts)	12.048	14.042	18.841	8.872	2.043	0.838	1.462	4.009

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
52	37-32-55.4 N	087-16-05.4 W	140.2	93.0	1244911

Address: 235 WEST KY 136 (76190)
City: CALHOUN **County:** MCLEAN **State:** KY **Construction Deadline:**

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	93.700	104.200	101.700	109.900	107.300	112.600	113.000	103.500
Transmitting ERP (watts)	0.263	1.499	8.907	25.402	25.096	29.869	6.908	2.214

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	93.700	104.200	101.700	109.900	107.300	112.600	113.000	103.500
Transmitting ERP (watts)	13.485	2.840	1.968	1.182	1.861	9.279	14.950	16.111

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
53	37-23-57.3 N	087-14-11.0 W	142.6	66.4	1043462

Address: 1266 Coffman School House Road (114157)
City: Sacramento **County:** MCLEAN **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	78.900	71.400	72.900	65.300	58.100	76.700	81.000	71.700
Transmitting ERP (watts)	167.796	70.666	5.756	0.746	0.337	0.392	10.993	84.493

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	78.900	71.400	72.900	65.300	58.100	76.700	81.000	71.700
Transmitting ERP (watts)	2.293	23.373	125.220	157.181	33.002	3.023	0.420	0.529

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	78.900	71.400	72.900	65.300	58.100	76.700	81.000	71.700
Transmitting ERP (watts)	1.557	0.314	0.315	5.633	46.706	157.098	119.251	12.856

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
54	36-44-32.4 N	087-03-22.0 W	177.4	60.7	

Address: 12442 Clarksville Rd (119164)
City: Olmstead **County:** LOGAN **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	38.700	51.200	58.700	61.000	61.600	65.600	54.200	43.800
Transmitting ERP (watts)	213.908	284.249	320.934	124.084	41.802	16.187	21.717	47.543

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
54	36-44-32.4 N	087-03-22.0 W	177.4	60.7	

Address: 12442 Clarksville Rd (119164)
City: Olmstead **County:** LOGAN **State:** KY **Construction Deadline:**

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	38.700	51.200	58.700	61.000	61.600	65.600	54.200	43.800
Transmitting ERP (watts)	0.398	2.494	20.501	62.455	72.666	71.877	14.509	4.740

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	38.700	51.200	58.700	61.000	61.600	65.600	54.200	43.800
Transmitting ERP (watts)	70.857	7.567	2.665	0.972	2.148	48.281	243.184	333.088

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
55	36-44-33.6 N	086-30-05.7 W	209.4	74.7	1057217

Address: 680 Phillips Lane (37504)
City: Franklin **County:** SIMPSON **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	86.700	76.200	71.800	57.600	57.100	67.700	72.000	80.500
Transmitting ERP (watts)	114.881	151.450	45.595	2.950	0.302	0.353	1.123	17.809

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	86.700	76.200	71.800	57.600	57.100	67.700	72.000	80.500
Transmitting ERP (watts)	0.274	0.273	1.936	29.962	137.017	135.788	29.053	1.424

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	86.700	76.200	71.800	57.600	57.100	67.700	72.000	80.500
Transmitting ERP (watts)	36.885	2.023	0.286	0.291	1.454	23.079	126.851	143.582

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
56	37-33-42.0 N	087-06-34.0 W	153.9	64.6	1043552

Address: 5020 HWY 431 (114800)
City: North Calhoun **County:** MCLEAN **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.000	67.700	60.800	71.600	77.400	81.300	63.900	67.300
Transmitting ERP (watts)	158.393	151.166	193.708	106.192	37.702	27.960	34.683	51.309

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
56	37-33-42.0 N	087-06-34.0 W	153.9	64.6	1043552

Address: 5020 HWY 431 (114800)
City: North Calhoun **County:** MCLEAN **State:** KY **Construction Deadline:**

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.000	67.700	60.800	71.600	77.400	81.300	63.900	67.300
Transmitting ERP (watts)	0.579	17.567	97.454	288.731	259.116	288.697	84.790	47.492

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.000	67.700	60.800	71.600	77.400	81.300	63.900	67.300
Transmitting ERP (watts)	225.807	88.641	98.488	33.766	42.937	203.385	284.088	256.109

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
57	37-53-45.0 N	086-49-51.0 W	164.5	65.6	1043711

Address: OLD LEWISPORT OWENSBORO RD (118228)
City: HAWESVILLE **County:** HANCOCK **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	89.400	84.300	98.800	62.900	81.500	94.100	95.600	100.200
Transmitting ERP (watts)	145.138	138.457	177.189	97.486	34.591	25.653	31.702	46.927

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	89.400	84.300	98.800	62.900	81.500	94.100	95.600	100.200
Transmitting ERP (watts)	0.626	6.840	56.877	237.296	312.736	242.992	49.505	20.160

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	89.400	84.300	98.800	62.900	81.500	94.100	95.600	100.200
Transmitting ERP (watts)	206.536	81.243	90.088	30.991	39.380	186.420	259.807	234.243

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
58	37-56-52.0 N	085-59-37.8 W	221.0	59.4	1204254

Address: 115 Timber Court (37606)
City: Muldraugh **County:** MEADE **State:** KY **Construction Deadline:**

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	82.000	113.300	99.300	64.300	63.500	56.300	78.500	87.900
Transmitting ERP (watts)	4.679	4.917	0.983	0.100	0.100	0.100	0.100	1.023

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN748 **File Number:** 0009619187 **Print Date:** 09-08-2021

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
58	37-56-52.0 N	085-59-37.8 W	221.0	59.4	1204254

Address: 115 Timber Court (37606)

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

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	82.000	113.300	99.300	64.300	63.500	56.300	78.500	87.900
Transmitting ERP (watts)	**0.100**	0.100	0.790	17.085	30.505	3.551	0.100	0.100

Antenna: 3

Maximum Transmitting ERP in Watts: 140.820							
Azimuth(from true north)	**0**	**45**	**90**	**135**	**180**	**225**	**270**	**315**
Antenna Height AAT (meters)	**82.000**	113.300	99.300	64.300	63.500	56.300	78.500	87.900
Transmitting ERP (watts)	0.100	**0.100**	0.100	0.309	10.332	36.527	6.709	0.159

Control Points:

Control Pt. No. 1

Address: 1650 Lyndon Farms Court

City: LOUISVILLE **County:** **State:** KY **Telephone Number:** (502)329-4700

Waivers/Conditions:

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).

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	File Number
KNLG209	
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
04-12-2017	08-31-2018	04-28-2027	

Market Number	Channel Block	Sub-Market Designator
BTA263	D	0

Market Name
Louisville, KY

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
04-28-2002			

Waivers/Conditions:

NONE

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNLG209 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1015
DALLAS, TX 75202

Call Sign	File Number
WPOI255	
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
05-27-2015	03-12-2020	06-23-2025	

Market Number	Channel Block	Sub-Market Designator
MTA026	A	19

Market Name
Louisville-Lexington-Evansvill

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
06-23-2000	06-23-2005		

Waivers/Conditions:

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

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

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WPOI255 **File Number:** **Print Date:**

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

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

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

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

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WPOI255 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL MATHEW
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., 21ST FL
DALLAS, TX 75202

Call Sign	File Number
WQDI528	
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
08-17-2015	05-27-2021	09-06-2025	

Market Number	Channel Block	Sub-Market Designator
BTA263	C	7

Market Name
Louisville, KY

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
09-06-2010			

Waivers/Conditions:

NONE

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WQDI528 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1015
DALLAS, TX 75202

Call Sign	File Number
WQGA817	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
11-29-2006	08-31-2018	11-29-2021	

Market Number	Channel Block	Sub-Market Designator
CMA446	A	0

Market Name
Kentucky 4 - Spencer

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WQGA817 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1015
DALLAS, TX 75202

Call Sign	File Number
WQGA818	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
11-29-2006	08-31-2018	11-29-2021	

Market Number	Channel Block	Sub-Market Designator
CMA447	A	0

Market Name
Kentucky 5 - Barren

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WQGA818 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1015
DALLAS, TX 75202

Call Sign	File Number
WQGD546	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
12-18-2006	08-31-2018	12-18-2021	

Market Number	Channel Block	Sub-Market Designator
CMA445	A	0

Market Name
Kentucky 3 - Meade

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

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

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WQGD546 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST. RM 1015
DALLAS, TX 75202

Call Sign	File Number
WQGD757	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
12-18-2006	02-20-2019	12-18-2021	

Market Number	Channel Block	Sub-Market Designator
BEA070	C	0

Market Name
Louisville, KY-IN

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

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

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Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WQGD757 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST. RM 1015
DALLAS, TX 75202

Call Sign	File Number
WQGD758	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
12-18-2006	02-20-2019	12-18-2021	

Market Number	Channel Block	Sub-Market Designator
BEA071	C	5

Market Name
Nashville, TN-KY

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

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

Conditions:
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Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WQGD758 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW
NEW CINGULAR WIRELESS PCS, LLC
208 S AKARD ST., RM 1015
DALLAS, TX 75202

Call Sign	File Number
WQGT878	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003291192

Grant Date	Effective Date	Expiration Date	Print Date
04-16-2007	08-31-2018	04-16-2022	

Market Number	Channel Block	Sub-Market Designator
BEA069	C	0

Market Name
Evansville-Henderson, IN-KY-IL

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WQGT878 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

EXHIBIT B

SITE DEVELOPMENT PLAN:

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

PROJECT DESCRIPTION:

INSTALLATION OF A NEW SELF-SUPPORT TOWER, A NEW MULTI-TENANT UTILITY FRAME, & NEW AT&T EQUIPMENT PAD/EQUIPMENT WITHIN A NEW FENCED & GRAVELED COMPOUND. INSTALLATION OF NEW AT&T ANTENNAS ON NEW TOWER. NO WATER OR SEWER IS REQUIRED. THIS WILL BE AN UNMANNED FACILITY.

CODE COMPLIANCE:

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

1. 2015 INTERNATIONAL BUILDING CODE WITH KENTUCKY AMENDMENTS
2. 2017 NATIONAL ELECTRIC CODE
3. 2013 NFPA 101 LIFE SAFETY CODE
4. 2015 INTERNATIONAL FIRE CODE
5. AMERICAN CONCRETE INSTITUTE
6. AMERICAN INSTITUTE OF STEEL CONSTRUCTION
7. MANUAL OF STEEL CONSTRUCTION, 13TH EDITION
8. ANSI/TIA/EIA-222-G
9. TIA 607
10. INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
11. IEEE C2 NATIONAL ELECTRIC SAFETY CODE, LATEST EDITION
12. TELECORDIA GR-1275
13. ANSI/T 311
14. 2015 INTERNATIONAL MECHANICAL CODE WITH KENTUCKY AMENDMENTS
15. 2015 INTERNATIONAL PLUMBING CODE WITH KENTUCKY AMENDMENTS
16. 2012 ENERGY CONSERVATION CODE IS MEANT FOR USE WITH THE KENTUCKY BUILDING CODE ONLY EXCLUDING R-2, R-3 AND R-4 CONSTRUCTION.
17. LOCAL BUILDING CODE
18. CITY/COUNTY ORDINANCES
19. STATE BUILDING CODE

DIG ALERT:

CALL FOR UNDERGROUND UTILITIES PRIOR TO DIGGING:
811

EMERGENCY:

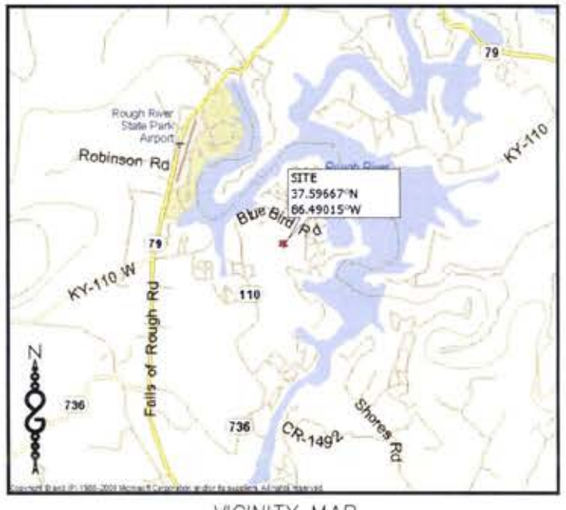
CALL 911

TILLMAN INFRASTRUCTURE

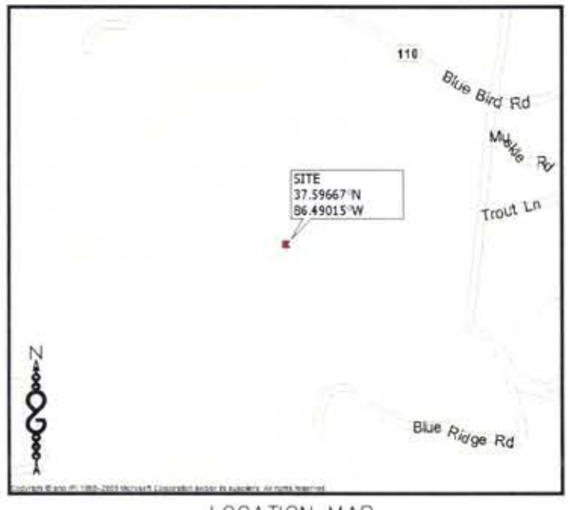
NEW SITE BUILD
TI-OPP-17878 - 15346957
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116
145' SELF-SUPPORT TOWER

APPROVAL	DATE	SIGNATURE
RF ENGINEER:		
RF MANAGER:		
OPPS MANAGER:		
CONSTR MANAGER:		
NSB MANAGER:		
TRANSPORT:		
EQUIP ENGINEER:		
COMPLIANCE:		
LANDLORD:		
SITE ACQUISITION:		
ZONING AGENT:		
PROJECT MANAGER:		
CONSTR MANAGER:		

REVIEWERS SHALL CLEARLY PLACE INITIALS ADJACENT TO EACH REDLINE NOTE AS DRAWINGS ARE BEING REVIEWED



VICINITY MAP
N.T.S



LOCATION MAP
N.T.S

PROJECT INFORMATION

SITE NAME:	FALLING BRANCH
SITE NUMBER:	TI-OPP-17878 - 15346957
SITE ADDRESS:	2589 BLUE BIRD ROAD FALLS OF ROUGH, KY 40116
PARCEL #:	034-00-00-013
DEED REFERENCE:	DB 444 PG 461, PLAT CABINET 2 SLIDE 600
ZONING CLASSIFICATION:	N/A
ZONING JURISDICTION:	GRAYSON COUNTY
GROUND ELEVATION:	639.9' A.M.S.L.
STRUCTURE TYPE:	SELF-SUPPORT TOWER
STRUCTURE HEIGHT:	145'
LATITUDE (NAD 83):	37° 35' 48.02"/37.596672° N
LONGITUDE:	86° 29' 24.53"/86.490147° W

DRAWING INDEX

DRWG. #	TITLE	REV.#	DATE
T1	TITLE SHEET	5	10/14/2021
S1-S3	SURVEY (BY OTHERS)	2	03/16/2021
C1	GENERAL NOTES & LEGEND	5	10/14/2021
C2	GENERAL NOTES	5	10/14/2021
C3	OVERALL SITE PLAN	5	10/14/2021
C3.1	ENLARGED PLAN	5	10/14/2021
C4	COMPOUND PLAN	5	10/14/2021
C5	TOWER ELEVATION	5	10/14/2021
C6	EQUIPMENT PAD LAYOUT & CONSTRUCTION DETAILS	5	10/14/2021
C7	WALK UP CABINET DETAILS	5	10/14/2021
C7.1	GENERATOR DETAILS	5	10/14/2021
C8	UTILITY H-FRAME DETAILS	5	10/14/2021
C9	CONSTRUCTION DETAILS	5	10/14/2021
C10	ANTENNA PLAN	5	10/14/2021
C10.1	DETAILS	5	10/14/2021
C11	DC9 & ANTENNA SPECIFICATIONS	5	10/14/2021
C12	RRUS DETAILS	5	10/14/2021
C13	SIGNAGE DETAILS	5	10/14/2021
EC1	GRADING, EROSION & SEDIMENT CONTROL PLAN	5	10/14/2021
EC2	GRADING, EROSION & SEDIMENT CONTROL NOTES & DETAILS	5	10/14/2021
EC3	CIVIL DETAILS	5	10/14/2021
E1	ELECTRICAL PLAN	5	10/14/2021
E2	COMPOUND ELECTRICAL PLAN	5	10/14/2021
E3	ELECTRICAL PANEL SCHEDULE, DIAGRAM, & NOTES	5	10/14/2021
E4	TYPICAL DC/FIBER SYSTEM DIAGRAM	5	10/14/2021
E5	TYPICAL DC WIRING DIAGRAM	5	10/14/2021
G1	GROUNDING PLAN	5	10/14/2021
G2	EQUIPMENT GROUNDING PLAN	5	10/14/2021
G3	GROUNDING DETAILS & NOTES	5	10/14/2021
G4	GROUNDING DETAILS	5	10/14/2021
RF1-RF5	RFDS INFORMATION	5	10/14/2021

PROJECT DIRECTORY

PARCEL OWNER(S):	TERRY L. NEWTON & KIMBERLY D. NEWTON
APPLICANT/TOWER OWNER:	TILLMAN INFRASTRUCTURE 152 W. 57TH STREET NEW YORK, NY 10019
ENGINEER:	INFINIGY ENGINEERING, PLLC 2255 SEWELL MILL ROAD SUITE 130 MARIETTA, GA 30062
CONTACT:	PETER RYNER PHONE: (678) 444-4463
POWER COMPANY:	MEADE CO RECC
TELCO COMPANY:	WINDSTREAM

at&t MOBILITY CORP.
8372 E. BROAD ST.
REYNOLDSBURG, OH 43068

TILLMAN INFRASTRUCTURE
152 W. 57TH STREET
NEW YORK, NEW YORK 10019
TEL: 212-706-1677

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
INFINIGY ENGINEERING, PLLC
2255 SEWELL MILL ROAD, SUITE 130
MARIETTA, GA 30062
Office #: (678) 444-4463

No.	Submittal / Revision	App'd	Date
5	ISSUED FOR CONSTRUCTION	CES	10/14/21
4	ISSUED FOR CONSTRUCTION	LMG	10/01/21
3	ISSUED FOR CONSTRUCTION	LMG	09/10/21
2	ISSUED FOR CONSTRUCTION	CES	08/25/21
1	ISSUED FOR CONSTRUCTION	CES	08/11/21
0	ISSUED FOR CONSTRUCTION	CES	07/16/21
A	ISSUED FOR REVIEW	CES	06/30/21

Drawn: CES Date: 06/30/21
Designed: CES Date: 06/30/21
Checked: CJW Date: 06/30/21

Project Number: 2136-Z0001-C

Project Title:
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

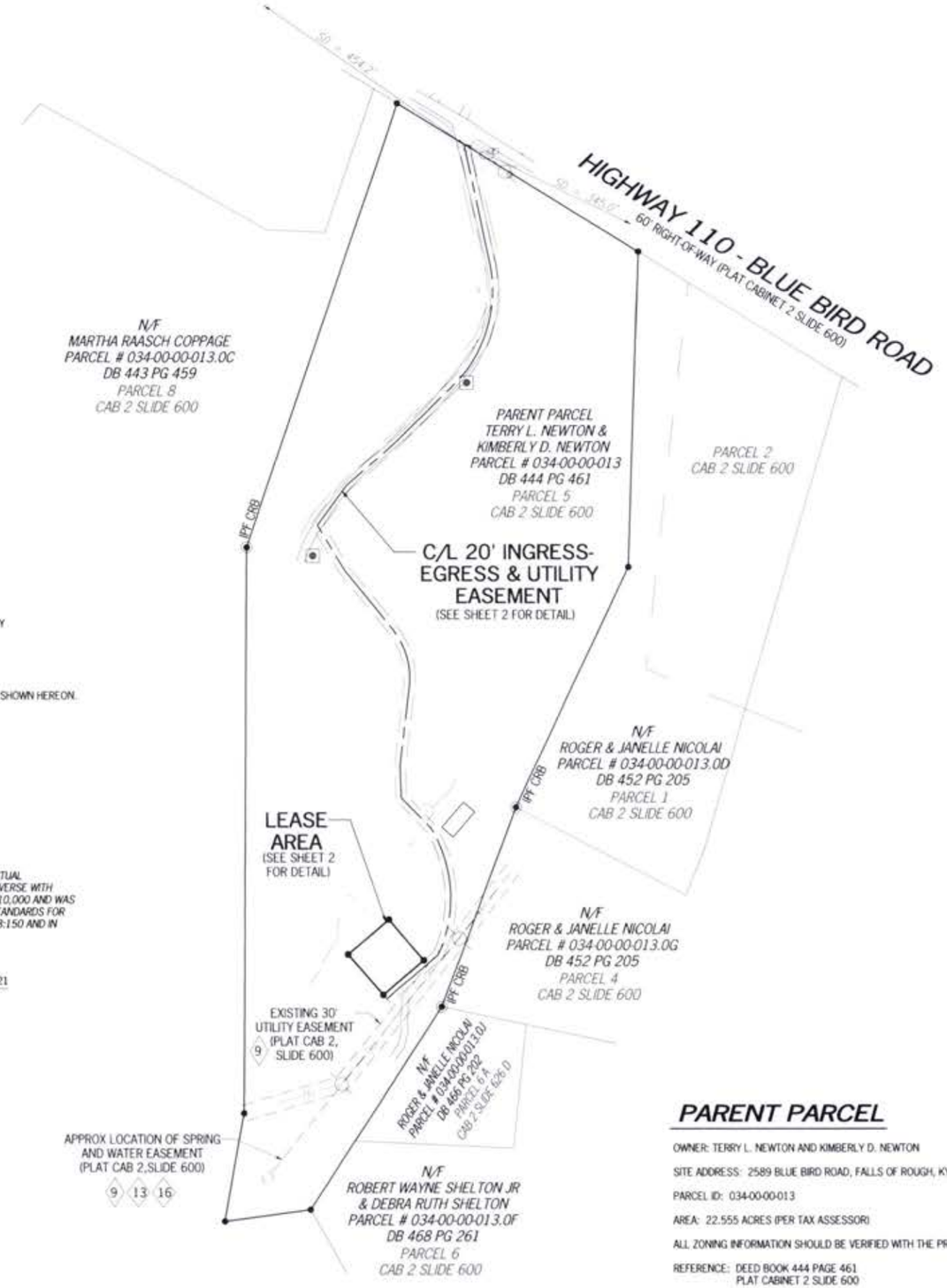
COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24029
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title:
TITLE SHEET

Drawing Scale: AS NOTED
Date: 06/30/21

CD

Drawing Number:
T1



VICINITY MAP

NOT TO SCALE

GPS NOTES

THE FOLLOWING GPS STATISTICS UPON WHICH THIS SURVEY IS BASED HAVE BEEN PRODUCED AT THE 95% CONFIDENCE LEVEL:

POSITIONAL ACCURACY: 0.07 FEET (HORZ) 0.25 FEET (VERT)
TYPE OF EQUIPMENT: GEOMAX ZENITH35 PRO BASE AND ROVER, DUAL FREQUENCY
TYPE OF GPS FIELD PROCEDURE: ONLINE POSITION USER INTERFACE
DATES OF SURVEY: 02/23/2021
DATUM / EPOCH: NAD_83(2011)(EPOCH:2010.0000)
PUBLISHED / FIXED CONTROL USE: N/A
GEOID MODEL: 18
COMBINED GRID FACTOR(S): 0.99989145 CENTERED ON THE GPS BASE POINT AS SHOWN HEREON.
CONVERGENCE ANGLE: -0.45428056°
BENCHMARKS USED: DK7559, DK4660, DM4051

SURVEYOR'S CERTIFICATE

I, G. DARRELL TAYLOR, A KENTUCKY PROFESSIONAL LAND SURVEYOR, CERTIFY THAT THE INFORMATION SHOWN HEREON WAS COMPILED USING DATA FROM AN ACTUAL FIELD SURVEY MADE UNDER MY DIRECT SUPERVISION BY METHOD OF RANDOM TRAVERSE WITH SIDE SHOTS. THE UNADJUSTED PRECISION RATIO OF THE TRAVERSE EXCEEDED 1:10,000 AND WAS NOT ADJUSTED FOR CLOSURE. THIS SURVEY MEETS OR EXCEEDS THE MINIMUM STANDARDS FOR AN URBAN SURVEY AS ESTABLISHED BY THE STATE OF KENTUCKY, PER 201 KAR 18:150 AND IN EFFECT ON THE DATE OF THIS SURVEY.

G. DARRELL TAYLOR, PLS 4179 — DATE 8/17/2021

LEGEND

POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
IPF	IRON PIN FOUND
IPS	IRON PIN SET
RB	REBAR
CRB	CAPPED REBAR
UP	UTILITY POLE
OU	OVERHEAD UTILITY
TR	TRANSFORMER
GW	GUY WIRE ANCHOR
N/F	NOW OR FORMERLY
CAB	CABINET
EP	EDGE OF PAVEMENT
EG	EDGE OF GRAVEL
WM	WATER METER
MB	MAILBOX
INV	INVERT
SD	SIGHT DISTANCE
CMP	CORRUGATED METAL PIPE
TBM	TEMPORARY BENCHMARK

GENERAL NOTES

* THIS SPECIFIC PURPOSE SURVEY IS FOR THE LEASED PREMISES AND EASEMENTS ONLY. THIS SPECIFIC PURPOSE SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF TILLMAN INFRASTRUCTURE, LLC AND EXCLUSIVELY FOR THE TRANSFERRAL OF THE LEASED PREMISES AND THE RIGHTS OF EASEMENT SHOWN HEREON AND SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE FEE SIMPLE TRANSFERRAL OF THE PARENT PARCEL NOR ANY PORTION OR PORTIONS THEREOF. BOUNDARY INFORMATION SHOWN HEREON HAS BEEN COMPILED FROM TAX MAPS AND DEED DESCRIPTIONS ONLY. NO BOUNDARY SURVEY OF THE PARENT PARCEL WAS PERFORMED.

THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY.

THE FIELD DATA UPON WHICH THIS SPECIFIC PURPOSE SURVEY IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 10,000+ FEET AND AN ANGULAR ERROR OF 5.0" PER ANGLE POINT AND WAS NOT ADJUSTED FOR CLOSURE.

EQUIPMENT USED FOR ANGULAR & LINEAR MEASUREMENTS: LEICA TPS 1200 ROBOTIC & GEOMAX ZENITH 35. (DATE OF LAST FIELD VISIT: 02/23/2021)

THE 2' CONTOURS AND SPOT ELEVATIONS SHOWN ON THIS SPECIFIC PURPOSE SURVEY ARE ADJUSTED TO NAVD 88 DATUM (COMPUTED USING GEOID18) AND HAVE A VERTICAL ACCURACY OF ± 1'. CONTOURS OUTSIDE THE IMMEDIATE SITE AREA ARE APPROXIMATE.

BEARINGS SHOWN ON THIS SPECIFIC PURPOSE SURVEY ARE BASED ON GRID NORTH (NAD 83) KENTUCKY SINGLE ZONE.

PER THE FEMA FLOODPLAIN MAPS, THE SITE IS LOCATED IN AN AREA DESIGNATED AS ZONE X (AREA OF MINIMAL FLOOD HAZARD). COMMUNITY PANEL NO. : 21085C0055C DATED: 09/19/2012

NO WETLAND AREAS HAVE BEEN INVESTIGATED BY THIS SPECIFIC PURPOSE SURVEY.

ALL ZONING INFORMATION SHOULD BE VERIFIED WITH THE PROPER ZONING OFFICIALS.

ANY UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM ABOVE GROUND FIELD SURVEY INFORMATION. THE SURVEYOR MAKES NO GUARANTEES THAT ANY UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT ANY UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED ANY UNDERGROUND UTILITIES.

PARENT PARCEL

OWNER: TERRY L. NEWTON AND KIMBERLY D. NEWTON

SITE ADDRESS: 2589 BLUE BIRD ROAD, FALLS OF ROUGH, KY 40119

PARCEL ID: 034-00-00-013

AREA: 22.555 ACRES (PER TAX ASSESSOR)

ALL ZONING INFORMATION SHOULD BE VERIFIED WITH THE PROPER ZONING OFFICIALS

REFERENCE: DEED BOOK 444 PAGE 461
PLAT CABINET 2 SLIDE 600

SURVEY NOT VALID WITHOUT SHEETS 2 & 3 OF 3

811 Know what's below. Call before you dig

STATE of KENTUCKY
G. DARRELL TAYLOR
4179
LICENSED PROFESSIONAL LAND SURVEYOR

NO.	DATE	REVISION
1	3/12/2021	REVISED ING-EGR - GJH
2	3/16/2021	TITLE REVIEW - DMM
3	8/17/2021	REVISED ZONING

* SPECIFIC PURPOSE SURVEY PREPARED BY:

POINT TO POINT LAND SURVEYORS
100 Governors Trace, Ste. 103
Peachtree City, GA 30269
(p) 678.565.4440 (f) 678.565.4497
(w) pointtopointsurvey.com

SPECIFIC PURPOSE SURVEY PREPARED FOR:

TILLMAN INFRASTRUCTURE

TILLMAN INFRASTRUCTURE, LLC
152 W 57TH STREET, 27TH FLOOR
NEW YORK, NY 10019

FALLING BRANCH

SITE NO.
TI-OPP-17878

GRAYSON COUNTY, KENTUCKY

DRAWN BY: GJH	SHEET: 1
CHECKED BY: JKL	
APPROVED: D. MILLER	
DATE: MARCH 8, 2021	
P2P JOB #: 210175KY	OF 3

E:\Dropbox (Point To Point)\P2P Current Jobs\2021\210175KY TI-OPP-17878\210175KY.mxd

CURVE TABLE

LINE	ARC	RADIUS	CHD. BRG.	CHD.
C1	245.50'	250.00'	N02°53'31"W	235.76'
C2	118.09'	142.72'	N15°01'44"W	114.75'
C3	250.85'	250.00'	N16°27'22"E	240.46'

SITE INFORMATION

LEASE AREA = 10,000 SQUARE FEET (0.2296 ACRES)

LATITUDE = 37° 35' 48.02" NAD 83 (37.596672°)
LONGITUDE = -86° 29' 24.53" NAD 83 (-86.490147°)
AT CENTER LEASE AREA

ELEVATION AT CENTER OF LEASE AREA = 639.9' A.M.S.L.

MATCH LINE

N/F
MARTHA RAASCH COPPAGE
PARCEL # 034-00-00-013.0C
DB 443 PG 459
PARCEL 8
CAB 2 SLIDE 600

N39°01'56"W
144.84'

610

C2

N06°59'54"E
141.45'

N02°09'59"W
61.82'

610

C/L DITCH

N43°47'18"W
80.38'

EXISTING BUILDING

PARENT PARCEL
TERRY L. NEWTON &
KIMBERLY D. NEWTON
PARCEL # 034-00-00-013
DB 444 PG 461
PARCEL 5
CAB 2 SLIDE 600

PROPERTY LINE

N/F
ROGER & JANELLE NICOLAI
PARCEL # 034-00-00-013.0D
DB 452 PG 205
PARCEL 1
CAB 2 SLIDE 600

S20°30'32"W 398.19'

IPF CRB
N:3741965.1674
E:4707066.8804

C/L 20' INGRESS-EGRESS
& UTILITY EASEMENT
(RIGHTS TO BE ACQUIRED)

LEASE AREA
(RIGHTS TO BE ACQUIRED)

620

C3

630

640

650

PROPERTY LINE

DITCH

UP

TBM IPS
ELEV = 634.5
GPS BASE PT

S49°27'41"W
100.00'

N40°32'19"W
100.00'

S40°32'19"E
100.00'

N49°27'41"E
100.00'

126.18'

10.00'

POB: LEASE

POB: ING-EGR

POC: IPF CRB
N:3741592.1307
E:4706927.3185

EXISTING 30'
UTILITY EASEMENT
PLAT CAB. 2, SLIDE 600

9

UP W/ TR

APPROX LOCATION OF
WATER EASEMENT
(PLAT CAB 2, SLIDE 600)

13 16

9

(TIE-LINE) N81°53'45"W 103.88'

EXISTING PATH

PROPERTY LINE

N/F
ROGER & JANELLE NICOLAI
PARCEL # 034-00-00-013.0G
DB 452 PG 205
PARCEL 4
CAB 2 SLIDE 600

N/F
ROGER & JANELLE NICOLAI
PARCEL # 034-00-00-013.0J
DB 466 PG 202
PARCEL 6 A
CAB 2 SLIDE 626 D

25 0 50 100
GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

GRID NORTH (NAD 83)
KENTUCKY SINGLE

N/F
MARTHA RAASCH COPPAGE
PARCEL # 034-00-00-013.0C
DB 443 PG 459
PARCEL 8
CAB 2 SLIDE 600

PROPERTY LINE

EP
EG
DITCH

HIGHWAY 110 -
BLUE BIRD ROAD
60' RIGHT-OF-WAY (PLAT CABINET 2 SLIDE 600)

WM
MB
DITCH
EP
UP

560

RIGHT-OF-WAY LINE

N12°17'20"W 225.46'

570

580

EXISTING GRAVEL DRIVE

PARENT PARCEL
TERRY L. NEWTON &
KIMBERLY D. NEWTON
PARCEL # 034-00-00-013
DB 444 PG 461
PARCEL 5
CAB 2 SLIDE 600

C/L DITCH

CO

590

N45°12'05"E
145.27'

600

C/L 20' INGRESS-EGRESS
& UTILITY EASEMENT
(RIGHTS TO BE ACQUIRED)

N48°44'29"E
128.49'

N35°53'34"E
90.42'

610

620

IPF CRB

CO

N30°50'14"W
97.94'

610

N39°01'56"W
144.84'

MATCH LINE

LEGEND

POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
IPF	IRON PIN FOUND
IPS	IRON PIN SET
RB	REBAR
CRB	CAPPED REBAR
UP	UTILITY POLE
OU	OVERHEAD UTILITY
TR	TRANSFORMER
GW	GUY WIRE ANCHOR
N/F	NOW OR FORMERLY
CAB	CABINET
EP	EDGE OF PAVEMENT
EG	EDGE OF GRAVEL
WM	WATER METER
MB	MAILBOX
INV	INVERT
SD	SIGHT DISTANCE
CMP	CORRUGATED METAL PIPE
TBM	TEMPORARY BENCHMARK

SURVEY NOT VALID WITHOUT SHEETS 1 & 3 OF 3

STATE of KENTUCKY
G. DARRELL TAYLOR
4179
LICENSED PROFESSIONAL LAND SURVEYOR

NO.	DATE	REVISION
1	3/12/2021	REVISED ING-EGR - GJH
2	3/16/2021	TITLE REVIEW - DMM
3	8/17/2021	REVISED ZONING

* SPECIFIC PURPOSE SURVEY PREPARED BY:
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SPECIFIC PURPOSE SURVEY PREPARED FOR:

TILLMAN INFRASTRUCTURE

TILLMAN INFRASTRUCTURE, LLC
152 W 57TH STREET, 27TH FLOOR
NEW YORK, NY 10019

FALLING BRANCH

SITE NO.
TI-OPP-17878
GRAYSON COUNTY,
KENTUCKY

DRAWN BY: GJH	SHEET: 2
CHECKED BY: JKL	
APPROVED: D. MILLER	
DATE: MARCH 8, 2021	
P2P JOB #: 210175KY	OF 3

C:\Dropbox (Point To Point)\P2P Current Jobs\2021\210175KY\TI-OPP-17878\210175KY.pro

LEGAL DESCRIPTION SHEET

PARENT PARCEL

(PER COMMITMENT NO.: TKY778193)

CERTAIN TRACT OR PARCEL OF LAND LYING ON OR BEING NEAR THE WATERS OF ROUGH CREEK, IN GRAYSON COUNTY, KENTUCKY. AND BEING MORE FULLY DESCRIBED AS FOLLOWS:

BEING PARCEL NUMBER 5 (22.555 ACRES) OF THE KENNETH AND MYRNA FENTRESS FARM DIVISION, AS SHOWN BY PLAT COMPLETED SEPTEMBER 28, 2015, APPEARING OF RECORD IN PLAT CABINET 2, SLIDE 600, RECORDS OF THE GRAYSON COUNTY CLERK'S OFFICE.

BEING SUBJECT TO AN EASEMENT GRANTED TO THE OWNERS OF PARCELS # 1, #2 AND #6 FOR THE USE WATER FROM THE SPRING LOCATED SUBJECT PROPERTY TOGETHER WITH THE 30' UTILITY EASEMENT DESIGNATED ON PLAT APPEARING IN PLAT CABINET 2, SLIDE 600. AS "WATER LINE EASEMENT LEADING FROM SPRING TO HOUSE AND BARN".

BEING A NEW SURVEY DESCRIPTION OF A PORTION OF THAT PROPERTY CONVEYED TO FRANCES EDWARDS AND BEVERLY RAZOR BY DEED FROM MYRNA FRANCES FENTRESS, A WIDOW AND SINGLE PERSON, DATED APRIL 29, 2008, APPEARING IN DEED BOOK 382, PAGE 440, RECORDS OF THE GRAYSON COUNTY CLERK.

BEING THE SAME PROPERTY CONVEYED TO TERRY L. NEWTON AND KIMBERLY D. NEWTON, HIS WIFE FROM FRANCES EDWARDS AND JOSEPH EUGENE EDWARDS, HER HUSBAND BY DEED DATED DECEMBER 11, 2015 AND RECORDED ON DECEMBER 23, 2015, IN DEED BOOK 444, PAGE 461.

20' INGRESS-EGRESS & UTILITY EASEMENT

TOGETHER WITH A 20-FOOT WIDE INGRESS-EGRESS AND UTILITY EASEMENT (LYING 10 FEET EACH SIDE OF CENTERLINE), LYING AND BEING IN GRAYSON COUNTY, KENTUCKY, AND BEING PARCEL 5 OF THE KENNETH AND MYRNA FENTRESS FARM DIVISION AS RECORDED IN PLAT CABINET 2, SLIDE 600, GRAYSON COUNTY RECORDS, AND BEING MORE PARTICULARLY DESCRIBED BY THE FOLLOWING CENTERLINE DATA:

TO FIND THE POINT OF BEGINNING, COMMENCE, AT A CAPPED REBAR FOUND AT THE SOUTHWEST CORNER OF PARCEL 4 OF SAID FENTRESS FARM DIVISION, SAID REBAR HAVING A KENTUCKY GRID NORTH, NAD83, SINGLE ZONE VALUE OF N:3741592.1307 E:4706927.3185, AND FOUND BEARING SOUTH 20°30'32" WEST, 398.19' FEET FROM A CAPPED REBAR, SAID REBAR HAVING A KENTUCKY GRID NORTH, NAD83, SINGLE ZONE VALUE OF N:3741965.1674 E:4707066.8804; THENCE RUNNING ALONG A TIE-LINE, NORTH 81°53'45" WEST, 103.88 FEET TO A POINT, AND THE TRUE POINT OF BEGINNING; THENCE RUNNING, NORTH 49°27'41" EAST, 126.78 FEET TO A POINT; THENCE, 245.50 FEET ALONG THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 250.00 FEET AND BEING SCRIBED BY A CHORD BEARING, NORTH 02°53'31" WEST, 235.76 FEET TO A POINT; THENCE, NORTH 43°47'18" WEST, 80.38 FEET TO A POINT; THENCE, NORTH 02°09'59" WEST, 61.82 FEET TO A POINT; THENCE, NORTH 06°59'54" EAST, 141.45 FEET TO A POINT; THENCE, 118.09 FEET ALONG THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 142.72 FEET AND BEING SCRIBED BY A CHORD BEARING, NORTH 15°01'44" WEST, 114.75 FEET TO A POINT; THENCE, NORTH 39°01'56" WEST, 144.84 FEET TO A POINT; THENCE, NORTH 30°50'14" WEST, 97.94 FEET TO A POINT ON AN EXISTING GRAVEL DRIVE; THENCE RUNNING ALONG THE CENTERLINE OF SAID GRAVEL DRIVE, NORTH 35°53'34" EAST, 90.42 FEET TO A POINT; THENCE, NORTH 48°44'29" EAST, 128.49 FEET TO A POINT; THENCE, NORTH 45°12'05" EAST, 145.27 FEET TO A POINT; THENCE, 250.85 FEET ALONG THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 250.00 FEET AND BEING SCRIBED BY A CHORD BEARING, NORTH 16°27'22" EAST, 240.46 FEET TO A POINT; THENCE, NORTH 12°17'20" WEST, 225.46 FEET TO THE ENDING AT A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF HIGHWAY 110/ BLUE BIRD ROAD (HAVING A 60-FOOT RIGHT-OF-WAY).

BEARINGS BASED ON KENTUCKY GRID NORTH, NAD 83, SINGLE ZONE.

LEASE AREA

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN GRAYSON COUNTY, KENTUCKY, AND BEING PARCEL 5 OF THE KENNETH AND MYRNA FENTRESS FARM DIVISION AS RECORDED IN PLAT CABINET 2, SLIDE 600, GRAYSON COUNTY RECORDS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TO FIND THE POINT OF BEGINNING, COMMENCE, AT A CAPPED REBAR FOUND AT THE SOUTHWEST CORNER OF PARCEL 4 OF SAID FENTRESS FARM DIVISION, SAID REBAR HAVING A KENTUCKY GRID NORTH, NAD83, SINGLE ZONE VALUE OF N:3741592.1307 E:4706927.3185, AND FOUND BEARING SOUTH 20°30'32" WEST, 398.19' FEET FROM A CAPPED REBAR, SAID REBAR HAVING A KENTUCKY GRID NORTH, NAD83, SINGLE ZONE VALUE OF N:3741965.1674 E:4707066.8804; THENCE RUNNING ALONG A TIE-LINE, NORTH 81°53'45" WEST, 103.88 FEET TO A POINT, AND THE TRUE POINT OF BEGINNING; THENCE RUNNING, NORTH 40°32'19" WEST, 100.00 FEET TO A POINT; THENCE, NORTH 49°27'41" EAST, 100.00 FEET TO A POINT; THENCE, SOUTH 40°32'19" EAST, 100.00 FEET TO A POINT; THENCE, SOUTH 49°27'41" WEST, 100.00 FEET TO A POINT AND THE POINT OF BEGINNING.

BEARINGS BASED ON KENTUCKY GRID NORTH, NAD 83, SINGLE ZONE.

SAID TRACT CONTAINS 0.2296 ACRES (10,000 SQUARE FEET), MORE OR LESS.

TITLE EXCEPTIONS

THIS SURVEY WAS COMPLETED WITH THE AID OF TITLE WORK PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT DATE OF JANUARY 15, 2021 8:00 AM, BEING COMMITMENT NO. TKY778193, FOR THE PARENT PARCEL, TO DETERMINE THE IMPACTS OF EXISTING TITLE EXCEPTIONS.

9. ALL MATTERS DESCRIBED ON A PLAT RECORDED IN PLAT CABINET 2, SLIDE 600-600D.

[THIS ITEM IS APPLICABLE TO THE PARENT PARCEL, LEASE AREA AND INGRESS-EGRESS AND UTILITY EASEMENT, AND IS PLOTTED HEREON.]

10. EASEMENT AGREEMENT GRANTED TO BIG RIVERS ELECTRIC CORPORATION DATED SEPTEMBER 12, 2008 AND RECORDED ON SEPTEMBER 19, 2008 IN BOOK 386, PAGE 310.

[THIS ITEM MAY BE APPLICABLE TO THE PARENT PARCEL BUT THE DESCRIPTION IS VAGUE AND THEREFORE WE CANNOT ASCERTAIN THE LOCATION THEREOF.]

11. SPECIAL POWER OF ATTORNEY DATED NOVEMBER 5, 2015 AND RECORDED ON NOVEMBER 10, 2015 IN BOOK 173, PAGE 161; GENERAL DURABLE POWER OF ATTORNEY DATED MARCH 2, 2007 AND RECORDED ON MARCH 2, 2007 IN BOOK 120, PAGE 497.

[THIS ITEM IS NOT A SURVEY RELATED MATTER.]

12. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED MADE BY AND BETWEEN FRANCES EDWARDS AND JOSEPH EUGENE EDWARDS, HER HUSBAND AND BEVERLY RAZOR AND RICKY RAZOR, HER HUSBAND AND MARTHA RAASCH COPPAGE, SINGLE (GRANTOR) RYAN HUGH COPPAGE, NATHAN ION COPPAGE, EVAN DEREK COPPAGE AND JORDAN ADRIAN COPPAGE (GRANTEE), DATED NOVEMBER 13, 2015 AND RECORDED NOVEMBER 13, 2015 IN BOOK 443, PAGE 459.

[THIS ITEM IS NOT APPLICABLE TO THE PARENT PARCEL.]

13. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED MADE BY AND BETWEEN FRANCES EDWARDS AND JOSEPH EUGENE EDWARDS, HER HUSBAND AND BEVERLY RAZOR AND RICKY RAZOR, HER HUSBAND (GRANTOR) AND HARVEL ESCUE AND WILDA ESCUE, HIS WIFE (GRANTEE), DATED NOVEMBER 13, 2015 AND RECORDED NOVEMBER 13, 2015 IN BOOK 443, PAGE 477.

[THIS ITEM IS APPLICABLE TO THE PARENT PARCEL. APPROXIMATE LOCATION OF SPRING AND WATERLINE ARE SHOWN HEREON.]

14. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED MADE BY AND BETWEEN FRANCES EDWARDS AND JOSEPH EUGENE EDWARDS, HER HUSBAND AND BEVERLY RAZOR AND RICKY RAZOR, HER HUSBAND (GRANTOR) AND SHEILA MEREDITH AND DAVID MEREDITH, HER HUSBAND (GRANTEE), DATED NOVEMBER 13, 2015 AND RECORDED NOVEMBER 13, 2015 IN BOOK 443, PAGE 454.

[THIS ITEM IS NOT APPLICABLE TO THE PARENT PARCEL.]

15. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED MADE BY AND BETWEEN FRANCES EDWARDS AND JOSEPH EUGENE EDWARDS, HER HUSBAND AND BEVERLY RAZOR AND RICKY RAZOR, HER HUSBAND (GRANTOR) AND CHRISTOPHER DEAN SHERRAD AND AMANDA LEE SHERRARD AND BILLY HAFFNER (GRANTEE), DATED NOVEMBER 13, 2015 AND RECORDED NOVEMBER 16, 2015 IN BOOK 443, PAGE 492.

[THIS ITEM IS NOT APPLICABLE TO THE PARENT PARCEL.]

16. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED MADE BY AND BETWEEN FRANCES EDWARDS AND JOSEPH EUGENE EDWARDS, HER HUSBAND AND BEVERLY RAZOR AND RICKY RAZOR, HER HUSBAND (GRANTOR) AND JOHN A. ARMES (GRANTEE), DATED DECEMBER 2, 2015 AND RECORDED DECEMBER 2, 2015 IN BOOK 444, PAGE 62.

[THIS ITEM IS APPLICABLE TO THE PARENT PARCEL. APPROXIMATE LOCATION OF SPRING AND WATERLINE ARE SHOWN HEREON.]

17. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN TIMBER SALE CONTRACT MADE BY AND BETWEEN KENNETH M. FENTRESS AND MYRNA FRANCES FENTRESS, HIS WIFE(GRANTOR) AND THE FISCHER CHAIR COMPANY (GRANTEE), DATED APRIL 28, 1948 IN BOOK 40, PAGE 279.

[THIS ITEM CANNOT BE LOCATED BECAUSE THE DESCRIPTION IS VAGUE AND THEREFORE WE CANNOT ASCERTAIN THE LOCATION THEREOF.]

18. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED OF CONVEYANCE MADE BY AND BETWEEN KENNETH FENTRESS & WIFE MYRNA FENTRESS (GRANTOR) AND W. O. BEAUCHAMP (GRANTEE), DATED APRIL 13, 1948 IN BOOK 52, PAGE 39.

[THIS ITEM CANNOT BE LOCATED BECAUSE THE DESCRIPTION IS VAGUE AND THEREFORE WE CANNOT ASCERTAIN THE LOCATION THEREOF.]

19. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED OF CONVEYANCE MADE BY AND BETWEEN KENNETH M. FENTRESS AND MYRNA FRANCES FENTRESS, HIS WIFE (GRANTOR) AND B. RITTER WHIPPLE AND LOUIS BRAMMER AND LILLY MAE BRAMMER, HIS WIFE (GRANTEE), DATED DECEMBER 6, 1958 IN BOOK 56, PAGE 489.

[THIS ITEM IS NOT APPLICABLE TO THE PARENT PARCEL.]

20. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED MADE BY AND BETWEEN KENNETH FENTRESS AND MYRNA FRANCES FENTRESS, HIS WIFE (GRANTOR) AND J.V. TUBB, JR., GEORGE FENTRESS, JR. AND WALTER MAHURIN (GRANTEE), DATED AUGUST 14, 1964 IN BOOK 84, PAGE 365.

[THIS ITEM CANNOT BE LOCATED BECAUSE THE DESCRIPTION IS VAGUE AND THEREFORE WE CANNOT ASCERTAIN THE LOCATION THEREOF.]

21. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED MADE BY AND BETWEEN KENNETH FENTRESS AND MYRNA FENTRESS, HIS WIFE (GRANTOR) AND OTHMARE J. HELLMANN AND ELNORA E. HELLMANN, HUSBAND AND WIFE, JOINTLY FOR LIFE WITH REMAINDER TO THE SURVIVOR OF EITHER OF THEM (GRANTEE), DATED JULY 11, 1966 IN BOOK 92, PAGE 421.

[THIS ITEM IS NOT APPLICABLE TO THE PARENT PARCEL.]

22. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED MADE BY AND BETWEEN KENNETH FENTRESS AND MYRNA FENTRESS, HIS WIFE (GRANTOR) AND CARL L. SARVER AND GEORGE FENTRESS, JR. (GRANTEE), DATED JUNE 25, 1968 IN BOOK 97, PAGE 444.

[THIS ITEM IS NOT APPLICABLE TO THE PARENT PARCEL.]

23. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED MADE BY AND BETWEEN KENNETH M. FENTRESS AND MYRNA FRANCES FENTRESS, HIS WIFE (GRANTOR) AND GEORGE FENTRESS, JR. (GRANTEE), DATED OCTOBER 18, 1968 IN BOOK 99, PAGE 225.

[THIS ITEM CANNOT BE LOCATED BECAUSE THE DESCRIPTION IS VAGUE AND THEREFORE WE CANNOT ASCERTAIN THE LOCATION THEREOF.]

24. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED MADE BY AND BETWEEN KENNETH M. FENTRESS AND MYRNA FRANCES FENTRESS, HIS WIFE (GRANTOR) AND DAVID MURL FENTRESS AND ALICE FENTRESS, HIS WIFE (GRANTEE), DATED MARCH 26, 1976 IN BOOK 146, PAGE 124.

[THIS ITEM CANNOT BE LOCATED BECAUSE THE DESCRIPTION IS VAGUE AND THEREFORE WE CANNOT ASCERTAIN THE LOCATION THEREOF.]

25. EASEMENT/RESTRICTIONS RECORDS SET FORTH IN DEED MADE BY AND BETWEEN MYRNA FRANCES FENTRESS, WIDOWED AND SINGLE, BY AND THROUGH HER ATTORNEY-IN-FACT, FRANCES (KITTY) EDWARDS (GRANTOR) AND DAVID MURL FENTRESS. (GRANTEE), DATED MAY 7, 2007 AND RECORDED ON MAY 8, 2007 IN BOOK 374, PAGE 38.

[THIS ITEM CANNOT BE LOCATED BECAUSE THE DESCRIPTION IS VAGUE AND THEREFORE WE CANNOT ASCERTAIN THE LOCATION THEREOF.]

26. OIL AND GAS LEASE MADE BY AND BETWEEN KENNETH M. FENTRESS AND MYRNA FRANCES FENTRESS, HUSBAND AND WIFE (GRANTOR) AND JIMMY CARPENTER (GRANTEE), DATED JULY 22, 1991 AND RECORDED ON SEPTEMBER 20, 1991 IN BOOK 38, PAGE 607; AS ASSIGNED TO KENTUCKY RESOURCES DEVELOPMENT, CORP. BY ASSIGNMENT DATED OCTOBER 16, 1996 AND RECORDED ON OCTOBER 25, 1996 IN BOOK 43, PAGE 394; AS ASSIGNED TO CONOCO INC., A DELAWARE CORPORATION BY ASSIGNMENT OF OIL AND GAS LEASE DATED AUGUST 14, 2001 AND RECORDED ON JUNE 8, 1992 IN BOOK 48, PAGE 246.

[THIS ITEM IS MAY NOT BE APPLICABLE TO THE PARENT PARCEL AND IS BLANKET IN NATURE.]

SURVEY NOT VALID WITHOUT SHEETS 1 & 2 OF 3

STATE of KENTUCKY
G. DARRELL TAYLOR
4179
LICENSED PROFESSIONAL LAND SURVEYOR

NO.	DATE	REVISION
1	3/12/2021	REVISED ING-EGR - GJH
2	3/16/2021	TITLE REVIEW - DMM
3	8/17/2021	REVISED ZONING

* SPECIFIC PURPOSE SURVEY PREPARED BY:
POINT TO POINT LAND SURVEYORS
100 Governors Trace, Ste. 103
Peachtree City, GA 30269
(p) 678.565.4440 (f) 678.565.4497
(w) pointtopointsurvey.com

SPECIFIC PURPOSE SURVEY PREPARED FOR:

TILLMAN INFRASTRUCTURE

TILLMAN INFRASTRUCTURE, LLC
152 W 57TH STREET, 27TH FLOOR
NEW YORK, NY 10019

FALLING BRANCH

SITE NO.
TI-OPP-17878
GRAYSON COUNTY, KENTUCKY

DRAWN BY: GJH	SHEET: 3
CHECKED BY: JKL	OF 3
APPROVED: D. MILLER	
DATE: MARCH 8, 2021	
P2P JOB #: 210175KY	

E:\Dropbox (Point To Point)\P2P Current Jobs\2021\210175KY-TIOPP-17878\210175KY.pro

GENERAL PROJECT NOTES

1. THE ENGINEER SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT ON A ONE TIME BASIS.
2. THE CONTRACTOR SHALL TOPSOIL AND SEED ALL DISTURBED AREAS.
3. THE PLANS SHOW SOME KNOWN SUBSURFACE STRUCTURES, ABOVE-GROUND STRUCTURES AND/OR UTILITIES BELIEVED TO EXIST IN THE WORKING AREA, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE SHOWN OR MAY NOT BE SHOWN; AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. 48 HOURS BEFORE YOU DIG, DRILL OR BLAST, CALL 811.
4. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE ENGINEER.
5. THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT.
6. THE CONTRACTOR SHALL RESTORE ALL PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD OF CONDITION AS BEFORE DISTURBED AS DETERMINED BY THE ENGINEER.
7. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES, ETC.
9. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF THE STATE LICENSED LAND SURVEYOR.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS, AND COORDINATE WORK WITH ALL CONTRACTS FOR THE SITE.
11. ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE JURISDICTIONS STATE CODE AND OSHA REGULATIONS FOR CONSTRUCTION.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.
13. ALL UTILITY WORK INVOLVING CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE ENGINEER AND THE UTILITY OWNER. NOTIFY THE ENGINEER AND THE UTILITY OWNER 24 HOURS BEFORE EACH AND EVERY CONNECTION TO EXISTING SYSTEMS IS MADE.
14. MAINTAIN FLOW FOR ALL EXISTING UTILITIES.
15. ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
16. CONTRACTOR TO GRADE ALL AREAS ON THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE COMPOUND AND THE TOWER.
17. THE CONTRACTOR SHALL TAKE TIES TO ALL UTILITY CONNECTIONS AND PROVIDE MARKED-UP AS-BUILT PLANS. AS-BUILT PLANS SHALL BE REVIEWED BY THE OWNER AND HIS REPRESENTATIVES, AND THE CONTRACTOR SHALL PROVIDE ANY CORRECTION OR ADMISSIONS TO THE SATISFACTION OF THE OWNER AND HIS REPRESENTATIVES BEFORE UTILITIES WILL BE ACCEPTED. AS-BUILTS SHALL INCLUDE ALL POWER, TELEPHONE, GROUNDING, ETC.
18. TOWER FOOTING DIMENSIONS SHALL BE VERIFIED WITH THE TOWER MANUFACTURER AND THE TOWER PLANS.

GENERAL CONSTRUCTION NOTES

1. GENERAL
   - A. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
   - B. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE UNDERGROUND UTILITIES.
   - C. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE APPROVAL.
   - D. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
   - E. PAINT ALL ANTENNAS, MOUNTING HARDWARE, CABLES, CABLE TRAYS, ETC. TO MATCH EXISTING STRUCTURE PER OWNER REQUIREMENTS. OWNER SHALL APPROVE COLOR.
   - F. ALL DAMAGED, MARRED, SCRAPED, ABRADED, ETC. AREAS OF EXISTING PAINT SHALL BE REPAIRED PER OWNERS REQUIREMENTS. OWNER SHALL APPROVE COLOR.
2. EXCAVATIONS/FOUNDATION
   - A. FOUNDATION EXCAVATION SHALL BE HAND-TRIMMED TO REMOVE LOOSE MATERIALS.
   - B. EXTERIOR FOUNDATION BACKFILL SHALL BE SELECTED GRANULAR FILL.
   - C. ALL STRUCTURAL BACKFILL AND SUBBASE UNDER SLABS-ON-GRADE AND FOOTINGS SHALL BE "SW" OR BETTER PER ASTM D-2487 COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY PER ASTM D 698.
   - D. DO NOT PLACE FOOTINGS IN WATER OR ON FROZEN GROUND.
   - E. SOIL BEARING SURFACES, PREVIOUSLY ACCEPTED BY GEOTECHNICAL ENGINEER, WHICH ARE ALLOWED TO BECOME SATURATED, FROZEN OR DISTURBED SHALL BE REWORKED TO SATISFACTION OF GEOTECHNICAL ENGINEER.
   - F. DO NOT ALLOW GROUND BENEATH FOOTINGS TO FREEZE.
   - G. FOOTING EXCAVATIONS SHALL BE CUT NEAT.
3. CONCRETE
   - A. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING APPLICABLE CODES: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"; ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE";
   - B. MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING CONCRETE.
   - C. CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED (±1.5%) WITH A MAXIMUM 4" SLUMP, AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI UNLESS OTHERWISE NOTED.
   - D. MAXIMUM AGGREGATE SIZE SHALL BE 1".
   - E. THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:	ASTM C 150, TYPE I
REINFORCEMENT:	ASTM A 615, GRADE 60
NORMAL WEIGHT AGGREGATE:	ASTM C 33
WATER:	DRINKABLE
ADMIXTURES:	NON-CHLORIDE CONTAINING

   - F. REINFORCING SHALL CONFORM TO ASTM A-615 WITH SUPPLEMENT. MINIMUM YIELD STRENGTH Fy= 60 KSI. REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315.
   - G. CONCRETE COVER AROUND REINFORCING BARS (U.N.O.) SHALL BE:
     1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED EARTH.....3"
     2. CONCRETE EXPOSED TO EARTH, WEATHER.....2"
     3. SLABS.....3/4"
     4. ALL OTHER CONCRETE.....1 1/2"
   - H. UNLESS INDICATED OTHERWISE ON THE DRAWINGS, REINFORCEMENT SPLICES SHALL MEET CLASS B, TENSION LAP REQUIREMENTS IN ACCORDANCE WITH ALL PROVISIONS OF ACI 318 LATEST EDITION, UNLESS NOTED OTHERWISE.

GENERAL CONSTRUCTION NOTES CONT.

- I. CURING COMPOUNDS SHALL CONFORM TO ASTM C-309.
- J. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI-301.
- K. DO NOT WELD OR TACKWELD REINFORCING STEEL.
- L. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, PIPING, WATERSTOPS, INSERTS, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
- M. LOCATE ADDITIONAL CONSTRUCTION JOINTS REQUIRED TO FACILITATE CONSTRUCTION AS ACCEPTABLE TO ENGINEER. PLACE REINFORCEMENT CONTINUOUSLY THROUGH JOINT.
- N. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
- O. PLACE CONCRETE IN A UNIFORM MANNER TO PREVENT THE FORMATION OF COLD JOINTS AND OTHER PLANES OF WEAKNESS. VIBRATE THE CONCRETE TO FULLY EMBED REINFORCING. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE THROUGH CHUTES OR FORMWORK.
- P. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
- Q. DO NOT ALLOW CONCRETE SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 14 DAYS AFTER PLACEMENT.
- R. FOR COLD-WEATHER AND HOT-WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS MINIMUM.
- S. PROVIDE A STEEL TROWEL FINISH TO THE SLAB.

4. ANTENNA SUPPORT BRACKET NOTES (IF APPLICABLE)
   - A. DESIGN RESPONSIBILITY OF ANTENNA MOUNTING BRACKETS AND POLES AND ALL COMPONENTS THERE OF AND ATTACHMENT THERE TO SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER. MFR SHALL PROVIDE TO THE ENGINEER FOR APPROVAL, DRAWINGS DETAILING ALL COMPONENTS OF THE ASSEMBLY, INCLUDING CONNECTIONS, DESIGN LOADS, AND ALL OTHER PERTINENT DATA.
   - B. BRACKETS SHALL BE DESIGNED TO SUPPORT CURRENT AND FUTURE PANEL ANTENNAS AND COAXIAL CABLES AS SHOWN.

5. STRUCTURAL STEEL NOTES
   - A. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
   - B. STEEL ANGLES, BASE PLATES, BEARING PLATES AND MISC. FABRICATION SHALL BE MADE FROM STEEL MEETING THE REQUIREMENTS OF ASTM-A36 WITH A MINIMUM YIELD STRESS OF 36 KSI. ALL STEEL TUBES AND PIPES SHALL BE A500 STEEL MINIMUM.
   - C. ALL DINGS, SCRAPES, MARS, AND WELDS IN THE FINISHED AREAS SHALL BE REPAIRED BY FIELD TOUCH-UP PRIOR TO COMPLETION OF THE WORK.
   - D. ALL EXTERIOR STRUCTURAL STEEL SHALL BE, WHEN DELIVERED, HOT-DIP GALVANIZED ACCORDING TO ASTM A123. TOUCH-UP FIELD WELDS AND ABRADED AREAS W/2 COATS OF GALVANIZED PAINT, ZRC COLD GALVANIZING COMPOUND OR APPROVED EQUAL.
   - E. DO NOT PLACE HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
   - F. CONNECTIONS:
     1. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS AND SHALL HAVE A MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
     2. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. GALVANIZED ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
   - G. SAFETY NOTES:
     1. THE CONTRACTOR WILL ADHERE TO ALL SAFETY REGULATIONS, LOCAL, STATE AND FEDERAL.
     2. THE CONTRACTOR WILL CONDUCT DAILY SAFETY TAILGATE MEETINGS IN ADDITION TO WEEKLY SAFETY MEETINGS. THESE REPORTS WIIL BE MADE AVAILABLE TO THE OWNER UPON REQUEST.
     3. ALL WORKERS & VISITORS TO THE SITE SHALL WEAR HARD HATS & ANY OTHER SAFETY EQUIPMENT REQUIRED BY THE WORK BEING PERFORMED ON THE SITE.

CIVIL LEGEND

EXISTING		PROPOSED
	FENCE	
UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC	
UNDERGROUND TELEPHONE	UNDERGROUND TELEPHONE	
OVERHEAD WIRES	OVERHEAD TELEPHONE	
	OVERHEAD ELECTRIC	
250	5' OR 10' CONTOUR LINE	250
202	1' OR 2' CONTOUR LINE	202
120.5 OR 120.5	SPOT ELEVATION	120.5 OR 120.5
	PRIMARY PROPERTY OR R.O.W.	
	LEASE LINE	
	EASEMENT	
	UTILITY POLE	
	TELEPHONE PEDESTAL	
	CURB	
	ASPHALT PAVEMENT	
	BUILDING	
	TREES, SHRUBS, BUSHES	

X — REPRESENTS DETAIL NUMBER
X — REF. DRAWING NUMBER

GROUNDING SYMBOLS

- GROUND ROD
- ACCESS WELL
- GROUND ROD WITH ACCESS
- —G— #2 BTCW GROUNDING WIRE U.N.O
- INDICATES CODED NOTE

ELECTRICAL SYMBOLS

- RECEPTACLE
- BURIED RACEWAY
- TOWER LIGHT SYSTEM
- INDICATES CODED NUMBER
- INDICATES DISCONNEC

ABBREVIATIONS

CIGBE	COAX ISOLATED GROUND BAR EXTERNAL
MIGB	MASTER ISOLATED GROUND BAR
SST	SELF SUPPORTING TOWER
GPS	GLOBAL POSITIONING SYSTEM
TYP.	TYPICAL
DWG	DRAWING
BCW	BARE COPPER WIRE
BFG	BELOW FINISH GRADE
W/	WITH
PVC	POLYVINYL CHLORIDE
CAB	CABINET
C	CONDUIT
SS	STAINLESS STEEL
G	GROUND
AWG	AMERICAN WIRE GAUGE
RGS	RIGID GALVANIZED STEEL
AHJ	AUTHORITY HAVING JURISDICTION
TTLNA	TOWER TOP LOW NOISE AMPLIFIER
UNO	UNLESS NOTED OTHERWISE
EMT	ELECTRICAL METALLIC TUBING

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No.	Submittal Revision	App'd	Date
5	ISSUED FOR CONSTRUCTION	QES	10/14/21
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3	ISSUED FOR CONSTRUCTION	LMG	09/10/21
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1	ISSUED FOR CONSTRUCTION	QES	08/11/21
0	ISSUED FOR CONSTRUCTION	QES	07/16/21
A	ISSUED FOR REVIEW	QES	06/30/21

Drawn: QES Date: 06/30/21
Designed: QES Date: 06/30/21
Checked: CJW Date: 06/30/21

Project Number: 2136-Z0001-C

Project Title:
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

Drawing Title:
GENERAL NOTES & LEGEND

Drawing Scale: AS NOTED
Date: 06/30/21

CD

Drawing Number:
C1

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANY OR OTHER PUBLIC AUTHORITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
5. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTH WITH RF ENGINEERING PRIOR TO INSTALLATION.
8. TRANSMITTER EQUIPMENT AND ANTENNAS ARE DESIGNED TO MEET ANSI/EIA/TIA 222-G REQUIREMENTS.
9. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
10. CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.
11. IF ANY UNDERGROUND UTILITIES OR STRUCTURES EXIST BENEATH THE PROJECT AREA, CONTRACTOR MUST LOCATE THEM AND CONTACT THE APPLICANT AND OWNER'S REPRESENTATIVE.
12. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION BY TECHNICIANS APPROXIMATELY TWICE A MONTH.
13. PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT OR MODIFICATION TO THE EXISTING STRUCTURE, A STRUCTURAL ANALYSIS SHALL BE PERFORMED BY THE OWNER'S AGENT TO CERTIFY THAT THE EXISTING/PROPOSED COMMUNICATION STRUCTURE AND COMPONENTS ARE STRUCTURALLY ADEQUATE TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, COAXIAL CABLES AND OTHER APPURTENANCES.
14. PROPERTY LINE INFORMATION WAS PREPARED USING DEEDS, TAX MAPS AND PLANS OF RECORD AND SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY.
15. THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
16. THE PROPOSED FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORM WATER RUNOFF, THEREFORE NO DRAINAGE STRUCTURES ARE PROPOSED.
17. NO SIGNIFICANT NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY.
18. THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).
19. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
20. POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.

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A	ISSUED FOR REVIEW	CES	06/30/21

Drawn: CES Date: 06/30/21
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Project Number: 2136-Z0001-C

Project Title:
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

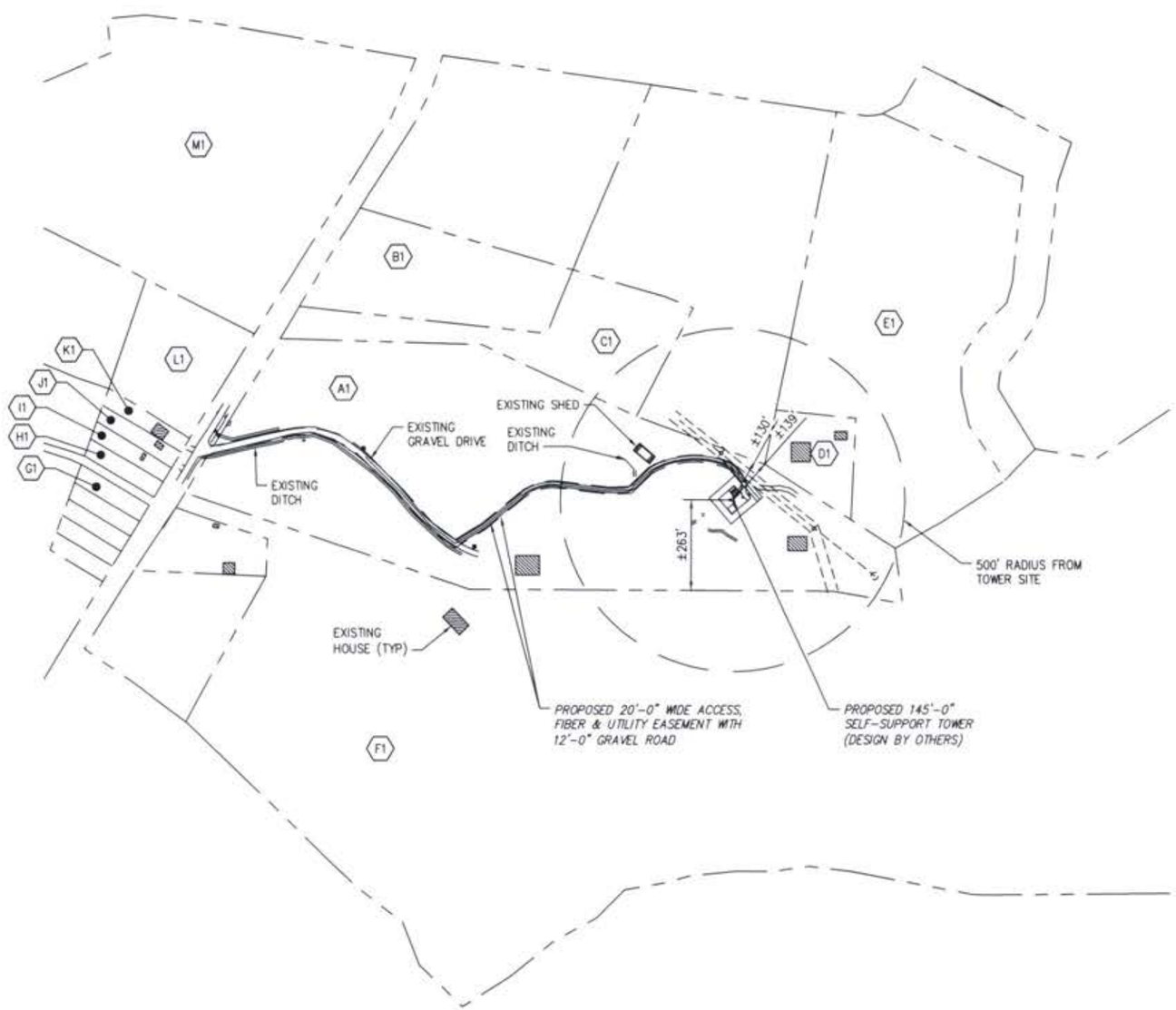
Engineer Stamp:
COMMONWEALTH OF KENTUCKY
CHRISTOPHER J. WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title:
GENERAL NOTES

Drawing Scale: AS NOTED
Date: 06/30/21
CD

Drawing Number:
C2

DIRECTIONS:
DEPART LOUISVILLE INTERNATIONAL AIRPORT ON LOCAL ROAD(S) (EAST) FOR 142 YDS TOWARD REMOTE PARKING. TURN LEFT (NORTH-WEST) ONTO LOCAL ROAD(S) FOR 0.3 MI. ROAD NAME CHANGES TO TOLL PLAZA DR FOR 0.2 MI. MERGE ONTO LOWER TERMINAL DR FOR 0.1 MI TOWARD I-264 / I-65 / PARKING / TERMINAL RETURN / DOWNTOWN. MERGE ONTO TERMINAL DR FOR 0.2 MI. KEEP RIGHT ONTO RAMP FOR 0.6 MI TOWARD I-264 / I-65 / DOWNTOWN. KEEP LEFT TO STAY ON RAMP FOR 0.3 MI TOWARD. TAKE RAMP (RIGHT) ONTO I-65 FOR 39.4 MI TOWARD I-65 / US-61 / NASHVILLE. AT EXIT 91, TURN RIGHT ONTO RAMP FOR 0.2 MI TOWARD US-31W / KY-61 / WK PARKWAY / HODGENVILLE / PADUCAH. KEEP RIGHT TO STAY ON RAMP FOR 0.2 MI TOWARD US-31W / KY-61 / WK PARKWAY / ELIZABETHTOWN / OWENSBORO. TAKE RAMP (LEFT) ONTO WENDELL H FORD WESTERN KENTUCKY PKWY FOR 29.3 MI TOWARD WK PARKWAY WEST / OWENSBORO / PADUCAH. AT EXIT 107, KEEP RIGHT ONTO RAMP FOR 0.2 MI TOWARD KY-259 / LEITCHFIELD / BROWNSVILLE. TURN RIGHT (NORTH) ONTO SR-259 FOR 0.7 MI. KEEP STRAIGHT ONTO US-62 FOR 0.2 MI. AT ROUNDABOUT, TAKE THE THIRD EXIT ONTO W MAIN ST FOR 142 YDS. BEAR RIGHT (WEST) ONTO SR-54 FOR 10.8 MI. TURN RIGHT (NORTH) ONTO SR-79 FOR 5.7 MI. TURN RIGHT (EAST) ONTO SR-110 FOR 0.4 MI. TURN RIGHT TO STAY ON SR-110 FOR 0.9 MI. TURN LEFT TO STAY ON SR-110 FOR 1.5 MI.TURN RIGHT (SOUTH) ONTO PARADISE ACRES RD FOR 0.3 MI. BEAR RIGHT (SOUTH) ONTO BLUE RIDGE RD FOR 0.3 MI. CHECK LOCAL TIME; THIS STOP IS IN A DIFFERENT TIME ZONE. TURN RIGHT (NORTH) ONTO LOCAL ROAD(S) FOR 0.2 MI. ARRIVE 2589 BLUE BIRD ROAD FALLS OF ROUGH, KY 40116



PARCEL KEY:

A1 PARCEL ID: 034-00-00-013
TERRY L. NEWTON & KIMBERLY D. NEWTON
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40119

B1 PARCEL ID: 034-00-00-013.00
NICOLAI ROGER & JANELLE
2663 BLUE BIRD RD
FALLS OF ROUGH, KY 40119

C1 PARCEL ID: 034-00-00-013.0G
NICOLAI ROGER & JANELLE
2663 BLUE BIRD RD
FALLS OF ROUGH, KY 40119

D1 PARCEL ID: 034-00-00-013.0J
NICOLAI ROGER & JANELLE
2663 BLUE BIRD RD
FALLS OF ROUGH, KY 40119

E1 PARCEL ID: 034-00-00-013.0F
SHELTON ROBERT WAYNE JR & DEBRA R.
362 CHERRY HILL PARKWAY
MT WASHINGTON, KY 40047

F1 PARCEL ID: 034-00-00-013.0C
COPPAGE MARTHA RAASCH
187 CHIPMUNK LN
FALLS OF ROUGH, KY 40119

G1 PARCEL ID: FENTRS CS-057
EDWARDS CHARLES B & PAULINE S
10141 FALLS OF ROUGH RD
FALLS OF ROUGH, KY 40119

H1 PARCEL ID: FENTRS CS-058
GRANT RONNIE DEAN & PATRICIA
142 QUEENS CT
BEAVER DAM, KY 42320

I1 PARCEL ID: FENTRS CS-059
GRANT RONNIE DEAN & PATRICIA
142 QUEENS CT
BEAVER DAM, KY 42320

J1 PARCEL ID: FENTRS CS-060
STREBLE NICHOLAS & WHITNEY
2878 WEAVERS RUN RD
WEST POINT, KY 40177

K1 PARCEL ID: FENTRS CS-061
STREBLE NICHOLAS & WHITNEY
2878 WEAVERS RUN RD
WEST POINT, KY 40177

L1 PARCEL ID: FENTRS CS-062
GITTINGS GEORGE L JR & SUE ANN
C/O ADAM THOMPSON & TRAVIS MICHELS
261 N SKYLINE DR
LOUISVILLE, KY 40229

M1 PARCEL ID: LOOK 0-00X
LANDOWNER INFORMATION FOR PARCEL UNAVAILABLE PER GRAYSON COUNTY PVA OFFICE.

NOTE:
PARCEL NUMBERS ARE OF RECORD IN THE GRAYSON COUNTY PROPERTY VALUATION ADMINISTRATOR OFFICE

NOTE:
IN COMPLIANCE WITH LOCAL REGULATIONS, CONTRACTOR TO PRESERVE EXISTING VEGETATION NEAR THE SITE.

CALLED NORTH

1 / -- 500' RADIUS AND ABUTTERS MAP
SCALE: 100' 0 100' 200' 400'
(IN FEET)
SCALE: 11"x17" SHEET 1" = 400'-0"
SCALE: 22"x34" SHEET 1" = 200'-0"

GRAYSON COUNTY KY PVA
ERNIE PERKINS, PVA
10 PUBLIC SQUARE
LEITCHFIELD, KY 42754
OFFICE: (270) 259-4838
FAX: (270) 259-3918

GENERAL NOTE:
1. ALL INFORMATION SHOWN HEREIN WAS OBTAINED FROM THE RECORDS OF THE WARREN COUNTY KENTUCKY PROPERTY VALUATION ADMINISTRATION OFFICE ON 08/31/21. THE PROPERTY VALUATION ADMINISTRATION MAY NOT REFLECT THE CURRENT OWNERS AND ADDRESSES DUE TO INACCURACIES AND TIME LAPSE IN UPDATING FILES. MORRISON HERSHFIELD CORPORATION AND THE COUNTY PROPERTY VALUATION ADMINISTRATION EXPRESSLY DISCLAIM ANY WARRANTY FOR THE CONTENT AND ANY ERRORS CONTAINED IN THEIR FILES.
2. THIS MAP IS FOR GENERAL INFORMATIONAL PURPOSES ONLY AND IS NOT A BOUNDARY SURVEY.
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Project Title:
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

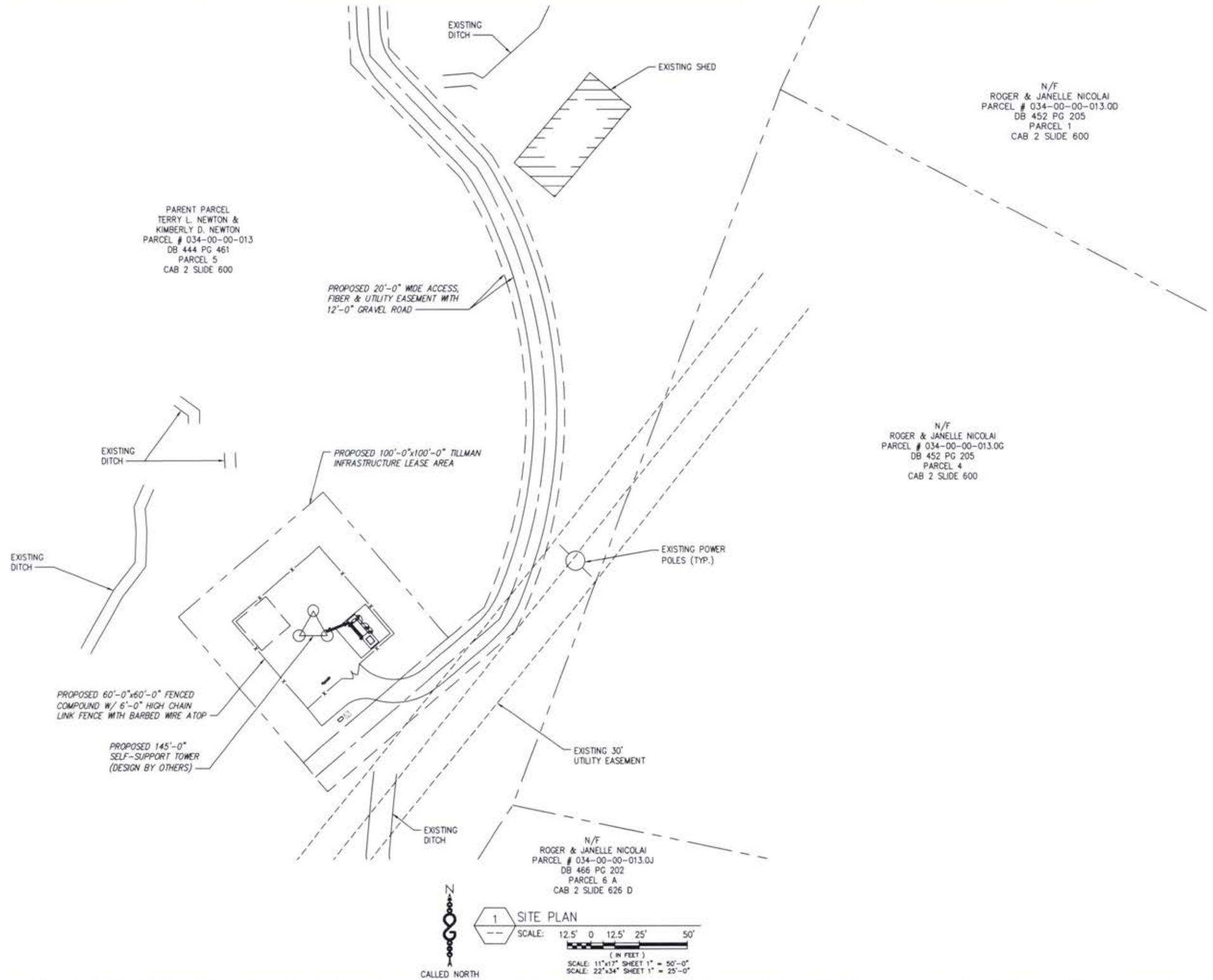
Engineer's Stamp:
COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title:
500' RADIUS AND ABUTTERS MAP & ADDRESSES

Drawing Scale: AS NOTED
Date: 06/30/21

CD

Drawing Number:
C3



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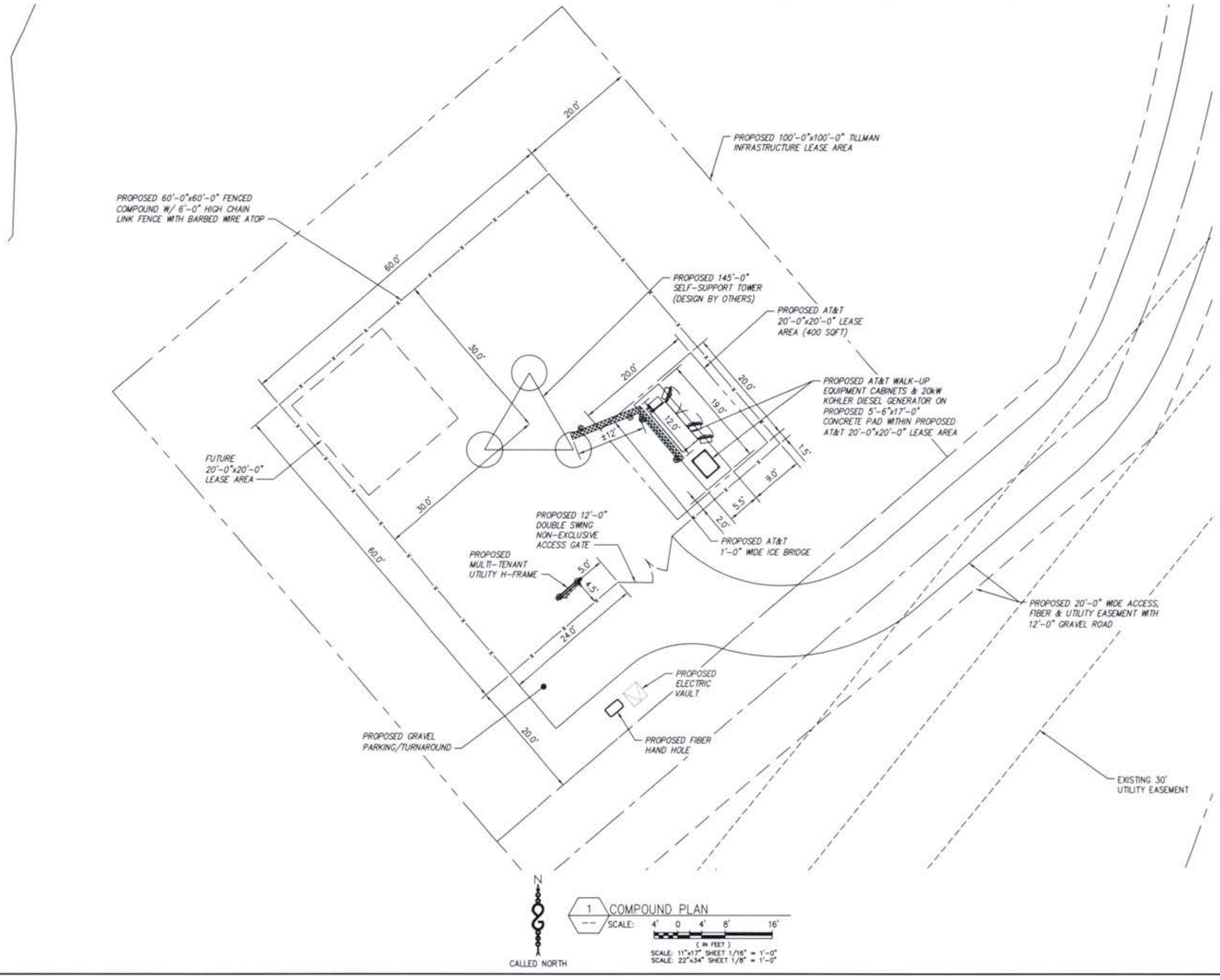
Engineer Seal
COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
SITE PLAN

Drawing Scale: AS NOTED
Date: 06/30/21
CD

Drawing Number
C3.1



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COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24029
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
COMPOUND PLAN

Drawing Scale: AS NOTED
Date: 06/30/21
CD

Drawing Number
C4

TOP OF PROPOSED LIGHTNING ROD
ELEV. = 149'-0" AGL

TOP OF PROPOSED TOWER
ELEV. = 145'-0" AGL

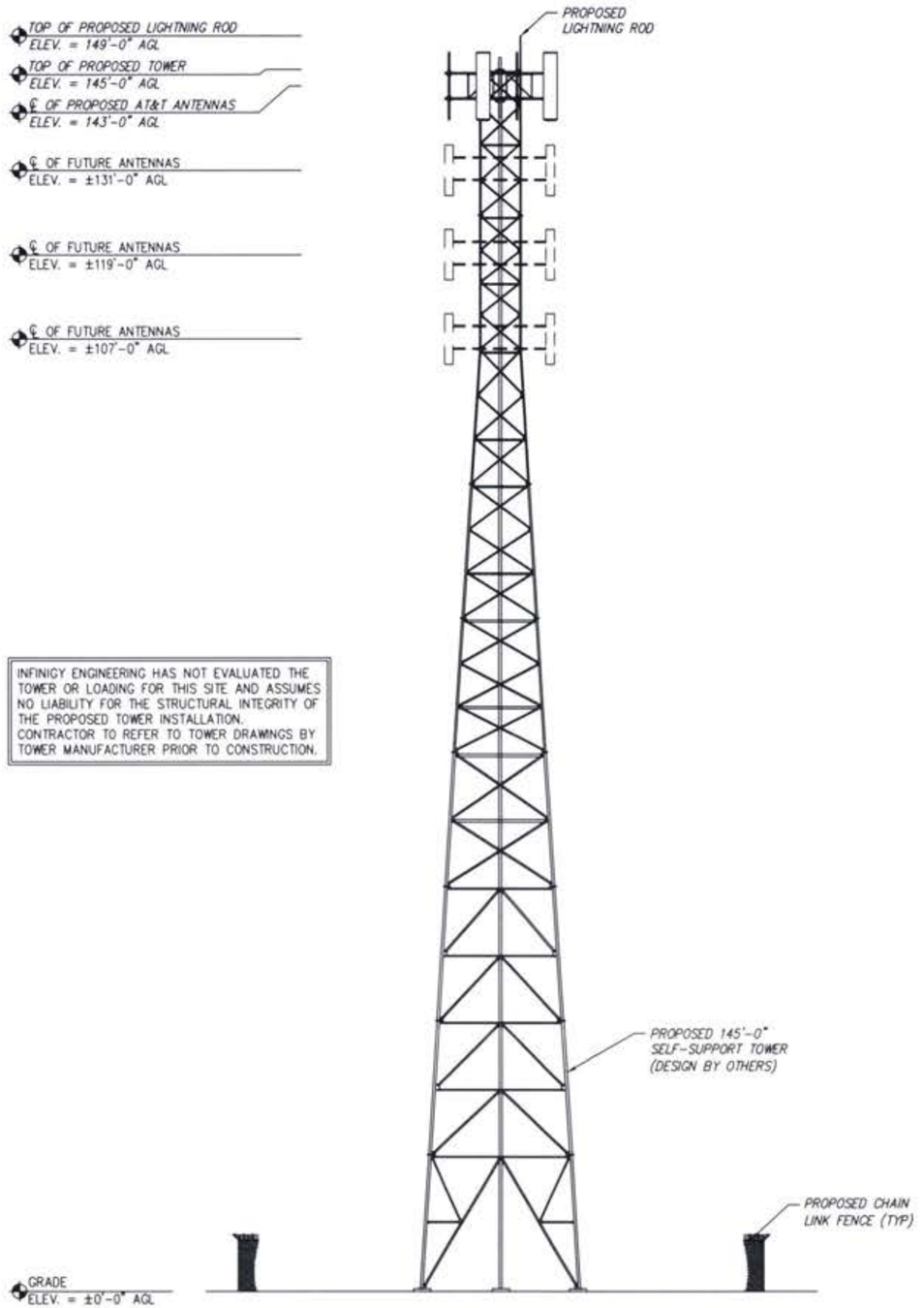
℄ OF PROPOSED AT&T ANTENNAS
ELEV. = 143'-0" AGL

℄ OF FUTURE ANTENNAS
ELEV. = ±131'-0" AGL

℄ OF FUTURE ANTENNAS
ELEV. = ±119'-0" AGL

℄ OF FUTURE ANTENNAS
ELEV. = ±107'-0" AGL

INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER OR LOADING FOR THIS SITE AND ASSUMES NO LIABILITY FOR THE STRUCTURAL INTEGRITY OF THE PROPOSED TOWER INSTALLATION. CONTRACTOR TO REFER TO TOWER DRAWINGS BY TOWER MANUFACTURER PRIOR TO CONSTRUCTION.



1 / -- TOWER ELEVATION
SCALE: NOT TO SCALE

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No	Submittal Revision	App'd	Date
5	ISSUED FOR CONSTRUCTION	CES	10/14/21
4	ISSUED FOR CONSTRUCTION	LMC	10/01/21
3	ISSUED FOR CONSTRUCTION	LMC	09/10/21
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A	ISSUED FOR REVIEW	CES	06/30/21

Drawn: CES Date: 06/30/21
Designed: CES Date: 06/30/21
Checked: GJW Date: 06/30/21

Project Number
2136-Z0001-C

Project Title
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

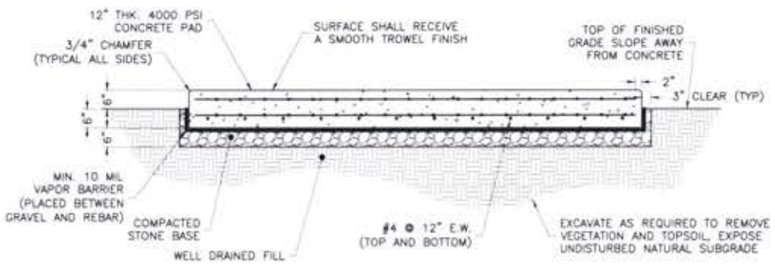
COMMONWEALTH OF KENTUCKY
CHRISTOPHER L. WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
TOWER ELEVATION

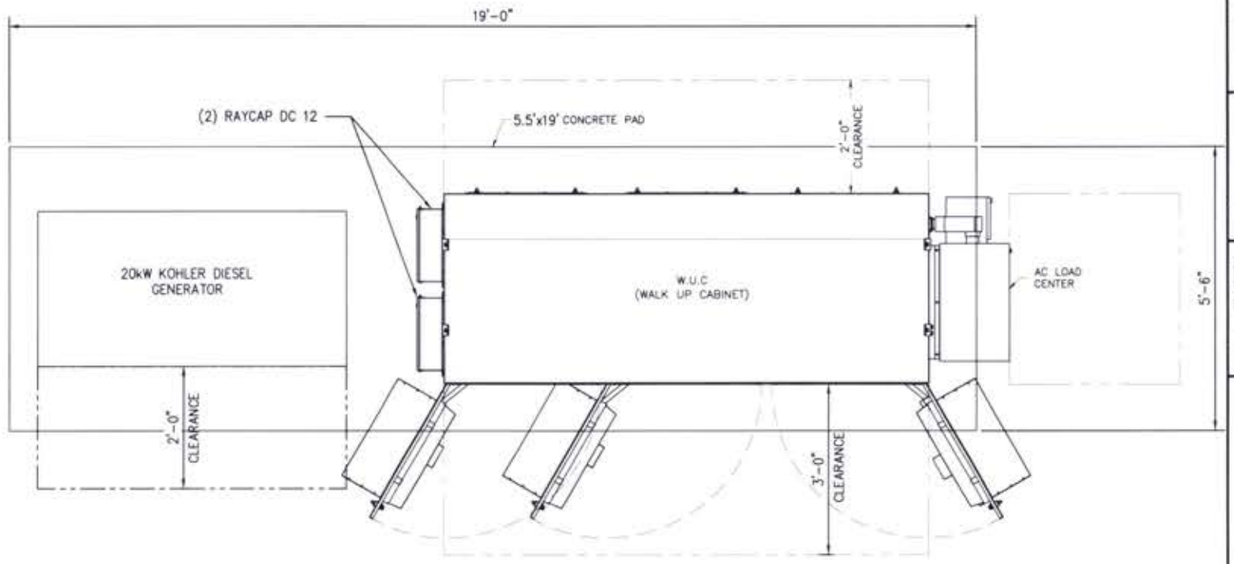
Drawing Scale
AS NOTED
Date
06/30/21

CD

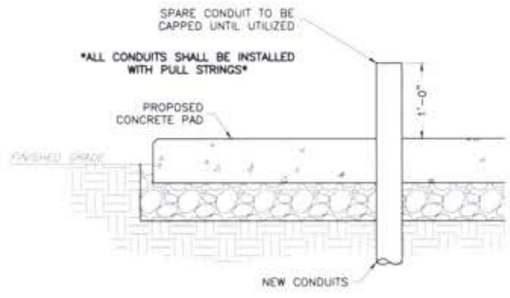
Drawing Number
C5



1 CONCRETE PAD DETAIL
-- NOT TO SCALE



2 EQUIPMENT PAD LAYOUT
-- NOT TO SCALE



3 CONDUIT PENETRATION DETAIL
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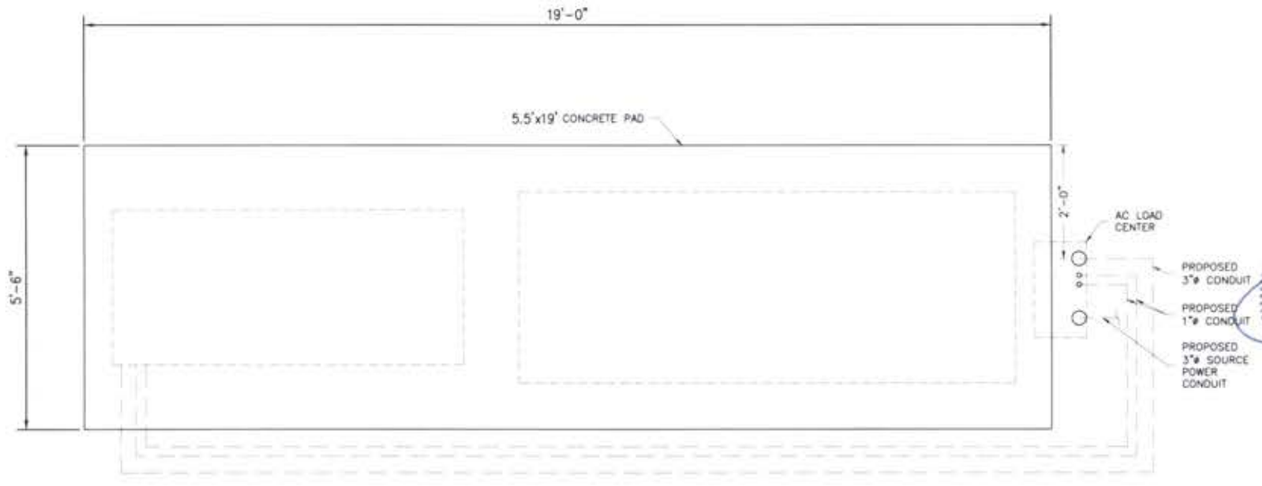

NOTE:
EQUIPMENT PAD/UTILITY LAYOUT SHOWN IS FOR REFERENCE & CONTRACTOR SHALL USE SITE SPECIFIC GENERATOR SPECIFICATIONS FOR UTILITY LAYOUT.

4 EQUIPMENT PAD/UTILITY LAYOUT
-- NOT TO SCALE

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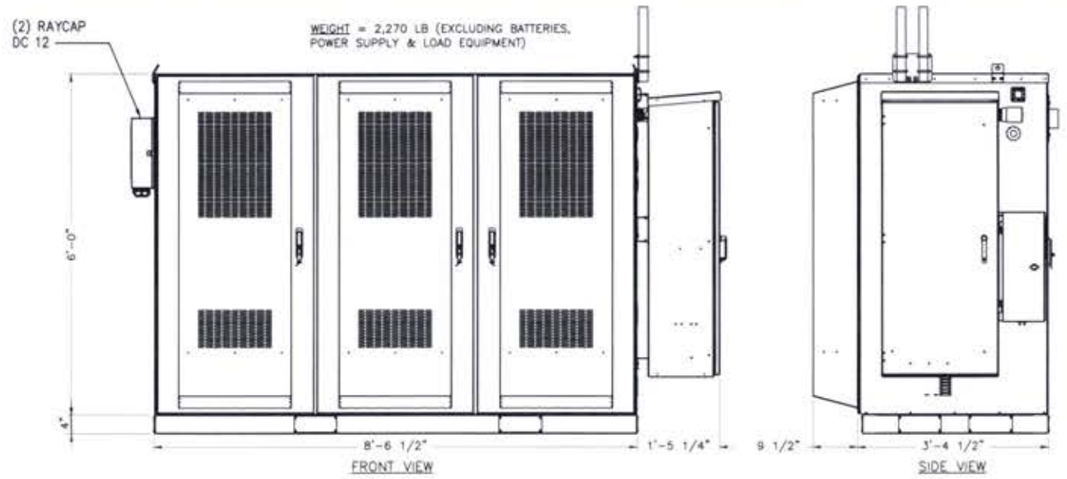
COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

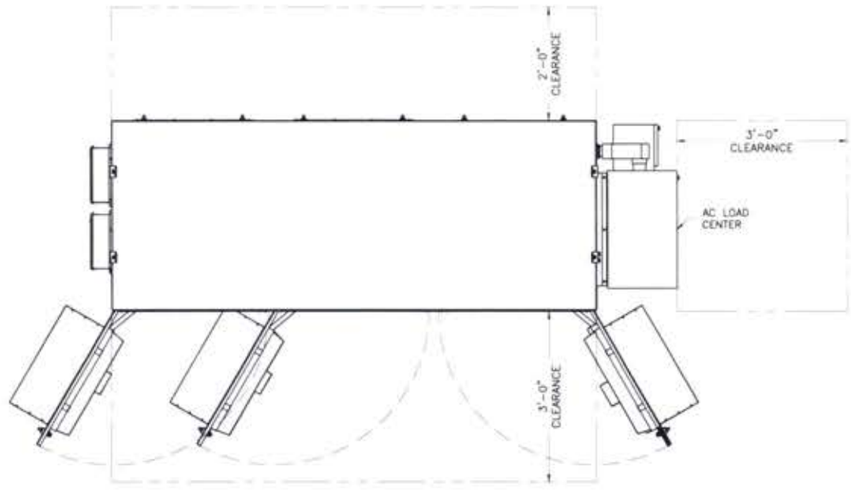
Drawing Title
EQUIPMENT PAD LAYOUT & CONSTRUCTION DETAILS

Drawing Scale
AS NOTED
Date
06/30/21
CD

Drawing Number
C6



1 / -- WALK UP CABINET ELEVATIONS – DELTA ESOF030-HCU01
NOT TO SCALE



2 / -- WALK UP CABINET – DELTA ESOF030-HCU01 PLAN
NOT TO SCALE

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Project Number
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Project Title
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2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

Engineer
COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
WALK UP CABINET & GENERATOR DETAILS

Drawing Scale
AS NOTED

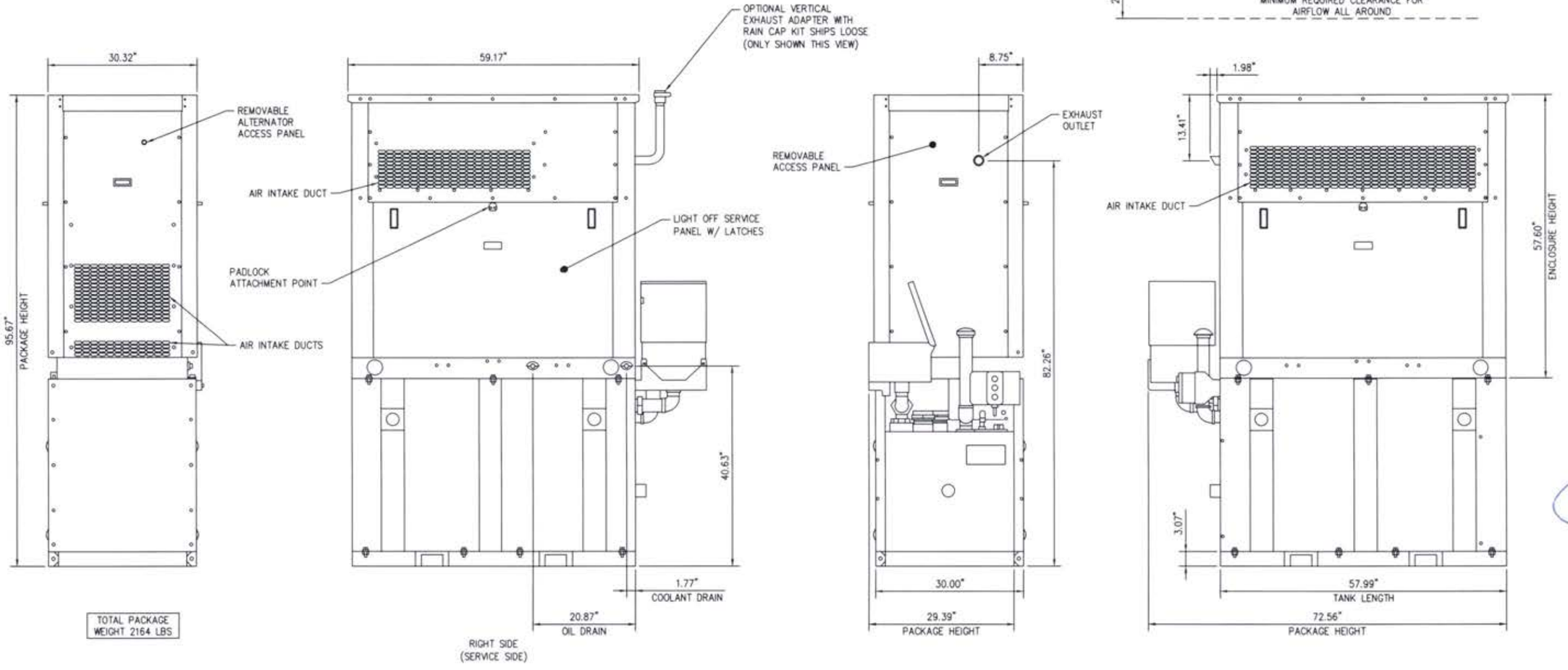
Date
06/30/21

CD

Drawing Number
C7

NOTES:

1. ALL SIDES OF THE GENERATOR ARE SERVICE ACCESSIBLE
2. 6 AMP BATTERY CHARGER.
3. 120VAC ENGINE BLOCK HEATER.
4. 120VAC 80W BATTERY HEATER.
5. GENERATOR MUST BE GROUNDED.
6. SOUND ATTENUATED ENCLOSURE STANDARD WITH GENERATOR.
7. MUST ALLOW FREE FLOW OF DISCHARGE AIR AND EXHAUST.
8. MUST ALLOW FREE FLOW OF INTAKE AIR.
9. BASE TANK REQUIRES ALL STUB-UPS TO BE IN THE REAR TANK STUB-UP AREA.
10. TANK EQUIPPED WITH FIRE SAFETY VALVE ON FUEL SUPPLY LINE.
11. IT IS THE RESPONSIBILITY OF THE INSTALLATION TECHNICIAN TO ENSURE THAT THE GENERATOR INSTALLATION COMPLIES WITH ALL APPLICABLE CODES, STANDARDS AND REGULATIONS.
12. GENERATOR IS INSTALLED ON A UL-142 RATED DOUBLE WALL SUBBASE FUEL TANK.



1 / -- DIESEL GENERATOR - DIESEL GENERATOR (20 KW KOHLER ADV-9064)
NOT TO SCALE

AT&T 20KW KOHLER DIESEL COMPACT SOUND ENCLOSURE W/ 105 GAL STATE TANK

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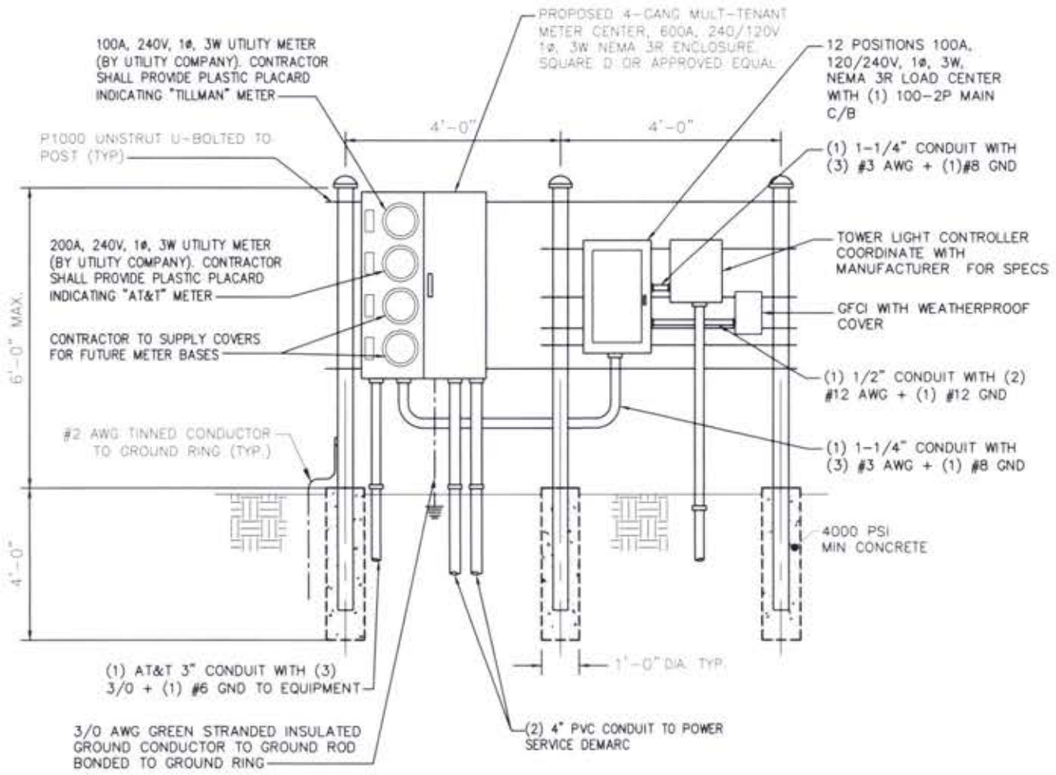
COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

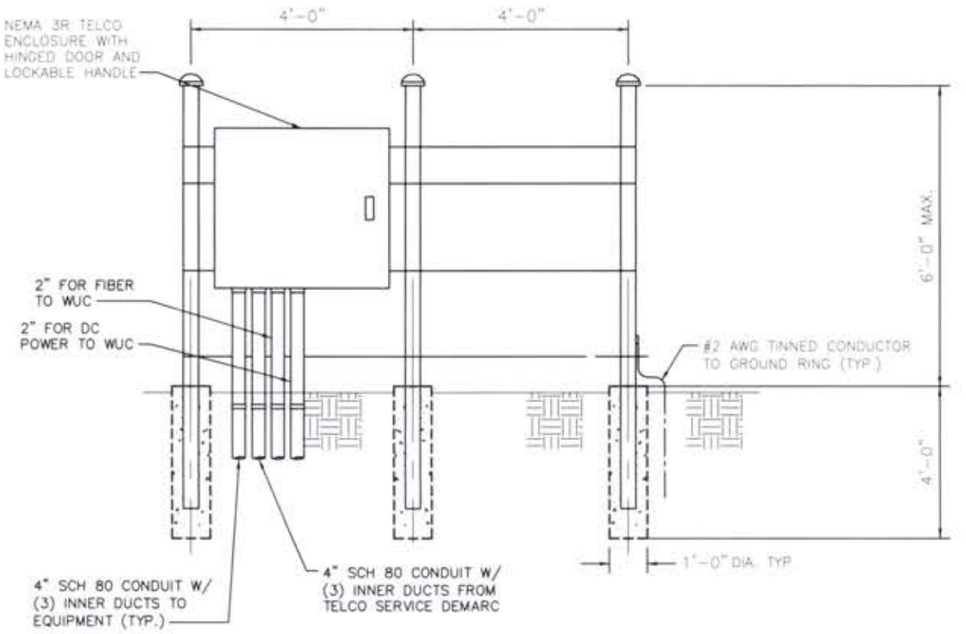
Drawing Title
WALK UP CABINET & GENERATOR DETAILS

Drawing Scale: AS NOTED
Date: 06/30/21
CD

Drawing Number
C7.1



FRONT



BACK

1 UTILITY BACKBOARD H-FRAME DETAIL
-- NOT TO SCALE

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Engineer Stamp
COMMONWEALTH OF KENTUCKY
CHRISTOPHER A. WARICH
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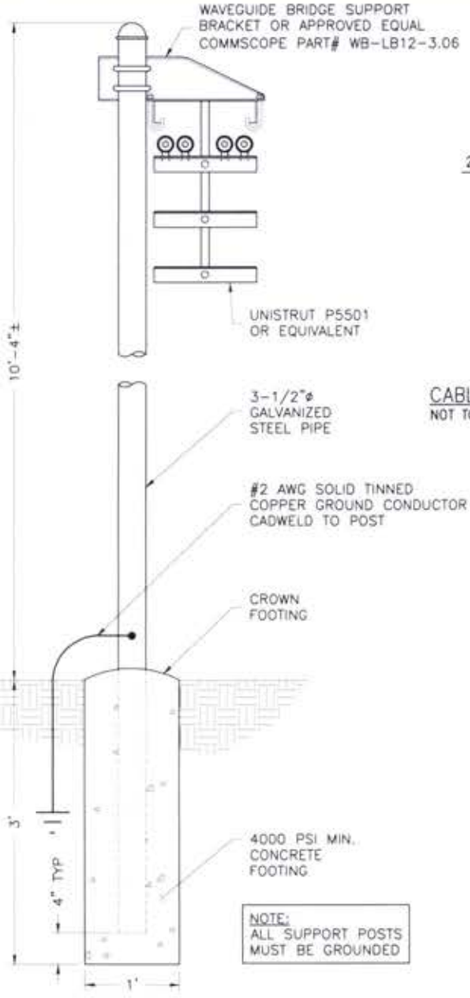
10-15-21
LICENSED PROFESSIONAL ENGINEER

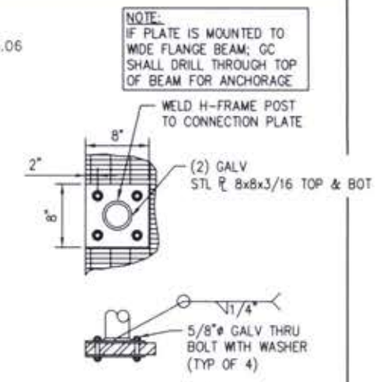
Drawing Title
UTILITY H-FRAME DETAILS

Drawing Scale
AS NOTED
Date
06/30/21
CD

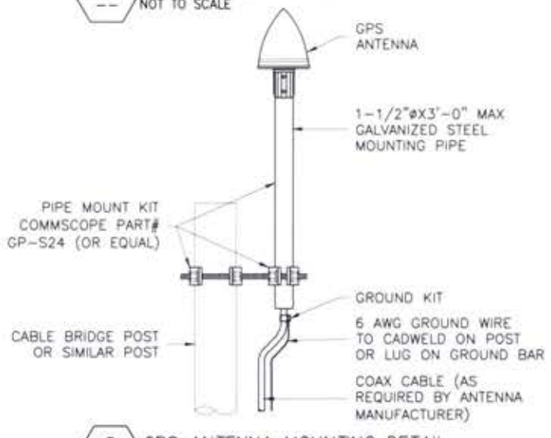
Drawing Number
C8



1 CABLE BRIDGE DETAIL
NOT TO SCALE



CABLE BRIDGE MOUNT ON PLATFORM
NOT TO SCALE



2 GPS ANTENNA MOUNTING DETAIL
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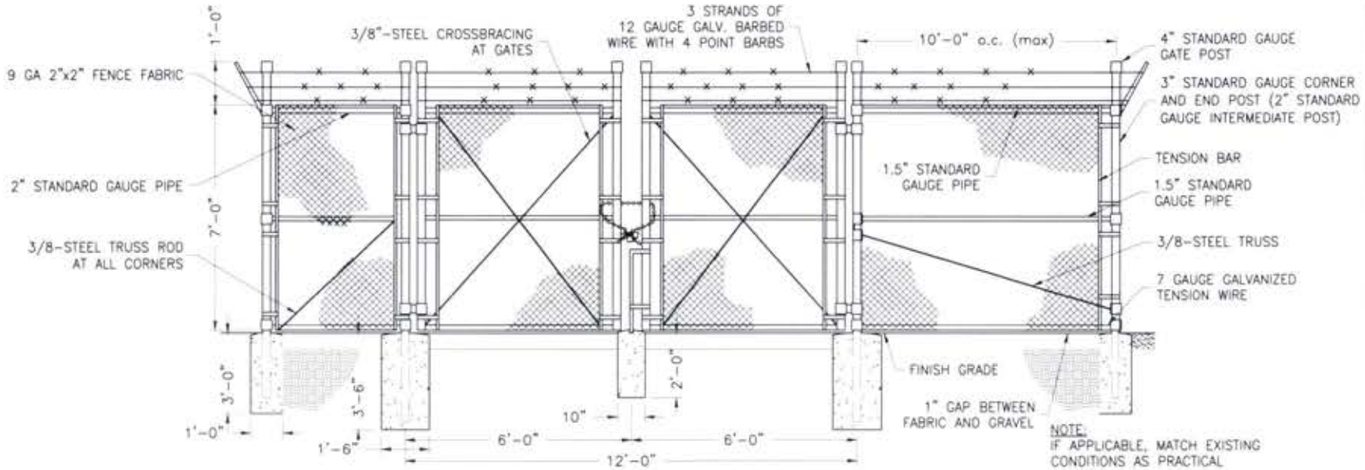
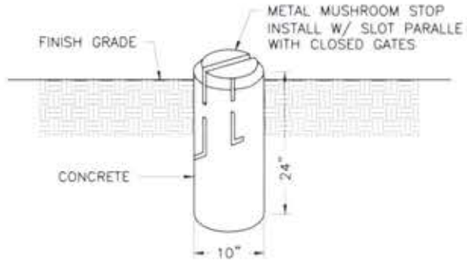


3 TYPICAL FENCE AND GATE DETAIL
NOT TO SCALE



4 MUSHROOM STOP DETAIL
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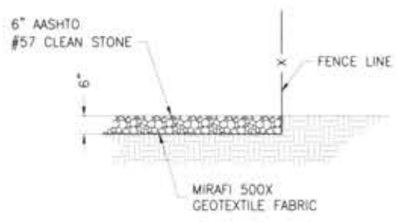

5 GRAVEL COMPOUND DETAIL
NOT TO SCALE

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2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

STATE OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
CONSTRUCTION DETAILS

Drawing Scale
AS NOTED

Date
06/30/21

CD

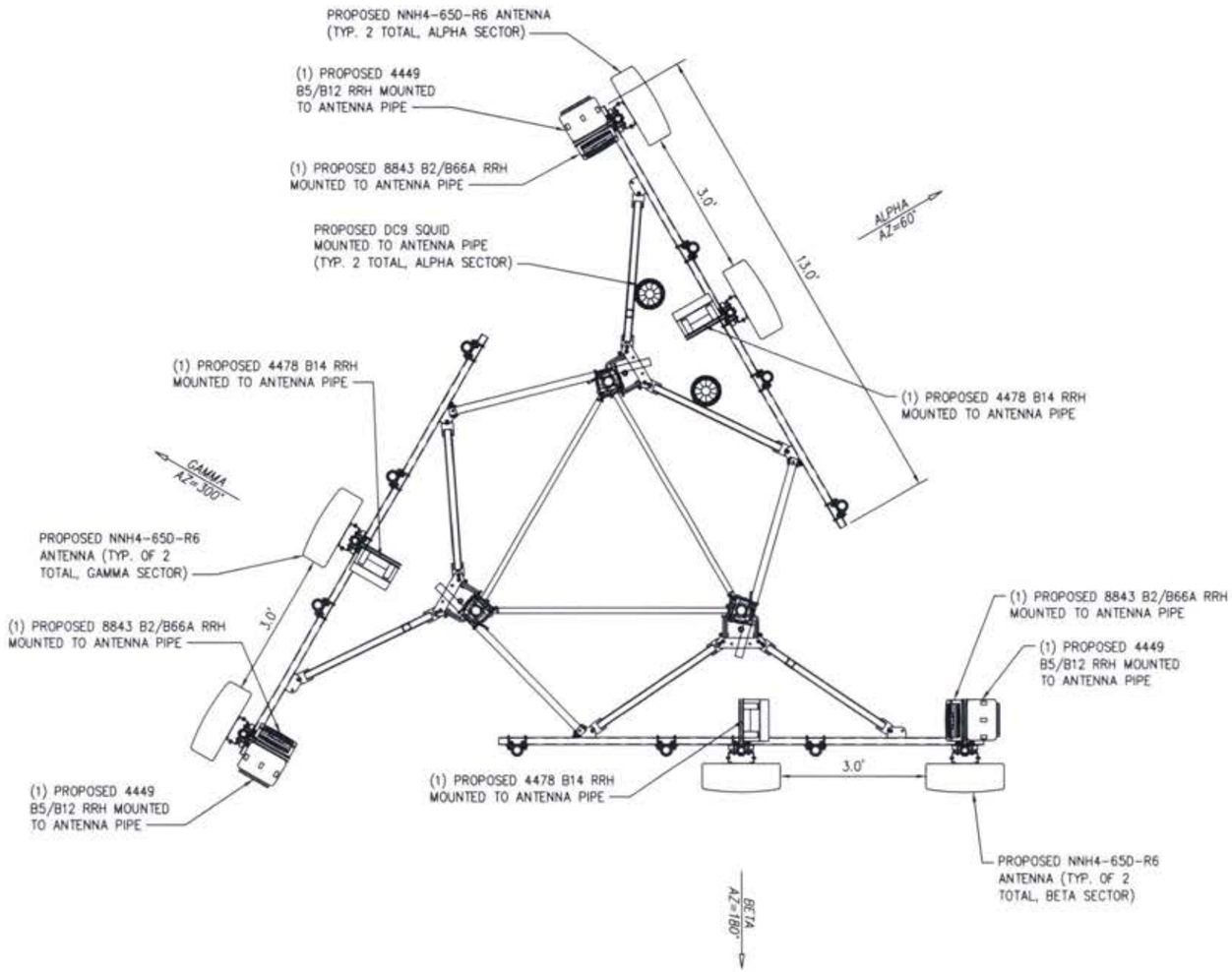
Drawing Number
C9

ANTENNA AND RRH SCHEDULE

SECTOR	ANTENNA MODEL	TECHNOLOGY	AZIMUTH	ANTENNA HEIGHT	RRH MODEL
ALPHA	NNH4-65D-R6	5G 850 LTE 700/1900/AWS	60°	143'±	(1) 4449 B5/B12 (1) 8843 B2/B66A
	-	-	-	-	-
	NNH4-65D-R6	LTE 700	60°	143'±	(1) 4478 B14
	-	-	-	-	-
	-	-	-	-	-
BETA	NNH4-65D-R6	5G 850 LTE 700/1900/AWS	180°	143'±	(1) 4449 B5/B12 (1) 8843 B2/B66A
	-	-	-	-	-
	NNH4-65D-R6	LTE 700	180°	143'±	(1) 4478 B14
	-	-	-	-	-
	-	-	-	-	-
GAMMA	NNH4-65D-R6	5G 850 LTE 700/1900/AWS	300°	143'±	(1) 4449 B5/B12 (1) 8843 B2/B66A
	-	-	-	-	-
	NNH4-65D-R6	LTE 700	300°	143'±	(1) 4478 B14
	-	-	-	-	-
	-	-	-	-	-

CABLE COUNT

QUANTITY	CABLE TYPE
6	6 CONDUCTOR (3 PR) 3/4" DC CABLE
2	36 FIBER (18 PR) 10MM FIBER
2	2" INNERDUCT



1 ANTENNA PLAN
SCALE: NOT TO SCALE

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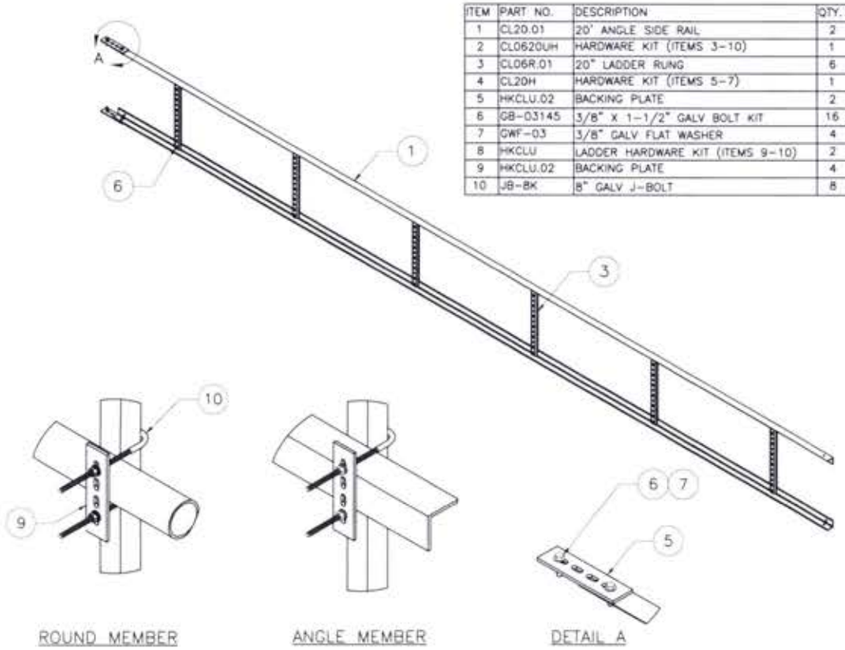
CHRISTOPHER J. WARNER
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title:
ANTENNA PLAN

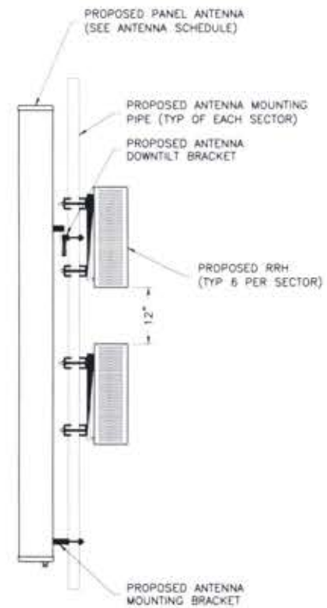
Drawing Scale: AS NOTED
Date: 06/30/21
CD

Drawing Number:
C10

ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT
1	CL20.01	20' ANGLE SIDE RAIL	2	49.38 LBS
2	CL0620UH	HARDWARE KIT (ITEMS 3-10)	1	–
3	CL06R.01	20" LADDER RUNG	6	1.69 LBS
4	CL20H	HARDWARE KIT (ITEMS 5-7)	1	–
5	HKCLU.02	BACKING PLATE	2	0.95 LBS
6	GB-03145	3/8" X 1-1/2" GALV BOLT KIT	16	0.07 LBS
7	GWF-03	3/8" GALV FLAT WASHER	4	0.01 LBS
8	HKCLU	LADDER HARDWARE KIT (ITEMS 9-10)	2	–
9	HKCLU.02	BACKING PLATE	4	0.95 LBS
10	JB-BK	8" GALV J-BOLT	8	0.36 LBS

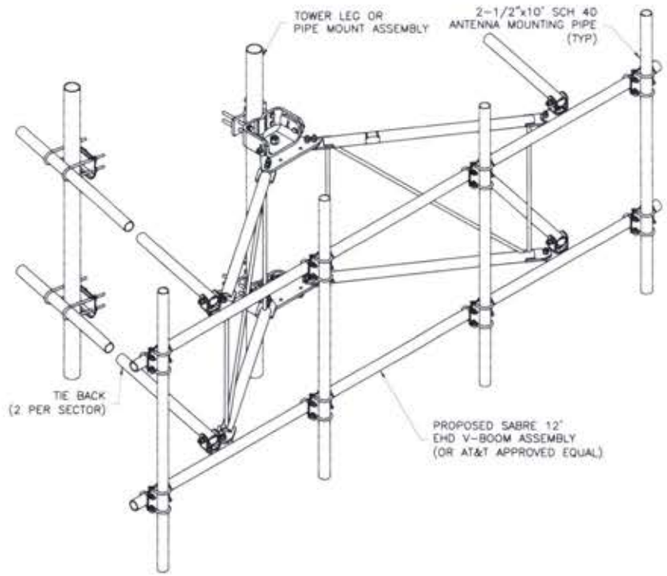


1 ANDREW CABLE LADDER CL-0620-U DETAIL
-- NOT TO SCALE



2 RRH MOUNTING DETAIL
-- NOT TO SCALE

APPROVED AT&T MOUNTS	
MANUFACTURER	MODEL
ADVANCED TOWER	HEAVY WLL-3-NP
BETTER METAL	BVM-U12K-WLL-3
COMMSCOPE	SFG2CT-12-B3
CONNECT-IT WIRELESS	3-PVFM12-3-B
KENWOOD TELECOM	T1672KT12-3S
NEWAVE	ATV-312-3
ROHN PRODUCTS	(3) KY2016A12 (3) KY1995A
SABRE	C10857007C
VALMONT	VFA10-HD3T5NP



3 ANTENNA MOUNT FRAME DETAIL
-- NOT TO SCALE

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10-15-21
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Drawing Title
DETAILS

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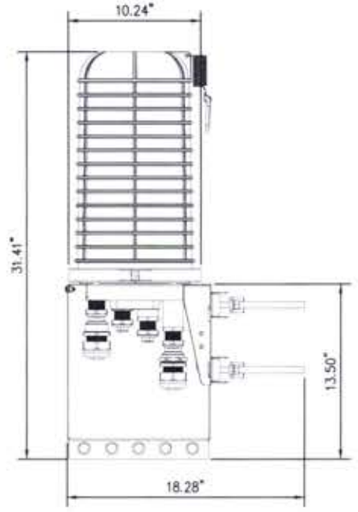
Drawing Number
C10.1



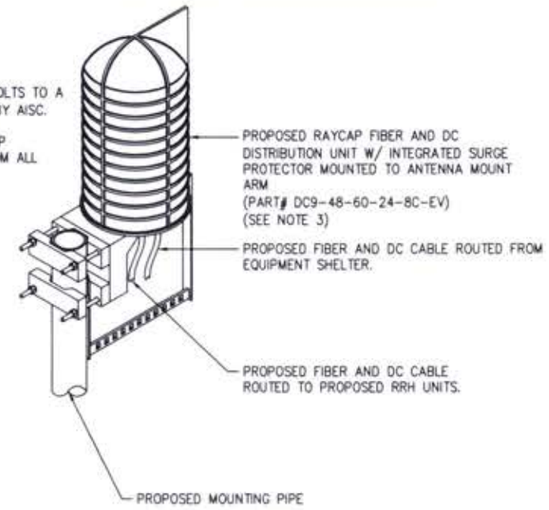
1 RAYCAP DC9-48-60-24-8C-EV DETAIL
-- NOT TO SCALE

NOTES:

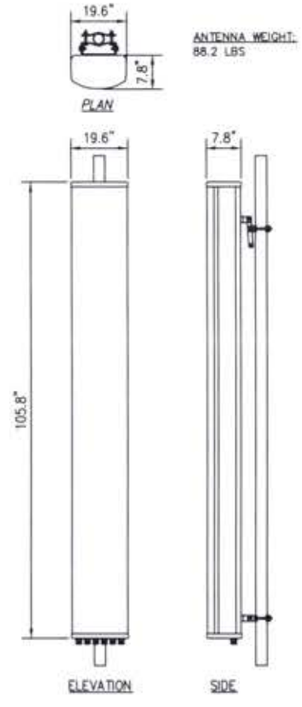
1. UNIT SHALL BE MOUNTED AS PER MANUFACTURER'S RECOMMENDATIONS.

2. CONTRACTOR SHALL TIGHTEN ALL BOLTS TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.

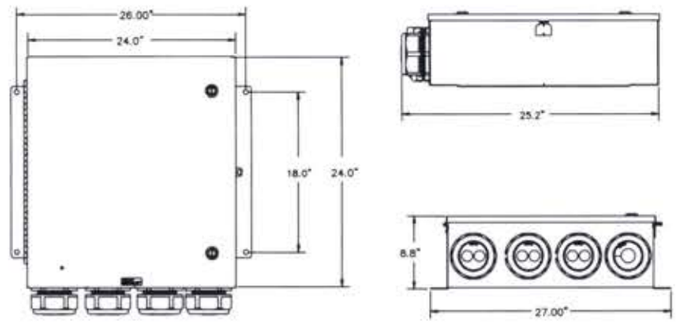
3. CONTRACTOR SHALL INSTALL RAYCAP DISTRIBUTION UNIT WITHIN 15 FEET FROM ALL RRHS.



2 RAYCAP MOUNTING DETAIL
-- NOT TO SCALE



3 NNH4-65D-R6 ANTENNA DETAILS
-- NOT TO SCALE



DC SURGE PROTECTION SOLUTIONS DC12-48-60-0-25E

DIMENSIONS, HxWxD: 24.00"x24.00"x8.00"
VOLTAGE PROTECTION RATING (VPR): 400V
VOLTAGE PROTECTION RATING (Up): 410V
TOTAL WEIGHT: 56.3 lbs

4 DC12 SURGE PROTECTION DETAILS
-- NOT TO SCALE

at&t MOBILITY CORP.
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5	ISSUED FOR CONSTRUCTION	CES	10/14/21
4	ISSUED FOR CONSTRUCTION	LMC	10/01/21
3	ISSUED FOR CONSTRUCTION	LMC	09/10/21
2	ISSUED FOR CONSTRUCTION	CES	08/25/21
1	ISSUED FOR CONSTRUCTION	CES	08/11/21
0	ISSUED FOR CONSTRUCTION	CES	07/16/21
A	ISSUED FOR REVIEW	CES	06/30/21
No.	Submittal Revision	Appvd	Date

Drawn: CES Date: 06/30/21
Designed: CES Date: 06/30/21
Checked: CJW Date: 06/30/21

Project Number
2138-Z0001-C

Project Title
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

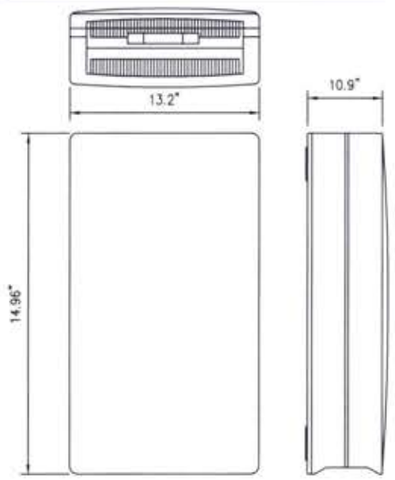
Engineer Stamp
COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
DC6 & ANTENNA SPECIFICATIONS

Drawing Scale
AS NOTED
Date
06/30/21
CD

Drawing Number
C11

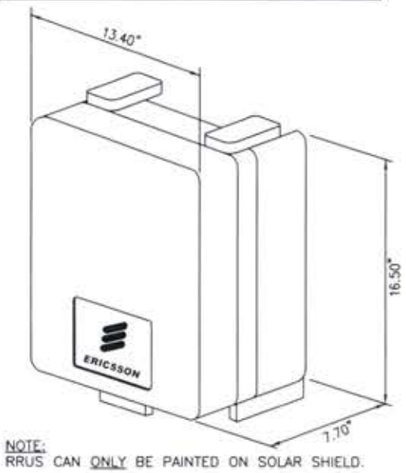
ERICSSON RRUS-8843 B2/B66A
- DIMENSIONS (H x W x D):
  14.96" x 13.2" x 10.9" (INCLUDES SUNSHIELD)
- WEIGHT: 72.0 LBS
- B2: TX=1930-1990 MHz
  RX=1850-1910 MHz
- B66: TX=2110-2180 MHz
  RX=1710-1780 MHz
- CPRI 2 PORTS X 2.5/4.9/9.8/10.1 GBPS.



NOTE:
RRUS CAN ONLY BE PAINTED ON SOLAR SHIELD.

1 ERICSSON RRUS 8843 B2/B66A
-- NOT TO SCALE

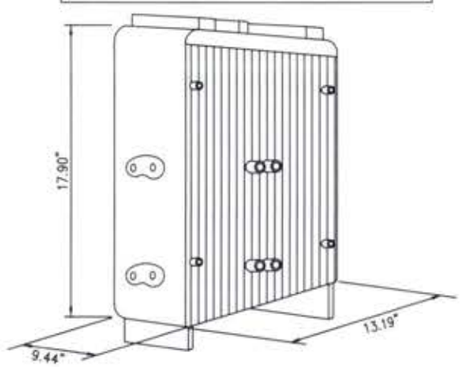
ERICSSON RRUS-4478 B14
- DIMENSIONS (H x W x D):
  16.50" x 13.4" x 7.7" (INCLUDES SUNSHIELD)
- WEIGHT: 59.9 LBS
- TX=869-894 MHZ
  RX=824-849 MHZ
- CPRI 2 PORTS X 2.5/4.9/9.8/10.1 GBPS.



NOTE:
RRUS CAN ONLY BE PAINTED ON SOLAR SHIELD.

2 ERICSSON RRUS 4478 B14
-- NOT TO SCALE

ERICSSON RRUS-4449 B5/B12
- DIMENSIONS (H x W x D):
  17.90" x 13.19" x 9.44" (INCLUDES SUNSHIELD)
- WEIGHT: 71.0 LBS
- LTE: MAX 6 CARRIERS PER PORT (DL)
  MAX 6 CARRIERS PER PORT (UL)
- CPRI SUPPORT- 2.5/4.9/9.8/10.1 GBPS.



NOTE:
RRUS CAN ONLY BE PAINTED ON SOLAR SHIELD.

3 ERICSSON RRUS 4449 B5/B12
-- NOT TO SCALE

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No	Submittal/ Revision	Appd	Date
5	ISSUED FOR CONSTRUCTION	CES	10/14/21
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Project Number
2136-Z0001-C

Project Title
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARNICK
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
RRU
DETAILS

Drawing Scale
AS NOTED
Date:
06/30/21
CD

Drawing Number
C12

BLUE BACKGROUND W/ WHITE LETTERING

WHITE BACKGROUND W/ BLACK LETTERING

WHITE BACKGROUND W/ BLACK LETTERING

12"X18" DIGITAL PRINT
MOUNTED OT .040
THICK ALUMINUM
OPERATIONS PROVIDED)

1 -- NOTICE-RF SIGN (BLUE)
NOT TO SCALE

SIGNAGE NOTES:

1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL & PAINTED WITH LONG LASTING UV RESISTAND COATINGS.
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE & FENCE USING A MINIMUM OF 9 GUAGE ALUMINUM WIREM HOG RINGS (FENCE) OR BRACKETS, WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METALS AS THE STRUCTURE TO AVOID GALVANIC CORROSION.
3. ADDITIONAL E911 ADDRESS AND FCC REGISTRATION SIGNS SHALL BE MOUNTED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF.
4. CARRIER SITE # $ EMERGENCY CONTACT SIGNS SHALL BE MOUNTED ON THE EQUIPMENT CABINET WITH PERMANENT SET ADHESIVE. TWO SIDED TAPE SHALL BE ATILIZED AT EACH CORNER OF THE BACKSIDETO AVOID PLACEMENT UNTIL THE ADHESIVE SETS.

WHITE BACKGROUND

BLACK TEXT

RED TEXT

24"X30"
WHITE BACKGROUND, RED/BLACK LETTERING
QUANTITY: 1 OR 2

2 -- PROPERTY OF TILLMAN INFRASTRUCTURE
NOT TO SCALE

12"X18" .040
ALUMINUM

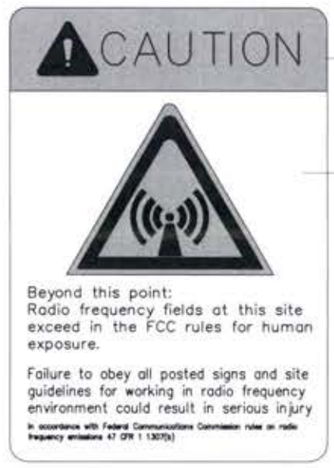
4 -- NO TRESPASSING SIGN
NOT TO SCALE

RED BACKGROUND W/ BLACK LETTERING

WHITE BACKGROUND W/ BLACK LETTERING AND RED SYMBOL

12"X18" DIGITAL PRINT
MOUNTED OT .040
THICK ALUMINUM
(OPERATIONS PROVIDED)

3 -- WARNING-RF SIGN
NOT TO SCALE



YELLOW BACKGROUND W/ BLACK LETTERING

WHITE BACKGROUND W/ BLACK LETTERING AND YELLOW SYMBOL

12"X18" DIGITAL PRINT
MOUNTED OT .040
THICK ALUMINUM
(OPERATIONS PROVIDED)

5 -- CAUTION-RF SIGN
NOT TO SCALE

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Office # (470) 444-4453

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Checked: CAW Date: 06/30/21

Project Number: 2136-Z0001-G

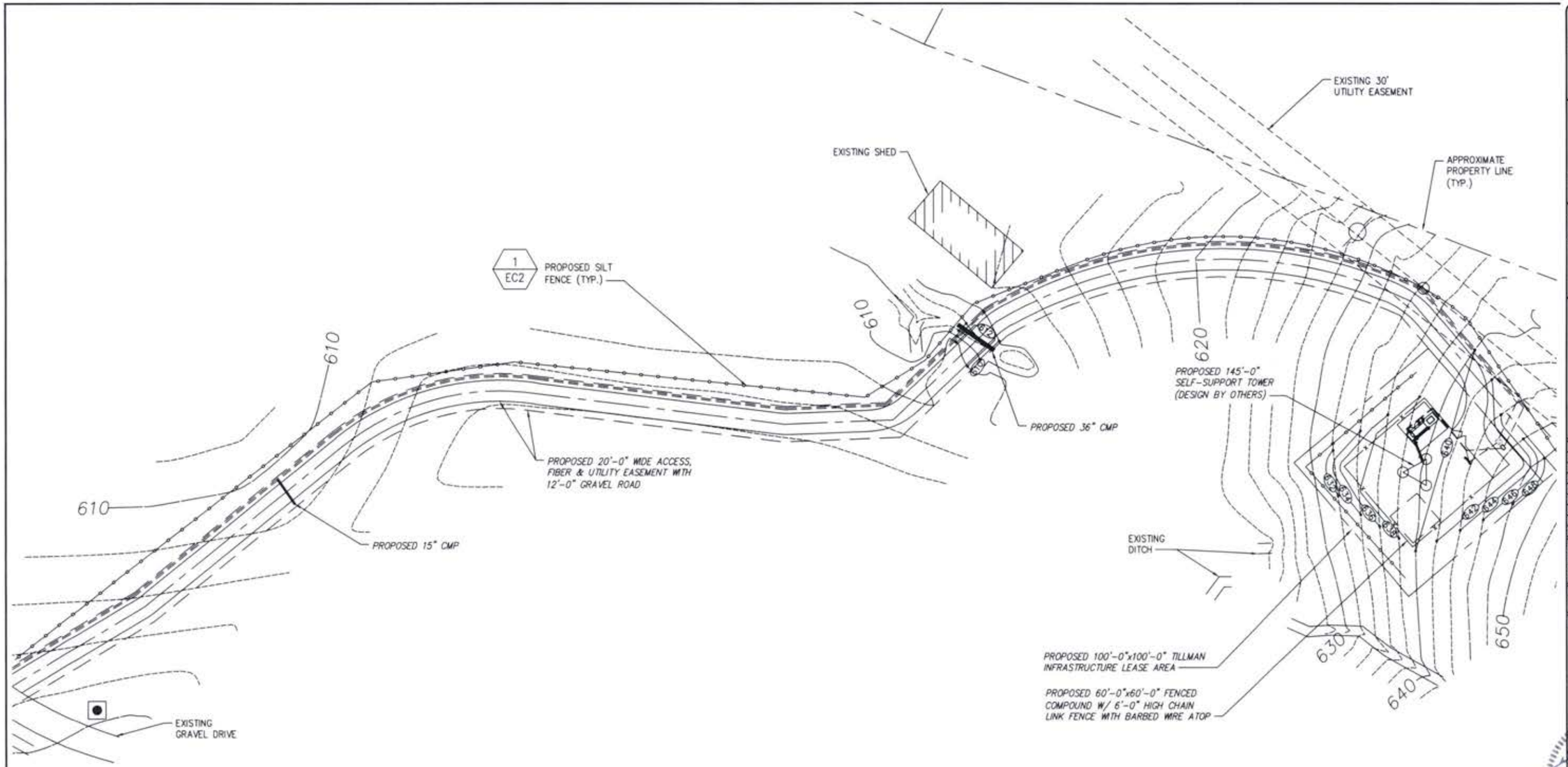
Project Title:
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

Engineer Stamp:
COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title:
SIGNAGE DETAILS

Drawing Scale: AS NOTED
Date: 06/30/21
CD

Drawing Number:
C13



CALLED NORTH

1 GRADING, EROSION & SEDIMENT CONTROL PLAN

SCALE: 15' 0 15' 30' 60'

(IN FEET)

SCALE: 11"x17" SHEET 1" = 60'-0"
SCALE: 22"x34" SHEET 1" = 30'-0"

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Engineer Stamp
COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
GRADING, EROSION & SEDIMENT CONTROL PLAN

Drawing Scale
AS NOTED
Date
06/30/21
CD

Drawing Number
EC1

GRADING & EXCAVATING NOTES:

1. ALL EXCAVATIONS ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUNDWATER. DEWATERING FOR EXCESS GROUNDWATER SHALL BE PROVIDED IF REQUIRED.
2. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC MATERIAL. IF SOUND SOIL IS NOT REACHED AT THE DESIGNATED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION BE FILLED WITH CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION.
3. ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH EITHER MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.
4. AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE, AND BEFORE BACKFILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH.
5. -USE APPROVED MATERIALS CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND
   -BE FREE FROM CLODS OR STONES OVER 2-1/2" MAXIMUM DIMENSIONS
   -BE PLACED IN 6" LAYERS AND COMPACTED TO 95% STANDARD PROCTOR EXCEPT IN GRASSED/LANDSCAPED AREAS, WHERE 90% STANDARD PROCTOR
6. REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACING FILLS. PLOW, STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN SUBGRADE OR EXISTING GROUND SURFACE TO RECEIVE FILL HAS A DENSITY LESS THAN THAT REQUIRED FOR FILL, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION OR AERATE SOIL AND RECOMPACT TO REQUIRED DENSITY.
7. PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING OR OTHER SUITABLE MATERIALS DESIGNED TO SPREAD EQUIPMENT LOADS. REPAIR DAMAGE TO EXISTING GRAVEL SURFACING OR SUBGRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTOR'S OPERATIONS. DAMAGED GRAVEL SURFACING SHALL BE RESTORED TO MATCH THE ADJACENT UNDAMAGED GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS.
8. REPLACE EXISTING GRAVEL SURFACING ON AREAS FROM WHICH GRAVEL SURFACING IS REMOVED DURING CONSTRUCTION OPERATIONS. GRAVEL SURFACING SHALL BE REPLACED TO MATCH EXISTING ADJACENT GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS. SURFACES OF GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED IF INJURIOUS AMOUNTS OF EARTH, ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ALL ADDITIONAL GRAVEL RESURFACING MATERIAL AS REQUIRED. BEFORE GRAVEL SURFACING IS REPLACED, SUBGRADE SHALL BE GRADED TO CONFORM TO REQUIRED SUBGRADE ELEVATIONS, AND LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED. DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL MAY BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE, SUBJECT TO ENGINEER'S APPROVAL.
9. DAMAGE TO EXISTING STRUCTURES AND UTILITIES RESULTING FROM CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED/REPLACED TO OWNER'S SATISFACTION AT CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH PROPERTY OWNER SO AS TO AVOID INTERRUPTIONS TO PROPERTY OWNER'S OPERATIONS.
11. ENSURE POSITIVE DRAINAGE DURING AND AFTER COMPLETION OF CONSTRUCTION.
12. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM 2 HORIZONTAL TO 1 VERTICAL.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING SITE VEHICLE TRAFFIC AS TO NOT ALLOW VEHICLES LEAVING THE SITE TO TRACK MUD ONTO PUBLIC STREETS. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING PUBLIC STREETS DUE TO MUDDY VEHICLES LEAVING THE SITE.

GENERAL EROSION & SEDIMENT CONTROL NOTES:

1. THE SOIL EROSION AND SEDIMENT CONTROL MEASURES AND DETAILS AS SHOWN HEREIN AND STIPULATED WITHIN STATE STANDARDS SHALL BE FOLLOWED AND INSTALLED IN A MANNER SO AS TO MINIMIZE SEDIMENT LEAVING THE SITE.
2. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS.
3. EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
5. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. CONTRACTOR SHALL CLEAN OUT ALL SEDIMENT PONDS WHEN REQUIRED BY THE ENGINEER OR THE LOCAL JURISDICTION INSPECTOR. CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
6. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE.
7. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.
8. SILT BARRIERS TO BE PLACED AT DOWNSTREAM TOE OF ALL CUT AND FILL SLOPES.
9. ALL CUT AND FILL SLOPES MUST BE SURFACED ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR CONSTRUCTION.
10. CONTRACTOR SHALL REMOVE ALL EROSION & SEDIMENT CONTROL MEASURES AFTER COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER.
11. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

SEEDING GUIDELINES:

FINAL STABILIZATION OF ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED, SHALL BE LOAMED AND SEEDED. LOAM SHALL BE PLACED AT A MINIMUM COMPACTED DEPTH OF 4". RECOMMENDED SEEDING DATES FOR PERMANENT VEGETATION SHALL BE BETWEEN JUNE 15 THROUGH AUGUST 1 AND SEPTEMBER 15 THROUGH OCTOBER 15. TEMPORARY VEGETATIVE MEASURES SHALL CONSIST OF AN ANNUAL OR PERENNIAL RYE GRASS WITH RECOMMENDED SEEDING DATES BEING FROM JUNE 1 THROUGH AUGUST 15 AND SEPTEMBER 30 THROUGH NOVEMBER 30.

EVALUATE PROPOSED COVER MATERIAL

BEFORE SPREADING COVER MATERIAL OVER THE DESIGNATED AREA, OBTAIN A REPRESENTATIVE SOIL SAMPLE AND SUBMIT TO A REPUTABLE SOIL TESTING LABORATORY FOR CHEMICAL AND PHYSICAL ANALYSIS. THE PRELIMINARY TEST IS NECESSARY TO DETERMINE THE REQUIRED INORGANIC AND/OR ORGANIC AMENDMENTS THAT ARE NEEDED TO ASSIST IN ESTABLISHING THE SEED MIXTURE IN AN ENVIRONMENTALLY AND ECONOMICALLY SOUND MANNER. THE RESULTS WILL GIVE THE COVER MATERIAL CHARACTERISTICS SUCH AS pH AND FERTILIZATION NEEDS. THESE RESULTS SHALL BE KEPT ON-SITE @ THE CONTRACTOR AND AVAILABLE FOR REVIEW BY THE COUNTY.

SEED BED PREPARATION

PROPOSED COVER MATERIAL SHOULD BE SPREAD EVENLY OVER THE SITE AREA IN A MINIMUM 4" LIFT VIA BULLDOZER/BUCKET LOADER. USING THE INFORMATION FROM THE SOIL ANALYSIS, CAREFULLY CALCULATE THE QUANTITIES OF LIMESTONE AND PRE-PLANT FERTILIZER NEEDED PRIOR TO APPLYING. PRE-PLANT AMENDMENTS CAN BE APPLIED WITH A BROADCAST AND/OR DROP SEEDER AND INCORPORATED WITH AN OFFSET DISK, YORK RAKE, AND/OR HAND RAKE. AFTER INCORPORATION THE PRE-PLANT SOIL AMENDMENTS, THE SEED BED SHOULD BE SMOOTH AND FIRM PRIOR TO SEEDING. THE FOLLOWING SEED MIXTURES SHALL BE USED AS NOTED:

SEED MIXTURE

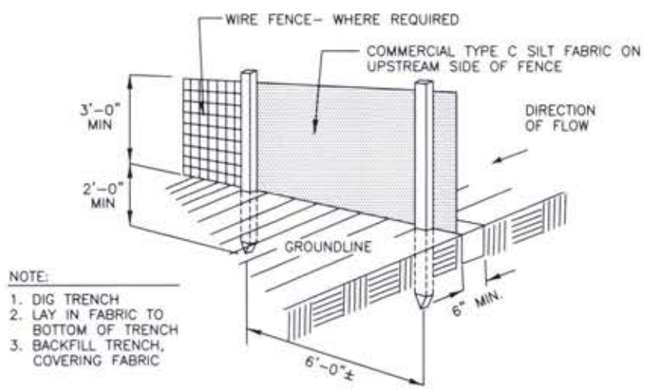
SPECIES/VARIETY	LBS/ACRE
CREEPING RED FESCUE	20
KENTUCKY BLUEGRASS	20
PERENNIAL RYEGRASS	5

SEED TIME AND METHOD

THE PREFERRED TIME FOR SEEDING THE COOL SEASON MIXTURE IS LATE SUMMER. SOIL AND AIR TEMPERATURES ARE IDEAL FOR SEED GERMINATION AND SEEDING GROWTH. WEED COMPETITION IS REDUCED BECAUSE SEEDS OF MANY WEED SPECIES GERMINATE EARLIER IN THE GROWING SEASON. ADDITIONALLY, HERBICIDE USE IS GREATLY REDUCED. HOWEVER, SEEDING MAY BE DONE AT ANY OF THE ABOVE NOTED TIMES.

MULCHING

NEWLY SEEDED AREAS SHOULD BE MULCHED TO INSURE ADEQUATE MOISTURE FOR SUCCESSFUL TURF ESTABLISHMENT AND TO PROTECT AGAINST SURFACE MOVEMENT OF SEDIMENT-BOUND AGROCHEMICALS AND SOIL EROSION. IF MULCHING PROCEDURES ARE NOT SPECIFIED ON PLANS, APPLY GOOD QUALITY STRAW OR HAY AT A RATE OF 2 BALES/1000 SQ. FT. OTHER COMMERCIALLY AVAILABLE MULCHES CAN BE USED.



NOTE:
1. DIG TRENCH
2. LAY IN FABRIC TO BOTTOM OF TRENCH
3. BACKFILL TRENCH, COVERING FABRIC

1 SILT FENCE DETAIL
NOT TO SCALE

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. ALL SILT FENCE MATERIALS MUST BE LISTED ON THE CURRENT STATES. D.O.T. QUALIFIED PRODUCTS LIST.

POSTS: STEEL EITHER T OR U TYPE.

FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING.

FILTER CLOTH: FILTER X, MIRAFI 100X' STABILINKA T140N OR APPROVED EQUAL.

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE OR APPROVED EQUAL.

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2295 SEWELL MILL ROAD, SUITE 130
MARIETTA, GA 30062
Office # (678) 444-4480

No.	Submittal / Revision	Appd.	Date
5	ISSUED FOR CONSTRUCTION	CES	10/14/21
4	ISSUED FOR CONSTRUCTION	LMG	10/01/21
3	ISSUED FOR CONSTRUCTION	LMG	09/10/21
2	ISSUED FOR CONSTRUCTION	CES	08/25/21
1	ISSUED FOR CONSTRUCTION	CES	08/11/21
0	ISSUED FOR CONSTRUCTION	CES	07/16/21
A	ISSUED FOR REVIEW	CES	06/30/21

Drawn: CES Date: 06/30/21
Designed: CES Date: 06/30/21
Checked: CJW Date: 06/30/21

Project Number: 2136-Z0001-C

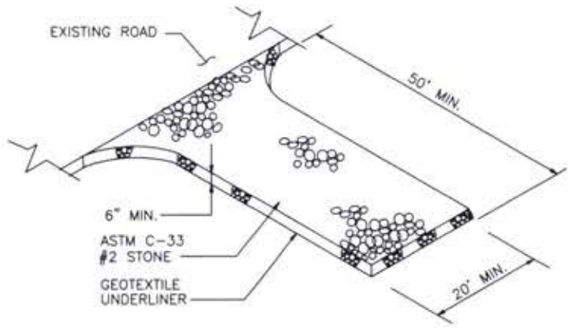
Project Title:
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH KY 40116

Professional Engineer
COMMONWEALTH OF KENTUCKY
CHRISTOPHER J. WARREN
24029
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title:
GRADING, EROSION & SEDIMENT CONTROL NOTES & DETAILS

Drawing Scale: AS NOTED
Date: 06/30/21
CD

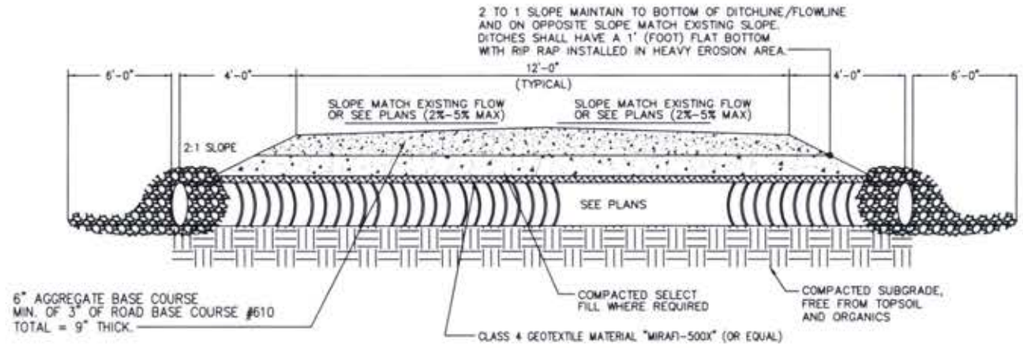
Drawing Number:
EC2



1 CONSTRUCTION EXIT DETAIL
-- NOT TO SCALE

NOTES:
-USE OF SWALES AND/OR DRAINAGE DITCHES FOR PROPER WATER RUNOFF AS NEEDED.

-AGGREGATE IS BASED ON STANDARD AASHTO.
ACCESS ROAD WIDTH ON EACH SIDE FOR PROPER SHOULDERING.



2 DRIVEWAY SECTION AT CULVERT
-- NOT TO SCALE

NOTES:
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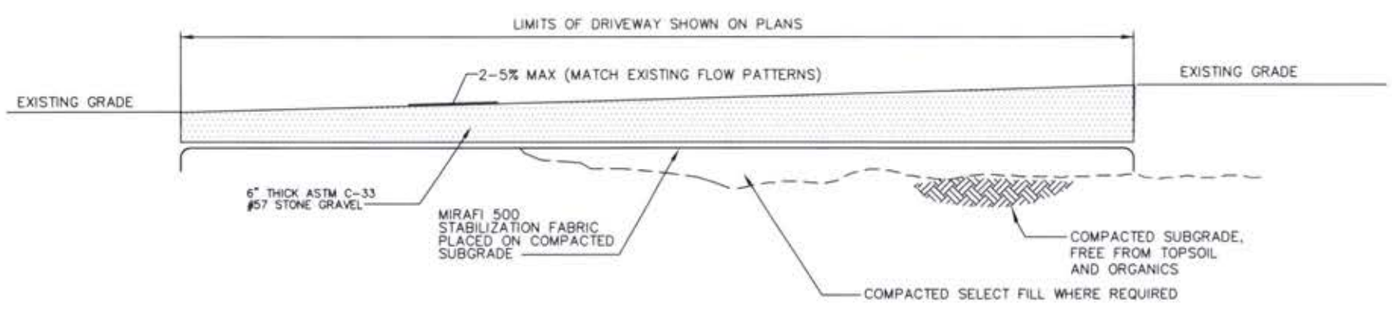
-AGGREGATE IS BASED ON STANDARD AASHTO.
ACCESS ROAD WIDTH ON EACH SIDE FOR PROPER SHOULDERING.



3 DRIVEWAY SECTION
-- NOT TO SCALE

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Project Number: 2138-20001-C

Project Title:
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TI-OPP-17878
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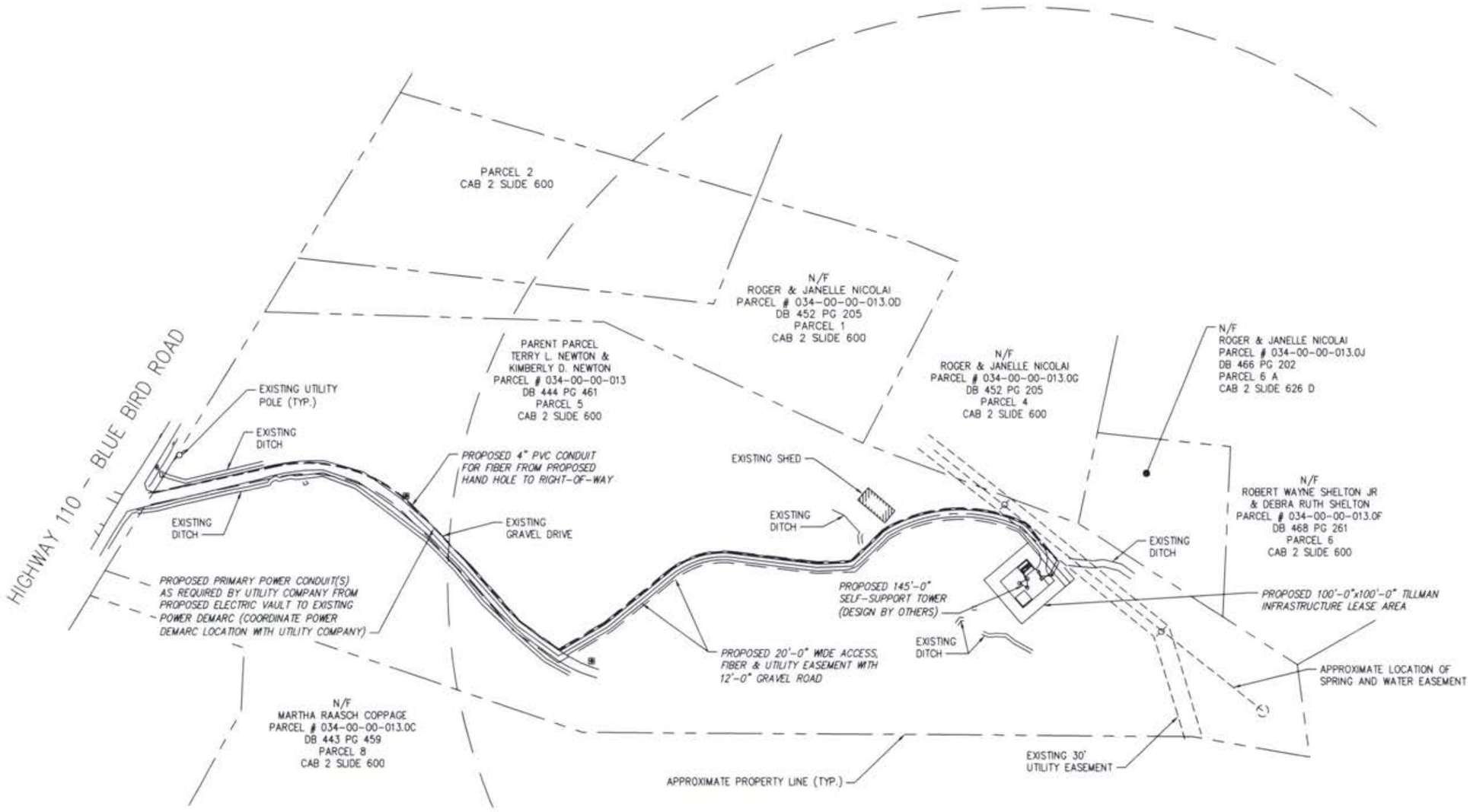
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

Project Engineer:
COMMONWEALTH OF KENTUCKY
CHRISTOPHER L. WARNER
24029
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title:
CIVIL DETAILS

Drawing Scale: AS NOTED
Date: 06/30/21
CD

Drawing Number:
EC3



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Project Number
2136-Z0001-C

Project Title
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TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

Engineer's Stamp
COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
ELECTRICAL PLAN

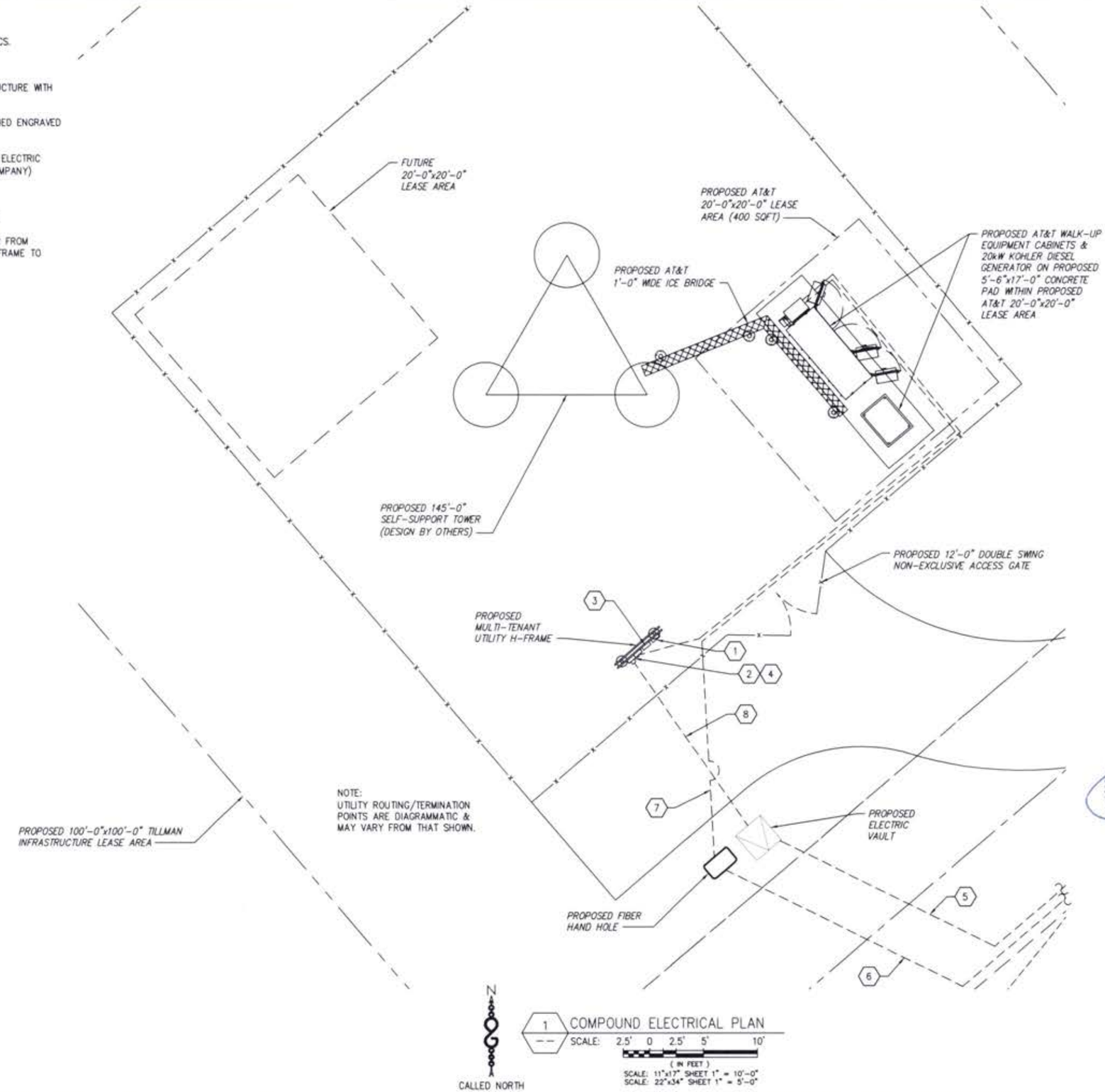
Drawing Scale
AS NOTED
Date
06/30/21

CD

Drawing Number
E1

TILLMAN ELECTRICAL REFERENCE NOTES

1. PROPOSED TOWER LIGHT CONTROLLER. COORDINATE WITH TOWER MANUFACTURER FOR SPECIFICS.
2. PROPOSED 100A-2P MAIN CIRCUIT BREAKER FOR TILLMAN INFRASTRUCTURE.
3. PROPOSED 125A RATED, 120/240V-1ø-3W, NEMA-3R, LOAD CENTER FOR TILLMAN INFRASTRUCTURE WITH (1) 100A-2P MAIN CIRCUIT BREAKER & 12 SPACE LOAD CENTER.
4. PROPOSED 200A, 240V, 1ø, 3W UTILITY METER SOCKET PER UTILITY STANDARDS. PER ATTACHED ENGRAVED NAME PLATE INDICATING "TILLMAN INFRASTRUCTURE".
5. PROPOSED PRIMARY POWER CONDUIT(S) AS REQUIRED BY UTILITY COMPANY FROM PROPOSED ELECTRIC VAULT TO EXISTING POWER DEMARC (COORDINATE POWER DEMARC LOCATION WITH UTILITY COMPANY)
6. PROPOSED 4" PVC CONDUIT FOR FIBER FROM PROPOSED HAND HOLE TO RIGHT-OF-WAY
7. PROPOSED 4" PVC CONDUIT FOR FIBER FROM PROPOSED HAND HOLE TO AT&T LOAD CENTER
8. PROPOSED 3" PVC CONDUIT WITH (3) 3/0 AWG CONDUCTORS & (1) #6 AWG GND FOR POWER FROM PROPOSED AT&T METER IN PROPOSED METER CENTER ON PROPOSED MULTI-TENANT UTILITY FRAME TO AT&T LOAD CENTER



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STATE OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

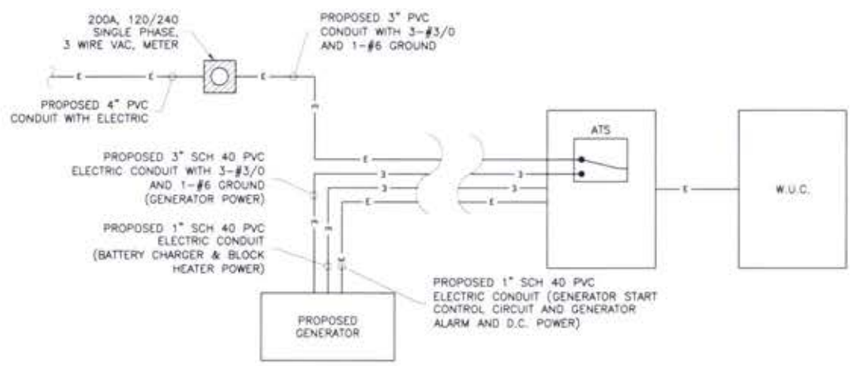
Drawing Title:
COMPOUND ELECTRICAL PLAN

Drawing Scale: AS NOTED
Date: 06/30/21
CD

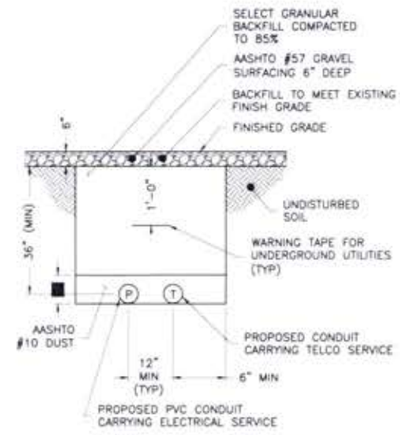
Drawing Number:
E2

ELECTRICAL NOTES

1. SUBMITTAL OF BID INDICATES THAT THE CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATIONS, OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO ORDERING OF ANY EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. VERIFY HEIGHTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
5. CONTRACTOR SHALL COORDINATE ALL WORK BETWEEN TRADES AND ALL OTHER SCHEDULING AND PROVISIONARY CIRCUMSTANCES SURROUNDING THE PROJECT.
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR COMPLETE AND FUNCTIONALLY OPERATING SYSTEMS ENERGIZED AND READY FOR USE THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. ELECTRICAL MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION OVER THE CONSTRUCTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU. ALL MATERIALS AND EQUIPMENT SHALL BE APPROVED FOR THEIR INTENDED USE AND LOCATION.
8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE GOVERNING STATE, COUNTY AND CITY CODES AND OSHA, NFPA, NEC & ASHRAE REQUIREMENTS.
9. ENTIRE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE. ALL WORK, MATERIAL AND EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
10. PROPERLY SEAL ALL PENETRATIONS. PROVIDE UL LISTED FIRE-STOPS WHERE PENETRATIONS ARE MADE THROUGH FIRE-RATED ASSEMBLIES. WATER-TIGHT USING SILICONE SEALANT.
11. DELIVER ALL BROCHURES, OPERATING MANUALS, CATALOGS AND SHOP DRAWINGS TO THE PROJECT MANAGER AT JOB COMPLETION. PROVIDE MAINTENANCE MANUALS FOR MECHANICAL EQUIPMENT. AFFIX MAINTENANCE LABELS TO MECHANICAL EQUIPMENT.
12. ALL CONDUCTORS SHALL BE COPPER. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG., UNLESS OTHERWISE NOTED. CONDUCTORS SHALL BE TYPE THHW, RATED IN ACCORDANCE WITH NEC 110-14(C).
13. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM INTERRUPTING CURRENT TO WHICH THEY MAY BE SUBJECTED.
14. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE; ARTICLES 250 & 810 AND THE UTILITY COMPANY STANDARDS.
15. CONDUIT:
    - A. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
    - B. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
    - C. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE U.L. LISTED AND SHALL BE USED AT FINAL CONNECTIONS TO MECHANICAL EQUIPMENT & RECTIFIERS AND WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL CONTAIN A FULL-SIZE GROUND CONDUCTOR.
    - D. CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILINGS OR WALLS UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL RUN PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, CEILING, OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE PROJECT MANAGER PRIOR TO INSTALLING.
    - E. PVC CONDUIT MAY BE PROVIDED ONLY WHERE SHOWN, OR IN UNDERGROUND INSTALLATIONS. PROVIDE UV-RESISTANT CONDUIT WHERE EXPOSED TO THE ATMOSPHERE. PROVIDE GROUND CONDUCTOR IN ALL PVC RUNS; EXCEPT WHERE PERMITTED BY CODE TO OMIT.
17. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS. BACKGROUND SHALL BE BLACK WITH WHITE LETTERS; EXCEPT AS REQUIRED BY CODE TO FOLLOW A DIFFERENT SCHEME.
18. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE PROJECT MANAGER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE.
19. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION. LEGALLY DISPOSE OF ALL REMOVED, UNUSED AND EXCESS MATERIAL GENERATED BY THE WORK OF THIS CONTRACT. DELIVER ITEMS INDICATED ON THE DRAWINGS TO THE OWNER IN GOOD CONDITION. OBTAIN SIGNED RECEIPT UPON DELIVERY.
20. COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS SHALL BE PAID BY THE CONTRACTOR.
21. VERIFY ALL EXISTING CIRCUITRY PRIOR TO REMOVAL AND NEW WORK. MAINTAIN POWER TO ALL OTHER AREAS & CIRCUITS NOT SCHEDULED FOR REMOVAL.
22. RED LINED AS-BUILT PLANS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER.



1 POWER DIAGRAM
NOT TO SCALE



NOTE:
1. EXCAVATE EXISTING SUBGRADE AS REQUIRED TO INSTALL CONDUITS IN ACCORDANCE WITH OSHA AND ALL APPLICABLE CODES.

2 TYPICAL TRENCH DETAIL
NOT TO SCALE

INTEGRATED LOAD CENTER

LOAD DESCRIPTION	QTY.	UNIT V.A.	LOAD PER PHASE (VA) A	LOAD PER PHASE (VA) B	WIRE COLOR	LOADS CONTINUOUS	LOADS NON-CONTINUOUS	LOADS SUB-PANEL	WIRE SIZE	GROUNDING WIRE SIZE	TRIP		TRIP	GROUNDING WIRE SIZE	WIRE SIZE	LOADS SUB-PANEL	LOADS NON-CONTINUOUS	LOADS CONTINUOUS	WIRE COLOR	LOAD PER PHASE (VA) A	LOAD PER PHASE (VA) B	UNIT V.A.	QTY.	LOAD DESCRIPTION	
1 RECTIFIER #1	1	1400	1400		BLK	X			8	(10)	40		40	(10)	8			X	BLK	1400		1400	1	RECTIFIER #5	2
3	1	1400		1400	RED														RED		1400	1400	1		4
5 RECTIFIER #2	1	1400	1400		BLK	X			8	(10)	40		40	(10)	8			X	BLK	1400		1400	1	RECTIFIER #6	6
7	1	1400		1400	RED														RED		1400	1400	1		8
9 RECTIFIER #3	1	1400	1400		BLK	X			8	(10)	40		40	(10)	8			X	BLK	1400		1400	1	RECTIFIER #7	10
12	1	1400		1400	RED														RED		1400	1400	1		12
13 RECTIFIER #4	1	1400	1400		BLK	X			8	(10)	40		40	(10)	8			X	BLK	1400		1400	1	RECTIFIER #8	14
15	1	1400		1400	RED														RED		1400	1400	1		16
17					BLK														BLK						18
19					RED	X			12	12	20								RED						20
21 GFCI RECEPTACLES	2	180	360		BLK	X			12	(12)	20								BLK						22
23 OPTIONAL FIBER BOX RECEPTACLE	1	180		180	RED	X			12	12	20								RED						24
25 BATTERY CHARGER	1	240	240		BLK	X			12	12	20								BLK						26
27 BLOCK HEATER	1	1500		1500	RED	X			12	12	20								RED						28
29 OIL HEATER	1	180	180		BLK	X			12	12	20								BLK						30
		SUBTOTAL CONTINUOUS	6,380	7,280																5,600	5,600	SUBTOTAL CONTINUOUS		TOTAL KVA CONTINUOUS x 1.25	31.075
		SUBTOTAL NON-CONTINUOUS	-	-																-	-	SUBTOTAL NON-CONTINUOUS		TOTAL KVA NON-CONTINUOUS	-
		SUBTOTAL SUB-PANEL	-	-																-	-	SUBTOTAL SUB-PANEL		TOTAL KVA SUB-PANEL	-

PANEL DESIGNATION: ELECTRICAL PANEL (ITEM 2)
MAIN LUGS: N/A | MAIN BREAKER: 200 AMP | BRANCH BREAKER TYPE: SIEMENS - BL | TOTAL KVA 31.075
VOLTAGE: 120/240 | CYCLE: 60 | PHASE: 1 | WIRES: 3 | MAIN COPPER BUS: 200 AMPS | NEUTRAL: 200 AMPS | TOTAL AMPS 129.48

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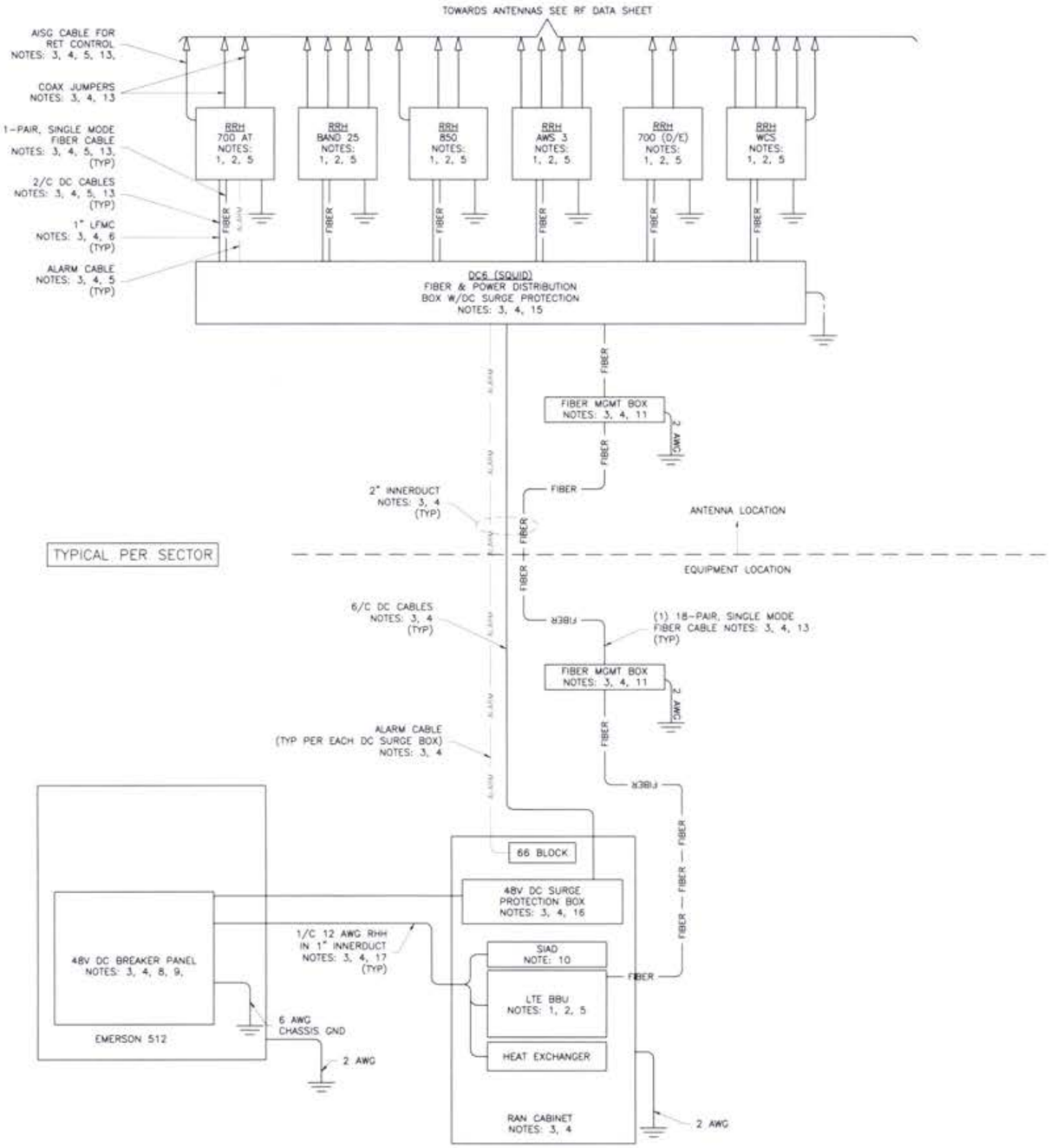
Registered Engineer
COMMONWEALTH OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
ELECTRICAL PANEL SCHEDULE, DIAGRAM, & NOTES

Drawing Scale: AS NOTED
Date: 06/30/21
CD

Drawing Number
E3



1 TYPICAL DC/FIBER SYSTEM DIAGRAM
-- NOT TO SCALE

NOTES:

1. FURNISHED BY OEM/AT&T.
2. INSTALLED BY OEM OR AS SCOPED BY MARKET.
3. FURNISHED BY OTHERS
4. INSTALLED BY OTHERS
5. FINAL CONNECTION BY OEM OR AS SCOPED BY MARKET.
6. OPEN END OF LFMC TO BE LEFT WEATHERPROOFED UNTIL TERMINATED.
7. DELETED.
8. BREAKERS SPECIFIED SOLD SEPERATELY.
9. BREAKERS TO BE TAGGED AND LOCKED OUT.
10. SIAD IS FURNISHED AND INSTALLED BY OTHERS AND INCLUDES POWER CONNECTIONS AND FIBER TO THE UNIT OR AS SCOPED BY MARKET. INSTALL 10 AWG CHASSIS GROUND, PROVIDE (2) 10A BREAKERS FROM A 24V DC POWER SOURCE OR (2) 5A BREAKERS FROM A 48V DC POWER SOURCE AND CONNECT USING MFR POWER CABLE WITH SPECIAL CONNECTOR.
11. FIBER MANAGEMENT BOX IS J-SOURCE MODEL 12126FM4SEC.
12. LEC TO FURNISH AND INSTALL NETWORK INTERFACE DEVICE.
13. LEAVE COILED AND PROTECTED UNTIL TERMINATED.
14. SEE DETAIL 140B FOR DC POWER CABLE SIZES.
15. FIBER AND POWER DISTRIBUTION BOX 4/48V SURGE SHALL BE RAYCAP MODEL DC6-48-60-18-8F.
16. POWER DISTRIBUTION W/DC SURGE PROTECTION BOX SHALL BE RAYCAP MODEL DC6-48-60-0-18.
17. SINGLE-CONDUCTOR DC POWER CABLES SHALL BE TELCOFLEX OR KS24194, COPPER, UL LISTED RHH NON-HALOGEN, LOW SMOKE WITH BRAIDED COVER, TYPE TC (1/0 AND LARGER). UNLESS OTHERWISE NOTED, STRANDING SHALL BE CLASS B (TYPE III) FOR CABLES SIZES 14, 12 & 10 AWG AND CLASS 1 (TYPE IV) FOR SIZES 8 AWG AND LARGER. CABLES SHALL BE COLOR CODED RED FOR +24V, BLUE FOR -48V AND GRAY FOR 24V AND 48V RETURN CONDUCTORS. MULTI-CONDUCTOR DC POWER CABLES SHALL COPPER, CLASS B STRANDED WITH FLAME RETARDANT PVC JACKET, TYPE TC, UL LISTED FOR 90°C DRY/ 75°C WET INSTALLATION.
18. 10A FUSE FOR HEAT EXCHANGER FURNISHED AND INSTALLED BY OTHERS.
19. DELETED
20. GROUNDING WIRES SHALL BE COPPER, GREEN THHN/THWN UL LISTED FOR 90°C DRY/75°C WET INSTALLATION. MINIMUM SIZE IS 6 AWG UNLESS NOTED OTHERWISE.
21. RET CONTROL FROM THE RRH IS AN OPTIONAL METHOD OF CONNECTION. REFER TO RF DATA SHEET FOR APPLICABILITY.
22. DELETED.
23. FIBER AND POWER DISTRIBUTION BOX 4/48V SURGE SHALL BE RAYCAP MODEL DC6-48-60-0-1E.
24. FIBER MANAGEMENT BOX IS COMMSCOPE MODEL FB 18188.
25. FIBER AND POWER DISTRIBUTION BOX 4/48V SURGE SHALL BE RAYCAP MODEL DC12-48-60-0-25E.

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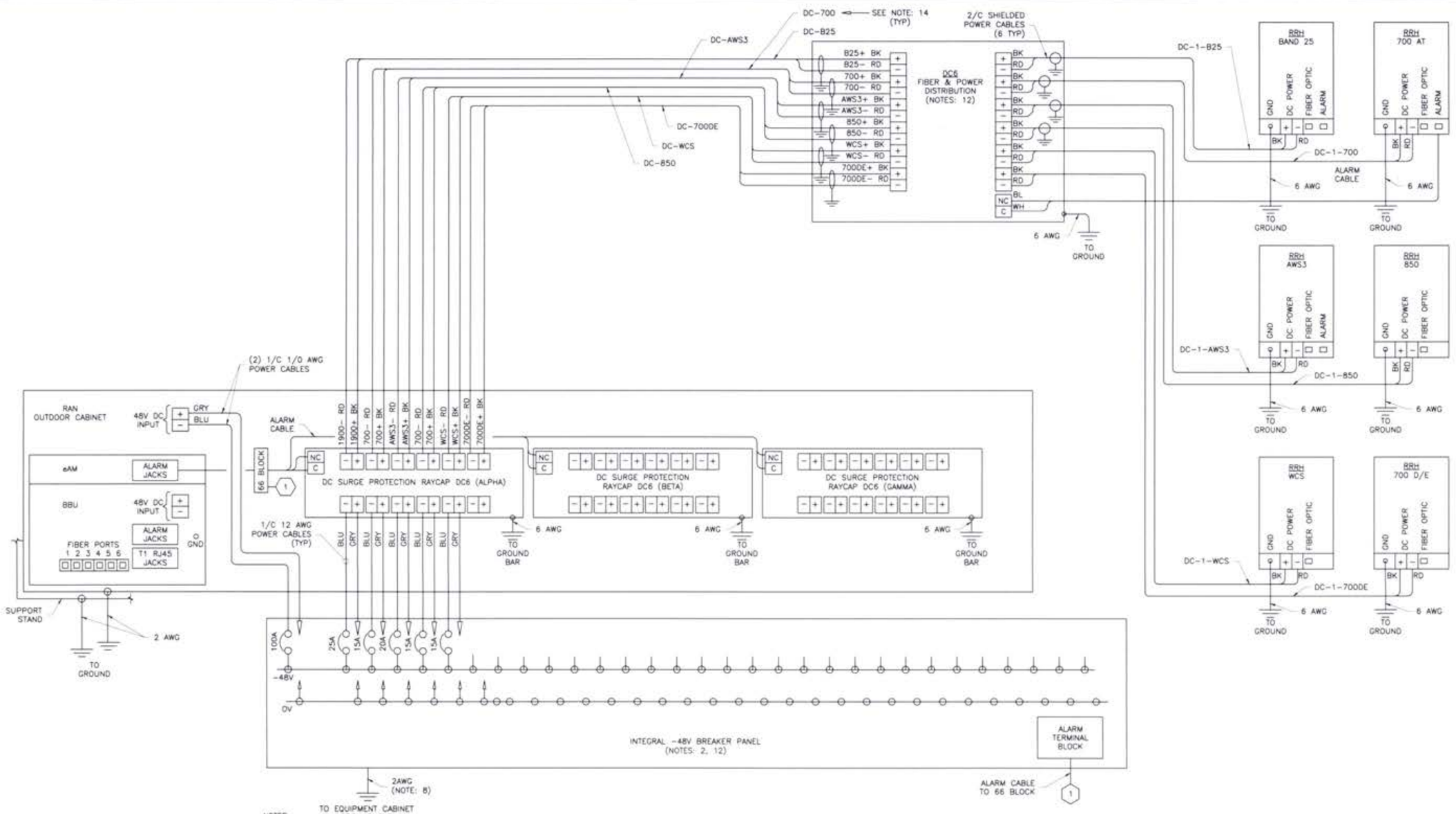
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

Engineer Stamp
COMMONWEALTH OF KENTUCKY
CHRISTOPHER J. WARREN
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
TYPICAL DC/FIBER SYSTEM DIAGRAM

Drawing Scale: AS NOTED
Date: 06/30/21
CD

Drawing Number
E4



NOTES

1. LABEL THE DC POWER CABLES AT BOTH ENDS OF EVERY WIRE AND IN ANY PULL BOX IF USED. LABEL SHALL BE DURABLE, SELF ADHESIVE, WRAPPED LONGITUDINALLY ALONG THE CABLE AND STATE THE SECTOR, FREQUENCY BAND AND POLARITY; I.E. A-AWS+.
2. INSTALL ON IN AUXILIARY EQUIPMENT CABINET.
3. CABLE TERMINALS FOR +24V INPUT FEED A, FEED B AND REFERENCE GROUND SHALL BE 2-HOLE: 3/8" ON 1" CENTER.
4. INSTALL CABLE TERMINALS FOR FEED A AND FEED B RETURN BACK-TO-BACK ON OPPOSITE SIDES OF PAD USING 1-HOLE 3/8" TERMINALS.
5. CABLE TERMINALS FOR CHASSIS GROUND SHALL BE 2-HOLE, 1/4" ON 5/8" CENTER.
6. WHEN DISTRIBUTION BOX IS NOT USED, INSTALL 3 RUNS OF (2) 2/C CABLES IN CONDUIT, 1 EACH FROM DC SURGE SHELF TO DC6s.
7. A JUNCTION BOX IS REQUIRED WHEN FIBER OPTIC CABLES ARE INSTALLED IN CONDUIT AS SCOPED BY MARKET.
8. CONVERTER REFERENCE GROUND IS NOT REQUIRED WHEN CONVERTER AND 24V DC POWER PLANT ARE ON THE SAME RACK OR ENCLOSURE.
9. THE BARE GROUND WIRE OF EACH MULTI-CONDUCTOR CABLE AND DRAIN WIRE WHEN A SHIELDED CABLE IS USED, SHALL BE CONNECTED TO THE EQUIPMENT CABINET GROUND BAR.
10. SEE ALARM BLOCK ASSIGNMENT DETAIL FOR ALARM CABLE CONNECTIONS.
11. PROVIDE A JUNCTION BOX, AS SCOPED BY MARKET, TO COIL EXCESS DC POWER AND OPTICAL FIBER CABLES (FIBER CALES NOT SHOWN FOR CLARITY)
12. NOTED EQUIPMENT MAY BE COMMON TO LTE AND UMTS SYSTEMS.
13. CABLE GROUND WIRE AND SHIELD DRAIN WIRE TO BE LEFT UN-TERMINATED AT RRH.
14. WHEN AN RRH IS USED INSTEAD OF AN AWS RRH CABLE, LABELS SHOULD REFLECT CORRECT FREQUENCY BAND.

TYPICAL PER SECTOR

1 TYPICAL DC WIRING DIAGRAM
NOT TO SCALE

at&t MOBILITY CORP.
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No	Submittal / Revision	App'd	Date
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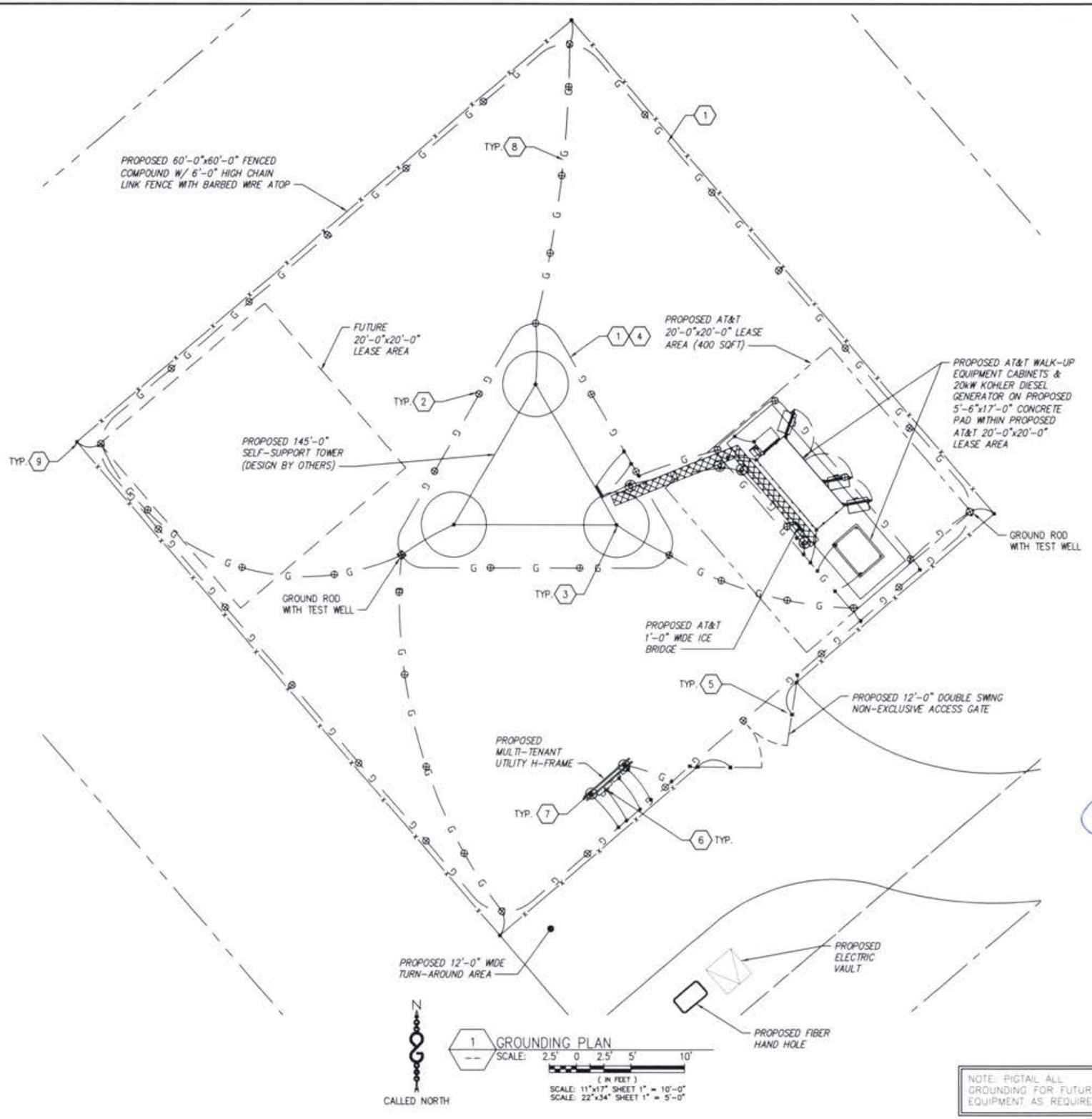
GROUNDING REFERENCE NOTES

1. APPROXIMATE LOCATION OF #2 AWG SOLID BARE TINNED GROUND RING. GROUND RING SHALL BE BURIED 36" BELOW THE FROST LINE OR 18" BELOW GRADE, WHICHEVER IS GREATER. EXACT LOCATION AND NUMBER OF GROUND RODS TO BE DETERMINED ON SITE AND BASED ON "FALL OF POTENTIAL GROUND RESISTANCE METHOD" FOR RESISTANCE < 5 OHMS. UNLESS OTHERWISE NOTED, DRIVEN GROUND RODS ARE TO BE BURIED AT 16 FEET INTERVALS. SEE SHEET E-5 FOR ADDITIONAL GROUNDING INFORMATION.
2. PROVIDE 5/8" X 10'-0" LONG COPPER CLAD STEEL (COPPER WELD) GROUND ROD AS SHOWN. PROVIDE INSPECTION SLEEVE AT GROUND ROD TO SHOW BOND TO EXTERIOR BURIED GROUND RING (MINIMUM OF 4 INSPECTION SLEEVES). INSTALL GROUND ROD TWO (2) FEET MINIMUM AWAY FROM ANY SLAB. INSTALL SO THAT TOP OF GROUND ROD IS 30" BELOW GRADE OR FROST LINE, WHICHEVER IS DEEPER. EXACT LOCATION AND NUMBER OF GROUND RODS TO BE ESTABLISHED ON SITE AND BASED ON "FALL OF POTENTIAL GROUND RESISTANCE METHOD" FOR RESISTANCE < 5 OHMS.. UNLESS OTHERWISE NOTED, DRIVEN GROUND RODS ARE BONDED TO THE BURIED GROUND RING AT 16 FEET INTERVALS.
3. NEW #2 AWG SOLID BARE TINNED COPPER CONDUCTOR FROM TOWER GROUNDING FLANGE AT BASE OF TOWER TO TOWER GROUND RING.
4. NEW #2 AWG SOLID BARE TINNED TOWER GROUND RING WITH GROUND RODS. TOWER GROUND RING SHALL BE SPACED A MINIMUM OF 2'-0" FROM TOWER FOUNDATION.
5. NEW #2 AWG WELDING CABLE OR FLEXIBLE CABLE, GATE JUMPER.
6. NEW #2 AWG GROUND FROM SERVICE ENTRANCE GROUND ELECTRODE TO EXTERNAL GROUND RING.
7. BOND "H-FRAME" TO EXTERNAL GROUND RING USING A #2 AWG GROUND CONDUCTOR (TYP OF 2 PLACES).
8. NEW #2 AWG GROUND FROM TOWER GROUNDING TO EXTERNAL GROUND RING.
9. BOND FENCE POST TO GROUND RING AS SHOWN WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR USING AN EXOTHERMIC WELD.

GROUNDING LEGEND

■	EXOTHERMIC WELD CONNECTION
●	COMPRESSION FITTING CONNECTION
⊗	5/8"X10' COPPER-CLAD STEEL GROUND ROD
⊠	5/8"X10' COPPER-CLAD STEEL GROUND ROD WITH INSPECTION WELL
———	PROPOSED GROUND WIRING
———	EXISTING GROUND WIRING
▭	TINNED COPPER GROUND BAR 1/4"X4"X12" OR 1/4"X4"X20"
CGB	COLLECTOR GROUND BAR
MGB	MAIN GROUND BAR

NOTE:
UTILITY ROUTING/TERMINATION POINTS ARE DIAGRAMMATIC & MAY VARY FROM THAT SHOWN.



NOTE: PIGTAIL ALL GROUNDING FOR FUTURE EQUIPMENT AS REQUIRED.

NOTES:

1. CONTRACTOR SHALL INSPECT AND TEST ANY NEW AT&T GROUNDING SYSTEM WITH A BIDDLE-MEGGER TESTER UTILIZING THE FALL OF POTENTIAL METHOD AND CONTACT CONSTRUCTION MANAGER IF RESISTANCE EXCEEDS 5 OHMS AND SHALL FIELD MODIFY GROUNDING SYSTEM AS NECESSARY TO ACHIEVE COMPLIANCE. TEST RESULTS AND CONCLUSIONS SHALL BE RECORDED FOR PROJECT CLOSE-OUT DOCUMENTATION.
2. CONTRACTOR SHALL PROVIDE PRE-CAST CONCRETE INSPECTION WELL WITH CAST IRON TRAFFIC RATED LID WHEN WELL WILL BE IN AN AREA WHERE THEY CAN BE DAMAGED.

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GROUNDING PLAN

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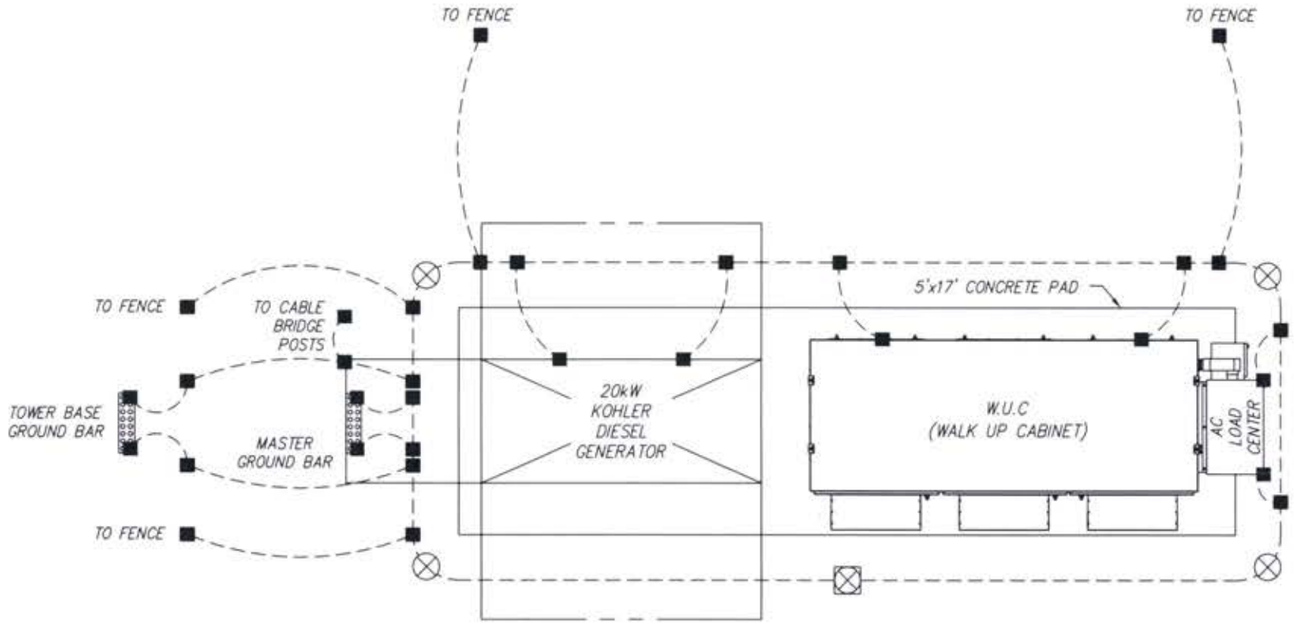
G1

GROUNDING LEGEND

■	EXOTHERMIC WELD CONNECTION
●	COMPRESSION FITTING CONNECTION
⊗	5/8"X10' COPPER-CLAD STEEL GROUND ROD
⊠	5/8"X10' COPPER-CLAD STEEL GROUND ROD WITH INSPECTION WELL
———	PROPOSED GROUND WIRING
———	EXISTING GROUND WIRING
▭	TINNED COPPER GROUND BAR 1/4"X4"X12" OR 1/4"X4"X20"
CGB	COLLECTOR GROUND BAR
MGB	MAIN GROUND BAR



1 TYPICAL AT&T EQUIPMENT GROUNDING PLAN
-- NOT TO SCALE

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EQUIPMENT GROUNDING PLAN

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G2

GROUNDING NOTES:

1. GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
2. ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
3. ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.
4. GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES, SPRAY CADWELD WITH GALVANIZING PAINT.
5. GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTIOXIDANT COATING.
6. GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
7. ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
8. INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
9. REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
10. THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS POSITION ACCORDING TO GROUNDING PLAN. THE GROUND RODS SHALL BE 5/8"X10'-0" COPPER CLAD STEEL INTERCONNECTED WITH #2 BARE TINNED COPPER WIRE BURIED 36" BELOW GRADE. BURY GROUND RODS A MAXIMUM OF 15' APART, AND A MINIMUM OF 8' APART.
11. IF ROCK IS ENCOUNTERED GROUND RODS SHALL BE PLACED AT AN OBLIQUE ANGLE NOT TO EXCEED 45°.
12. EXOTHERMIC WELDS SHALL BE MADE IN ACCORDANCE WITH ERICO PRODUCTS BULLETIN A-AT.
13. CONSTRUCTION OF GROUND RING AND CONNECTIONS TO EXISTING GROUND RING SYSTEM SHALL BE DOCUMENTED WITH PHOTOGRAPHS PRIOR TO BACKFILLING SITE. PROVIDE PHOTOS TO THE VERIZON WIRELESS CONSTRUCTION MANAGER.
14. ALL GROUND LEADS EXCEPT THOSE TO THE EQUIPMENT ARE TO BE #2 BARE TINNED COPPER WIRE. ALL EXTERIOR GROUND BARS TINNED COPPER.
15. PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR-SHIELD OR EQUAL.
16. ENGAGE AN INDEPENDENT ELECTRICAL TESTING FIRM TO TEST AND VERIFY THAT IMPEDANCE DOES NOT EXCEED FIVE OHMS TO GROUND BY MEANS OF "FALL OF POTENTIAL TEST". TEST SHALL BE WITNESSED BY A METROPCS REPRESENTATIVE, AND RECORDED ON THE "GROUND RESISTANCE TEST" FORM.
17. WHERE BARE COPPER GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO GROUND RING, INSTALL WIRE IN 3/4" PVC SLEEVE, FROM 1' BELOW GRADE AND SEAL TOP WITH SILICONE MATERIAL.
18. PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTION, APPLY APPROPRIATE ANTI-OXIDIZATION PAINT.
19. ANY SITE WHERE THE EQUIPMENT (BTS, CABLE BRIDGE, PPC, GENERATOR, ETC.) IS LOCATED WITHIN 6 FEET OF METAL FENCING, THE GROUND RING SHALL BE BONDED TO THE NEAREST FENCE POST USING (3) RUNS OF #2 BARE TINNED COPPER WIRE.

CABLE COLOR CODING NOTES:

1. SECTOR ORIENTATION/AZIMUTH WILL VARY FROM REGION AND IS SITE SPECIFIC. REFER TO RF REPORT FOR EACH SITE TO DETERMINE THE ANTENNA LOCATION AND FUNCTION OF EACH TOWER SECTOR FACE.
2. THE ANTENNA SYSTEM CABLES SHALL BE LABELED WITH VINYL TAPE EXCEPT IN LOCATIONS WHERE ENVIRONMENTAL CONDITIONS CAUSE PHYSICAL DAMAGE, THEN PHYSICAL TAGS ARE PREFERRED.
3. THE STANDARD IS BASED ON EIGHT COLORED TAPES - RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE & VIOLET. THESE TAPES MUST BE 3/4" WIDE & UV RESISTANT SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE AND SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR SUBCONTRACTOR ON SITE.
4. USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLES BY SECTOR AND NUMBER AS SHOWN ON "CABLE MARKING COLOR CONVENTION TABLE".
5. WHEN AN EXISTING COAXIAL LINE THAT IS INTENDED TO BE A SHARED LINE BETWEEN GSM/3G AND IS-136 TDMA IS ENCOUNTERED, THE SUBCONTRACTOR SHALL REMOVE THE EXISTING COLOR CODING SCHEME AND REPLACE IT WITH THE COLOR CODING AND TAGGING STANDARD THAT IS OUTLINED IN THE CURRENT VERSION OF ND-00027. IN THE ABSENCE OF AN EXISTING COLOR CODING TAGGING SCHEME, OR WHEN INSTALLING PROPOSED COAXIAL CABLES, THIS GUIDELINE SHALL BE IMPLEMENTED AT THAT SITE REGARDLESS OF TECHNOLOGY.
6. ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE A MINIMUM OF (3) WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
7. ALL COLOR BANDS INSTALLED AT THE TOP OF TOWER SHALL BE A MINIMUM OF 3" WIDE AND SHALL HAVE A MINIMUM OF 3/4" OF SPACE IN BETWEEN EACH COLOR.
8. ALL COLOR CODES SHALL BE INSTALLED AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE TO SIDE.
9. IF EXISTING CABLES AT THE SITE ALREADY HAVE A COLOR CODING SCHEME AND THEY ARE NOT INTENDED TO BE REUSED OR SHARED WITH THE GSM TECHNOLOGY, THE EXISTING COLOR CODING SCHEME SHALL REMAIN UNTOUCHED.

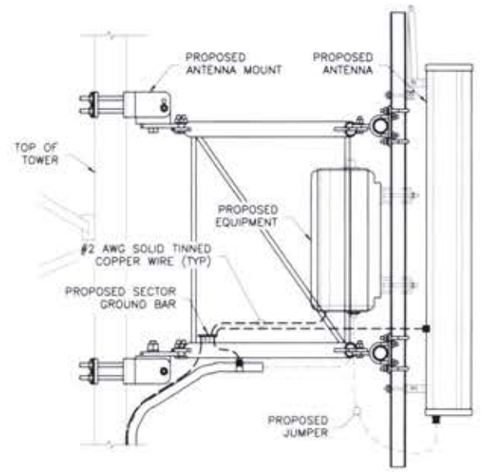
CABLE MARKING TAGS:

WHEN USING THE ALTERNATIVE LABELING METHOD, EACH RF CABLE SHALL BE IDENTIFIED WITH A METAL ID TAG MADE OF STAINLESS STEEL OR BRASS. THE TAG SHALL BE 1-1/2" IN DIAMETER WITH 1/4" STAMPED LETTERS AND NUMBERS INDICATION THE SECTOR, ANTENNA POSITION AND CABLE NUMBER. ID MARKING LOCATIONS SHOULD BE AS PER "CABLE MARKING LOCATIONS TABLE". THE TAG SHOULD BE ATTACHED WITH CORROSION PROOF WIRE AROUND THE CABLE AT THE SAME LOCATION AS DEFINED ABOVE. THE TAG SHOULD BE LABELED AS SHOWN ON THE "GSM AND UMTS LINE TAG" DETAIL.

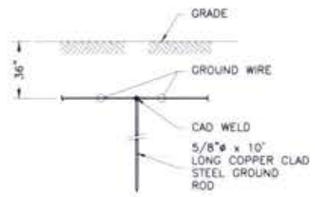
CABLE MARKING LOCATIONS TABLE

NO.	LOCATIONS
1	EACH JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
2	EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS AT THE TOP JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS PRIOR TO ENTERING THE BTS OR SHELTER.
3	CABLE ENTRY PORT ON THE INTERIOR OF SHELTER.
4	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.
5	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.

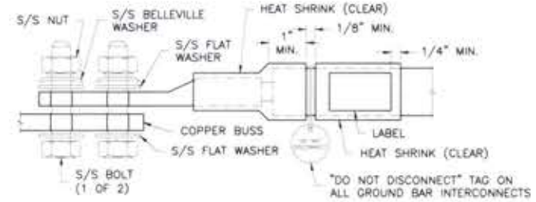
1 CADWELD GROUNDING CONNECTION DETAILS
NOT TO SCALE



2 ANTENNA & CABLE GROUNDING
NOT TO SCALE

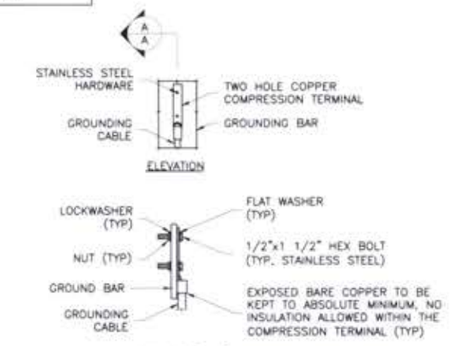


3 GROUNDING ROD DETAIL
NOT TO SCALE



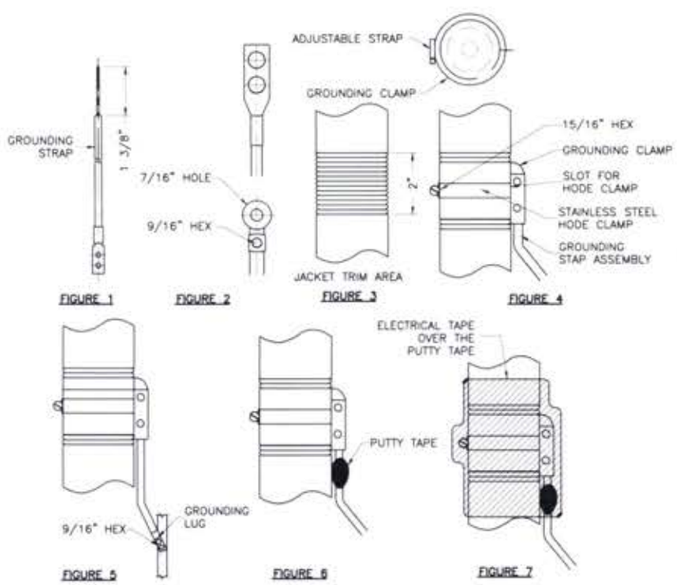
NOTES:
1. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH ANTI-OXIDATION COMPOUND BEFORE MATING.
2. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH ANTI-OXIDATION COMPOUND.
3. COAT ALL BARRELS WITH ANTI-OXIDATION COMPOUND BEFORE CRIMPING.

4 GENERAL LUG DETAIL
NOT TO SCALE



NOTE:
1. "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

5 TYPICAL GROUND BAR CONNECTION DETAIL
NOT TO SCALE



6 GROUNDING STRAP WEATHERPROOFING DETAIL
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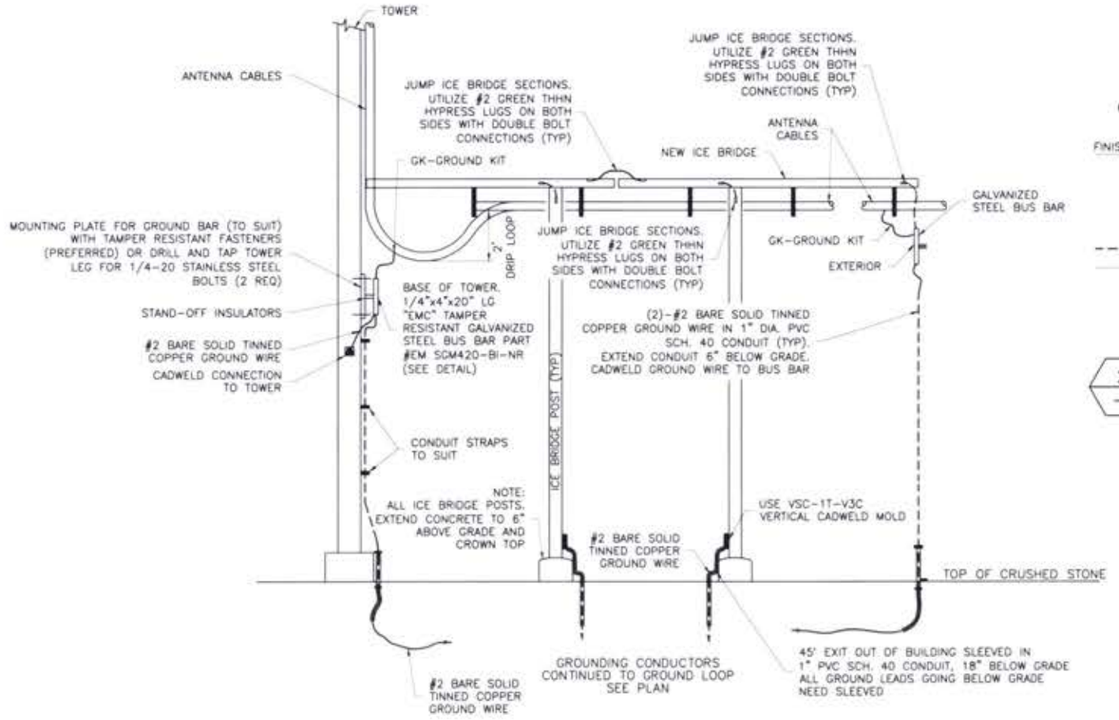
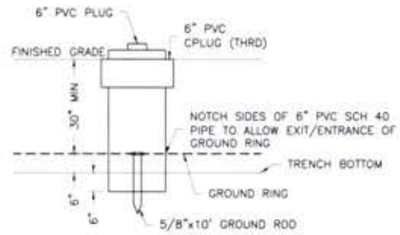


1 COAXIAL GROUNDING AT ICE BRIDGE
-- NOT TO SCALE



2 INSPECTION WELL DETAIL
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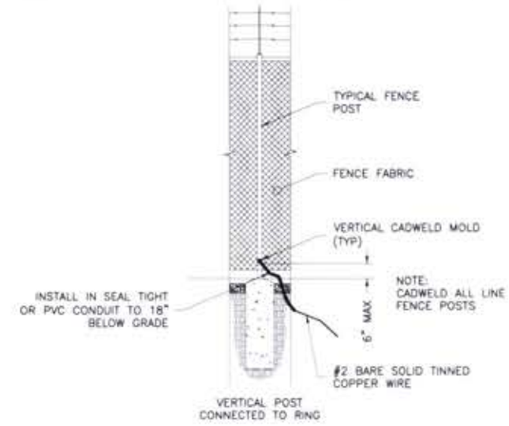

3 TYPICAL FENCE POST GROUNDING
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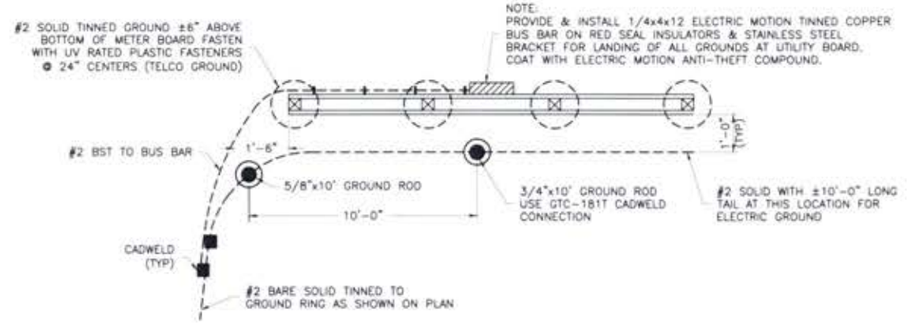
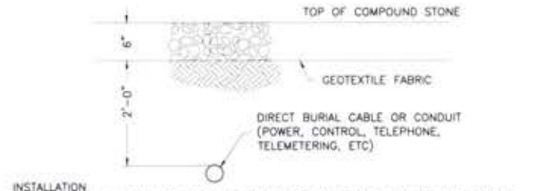


4 METER BOARD UTILITY GROUNDING DETAIL
-- NOT TO SCALE



INSTALLATION
1. THE TAPE SHALL BE LAID DIRECTLY ABOVE THE CABLE OR CONDUIT UNDER RIGID TYPE AND OIL MAT PAVEMENTS, AND DIRECTLY ON TOP OF THE COMPACTED EARTH SUBGRADE IMMEDIATELY BEFORE RESTORING THE PAVEMENT.

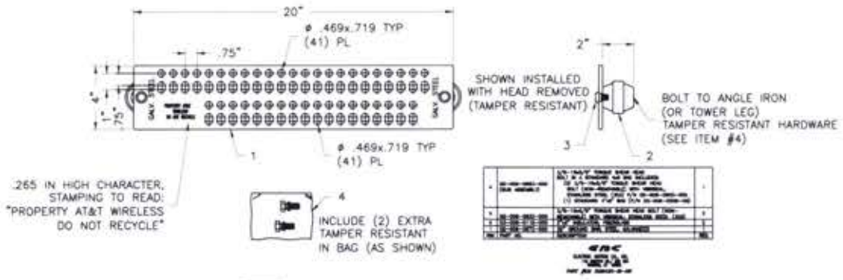
2. IN OPEN AREAS, THE TAPE SHALL BE LAID DURING THE BACKFILLING OPERATION ON SMOOTH, COMPACTED BACKFILL AT A DISTANCE OF 8" BELOW THE SURFACE OF THE AREA.

3. THE ENDS OF THE TAPE SHALL BE LAPPED APPROXIMATELY SIX (6) INCHES.

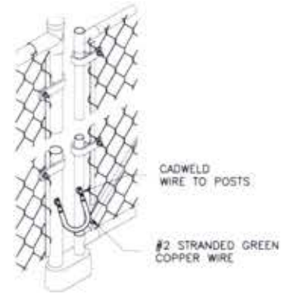
4. TAPE SHALL BE THE COLOR AS INDICATED AND HAVE THE FOLLOWING MARKINGS:

RED	CAUTION BURIED ELECTRIC LINE BELOW	CAUTION	CAUTION
ORANGE	CAUTION BURIED TELEPHONE LINE BELOW	CAUTION	CAUTION

5 STANDARD MARKER TAPE DETAIL
-- NOT TO SCALE



6 TOWER BUS BAR DETAIL
-- NOT TO SCALE



7 GATE GROUNDING DETAIL
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No.	Submittal Revision	App'd	Date
5	ISSUED FOR CONSTRUCTION	CES	10/14/21
4	ISSUED FOR CONSTRUCTION	LMC	10/01/21
3	ISSUED FOR CONSTRUCTION	LMC	09/10/21
2	ISSUED FOR CONSTRUCTION	CES	08/25/21
1	ISSUED FOR CONSTRUCTION	CES	08/11/21
0	ISSUED FOR CONSTRUCTION	CES	07/16/21
A	ISSUED FOR REVIEW	CES	06/30/21

Drawn: CES Date: 06/30/21
Designed: CES Date: 06/30/21
Checked: CJW Date: 06/30/21

Project Number: 2136-Z0001-C

Project Title:
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

Drawing Title:
GROUNDING DETAILS

Drawing Scale: AS NOTED
Date: 06/30/21
CD

Drawing Number:
G4

Section 1 - RFDS GENERAL INFORMATION

RFDS NAME:	KYLO3647	DATE:	07/16/2021	RF DESIGN ENG:	Sherri Lewis
ISSUE:		Approved? (Y/N):	Yes	RF DESIGN PHONE:	5126472251
REVISION:		RF MANAGER:	Byron Horn	RF DESIGN EMAIL:	SL1906@ATT.COM
INITIATIVE /PROJECT:	LTE: Add (6) NNHU-65D-R6 12-port antennas, (2) per sector. Add (3) 850/700MHz 4449, (3) AWS/PCS 6843 DB, and (3) 700MHz B14 4478. Add (2) 24-pair fiber lines. Add (2) DC9 and (6) power lines. Final baseband configuration is (2) 6630. At least 6' horizontal separation between 700 MHz D/E and 700 MHz B/C antennas within the same sectorface and 3' horizontal separation between 700 B14 FNET. For antennas with no working ports, add DF-CAPKIT to open ports and add DUST CAP to RET port. For antennas with working ports, add T-2-DM - 2 Watt load to open ports.				

RF PERF. CNO:		RFDS PROGRAM TYPE:	2033 New Site		
RF PERF PHONE:		RFDS TECHNOLOGY:	Expansion		
RF PERF EMAIL:		STATE/STATUS:	As Built/In Progress		
ADDITIONAL WORKFLOW NOTIFICATIONS:		RFDS ID:	4642459		
RFDS VERSION:	1.00	Created By:	sl1906	Updated By:	ka2331
UMTS FREQUENCY:		Date Created:	7/16/2021 5:25:42 PM	Date Updated:	8/24/2021 11:47:23 AM
LTE FREQUENCY:	700, 1900, AWS	EXPIRATION DATE:			
5G FREQUENCY:	850	ESTIMATED SQIN:	15.879	Calculation ID:	20210825100740513C
I-PLAN JOB # 1:	NER-RTNK-20-02057	IPLAN PRD GRP || SUB GRP #1:	New Site || LTE Only 1C ABM		
I-PLAN JOB # 2:	NER-RTNK-20-02763	IPLAN PRD GRP || SUB GRP #2:	LTE Next Carrier || LTE 2C ABM		
I-PLAN JOB # 3:	NER-RTNK-20-02733	IPLAN PRD GRP || SUB GRP #3:	LTE Software Carrier || LTE 4C ABM		
I-PLAN JOB # 4:	NER-RTNK-20-02749	IPLAN PRD GRP || SUB GRP #4:	LTE Next Carrier || LTE 3C ABM		
I-PLAN JOB # 5:	NER-RTNK-20-03329	IPLAN PRD GRP || SUB GRP #5:	5G NR Software Radio || 5G NR 1DR-2 ABM		
I-PLAN JOB # 6:		IPLAN PRD GRP || SUB GRP #6:			
I-PLAN JOB # 7:		IPLAN PRD GRP || SUB GRP #7:			
I-PLAN JOB # 8:		IPLAN PRD GRP || SUB GRP #8:			

Section 2 - LOCATION INFORMATION

USID:	299215	FA LOCATION CODE:	15346957	LOCATION NAME:	FALLING BRANCH
REGION:	SOUTHEAST	MARKET CLUSTER:	TENNESSEE/KENTUCKY	MARKET:	EVANSVILLE
ADDRESS:	2589 BLUE BIRD ROAD	CITY:	FALLS OF ROUGH	STATE:	KY
ZIP CODE:	40119	COUNTY:	GRAYSON	LONG (DEC. DEG.):	-86.4901470
LATITUDE (D-M-S):	37d 38m 46.0192s	LONGITUDE (D-M-S):	-86d -29m-24.3292s	LAT (DEC. DEG.):	37.9566720
DIRECTIONS, ACCESS AND EQUIPMENT LOCATION:	TBD				

ORACLE PTN # 1:	2452ADWCVD	FACE JOB # 1:	MRTNKD50656		
ORACLE PTN # 2:	2452ADY0WT	FACE JOB # 2:	MRTNKD52615		
ORACLE PTN # 3:	2452ADY0WP	FACE JOB # 3:	MRTNKD52630		
ORACLE PTN # 4:	2452ADY0WH	FACE JOB # 4:	MRTNKD52617		
ORACLE PTN # 5:	2452ADY0WZ	FACE JOB # 5:	MRTNKD52574		
ORACLE PTN # 6:		FACE JOB # 6:			
ORACLE PTN # 7:		FACE JOB # 7:			
ORACLE PTN # 8:		FACE JOB # 8:			
BORDER CELL WITH CONTOUR COORD:		SEARCH RING NAME:	Falling Branch		
AM STUDY REQ'D (Y/N):	No	SEARCH_RING_ID:	Falling Branch		
FREQ COORD:		BTA:		MSA / RSA:	
		LAC(UMTS):			
RF DISTRICT:	KY West				
RF ZONE:	Evansville	RNC(UMTS):			
		MME POOL ID(LTE):	FF20		
PARENT NAME(UMTS):					

Section 3 - LICENSE COVERAGE/FILING INFORMATION

CGSA - NO FILING TRIGGERED (Yes/No):	No	CGSA LOSS:		PCS REDUCED - UPS ZIP:	
CGSA - MINOR FILING NEEDED (Yes/No):	No	CGSA EXT AGMT NEEDED:		PCS POPS REDUCED:	
CGSA - MAJOR FILING NEEDED (Yes/No):	Yes	CGSA SCORECARD UPDATED:		CGSA CALL SIGNS:	

Section 4 - TOWER/REGULATORY INFORMATION

STRUCTURE AT&T OWNED?:	No	GROUND ELEVATION (ft):	640	STRUCTURE TYPE:	
ADDITIONAL REGULATORY?:	No	HEIGHT OVERALL (ft):		FCC ASR NUMBER:	
SUB-LEASE RIGHTS?:	No	STRUCTURE HEIGHT (ft):			
LIGHTING TYPE:					

MARKET LOCATION 700 MHz Band:			
MARKET LOCATION 850 MHz Band:			
MARKET LOCATION 1900 MHz Band:			
MARKET LOCATION AWS Band:			
MARKET LOCATION WCS Band:			
MARKET LOCATION Future Band:			

1 RFDS TITLE PAGE
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No.	Submittal / Revision	App'd	Date
5	ISSUED FOR CONSTRUCTION	CES	10/14/21
4	ISSUED FOR CONSTRUCTION	LMG	10/01/21
3	ISSUED FOR CONSTRUCTION	LMG	09/10/21
2	ISSUED FOR CONSTRUCTION	CES	08/25/21
1	ISSUED FOR CONSTRUCTION	CES	08/11/21
0	ISSUED FOR CONSTRUCTION	CES	07/16/21
A	ISSUED FOR REVIEW	CES	06/30/21

Drawn: CES Date: 06/30/21
Designed: CES Date: 06/30/21
Checked: CW Date: 06/30/21

Project Number: 2136-Z0001-C

Project Title:
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

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CHRISTOPHER WARREN
24023
10-15-21
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Drawing Title:
RFDS
TITLE PAGE

Drawing Scale: AS NOTED
Date: 06/30/21
CD

Drawing Number:
RF-1

Section 17A - FINAL TOWER CONFIGURATION - SECTOR A (OR OMNI)

ANTENNA POSITION is LEFT to RIGHT from BACK OF ANTENNA (unless otherwise specified)	ANTENNA POSITION 1		ANTENNA POSITION 2		ANTENNA POSITION 3		ANTENNA POSITION 4		ANTENNA POSITION 5		ANTENNA POSITION 6		ANTENNA POSITION 7	
ANTENNA MAKE - MODEL	NNH4-65D-R6				NNH4-65D-R6									
ANTENNA VENDOR	Commscope				Commscope									
ANTENNA SIZE (H x W x D)	105.8X19.6X7.8				105.8X19.6X7.8									
ANTENNA WEIGHT	86.2				86.2									
AZIMUTH	60				60									
MAGNETIC DECLINATION														
RADIATION CENTER (feet)	143				143									
ANTENNA TIP HEIGHT														
MECHANICAL DOWNTILT	0				0									
FEEDER AMOUNT														
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)														
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)														
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)														
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)														
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)	2	26			1	26								
Antenna RET Motor (QTY/MODEL)														
SURGE ARRESTOR (QTY/MODEL)														
DIPLEXER (QTY/MODEL)														
DUPLEXER (QTY/MODEL)														
Antenna RET CONTROL UNIT (QTY/MODEL)														
DC BLOCK (QTY/MODEL)														
TMA/LNA (QTY/MODEL)														
CURRENT INJECTORS FOR TMA (QTY/MODEL)														
PDU FOR TMAS (QTY/MODEL)														
FILTER (QTY/MODEL)														
SQUID (QTY/MODEL)	2	DC9-48-60-24-8C-EV												
FIBER TRUNK (QTY/MODEL)	2													
DC TRUNK (QTY/MODEL)	6													
REPEATER (QTY/MODEL)														
RRH - 700 band (QTY/MODEL)	1	4449 B5/B12			1	4478 B14								
RRH - 850 band (QTY/MODEL)		RRH is shared with another band												
RRH - 1900 band (QTY/MODEL)	1	8843 B2/B66A												
RRH - AWS band (QTY/MODEL)		RRH is shared with another band												
RRH - WCS band (QTY/MODEL)														
Additional RRH #1 - any band (QTY/MODEL)														
Additional RRH #2 - any band (QTY/MODEL)														
RRH 7E 1 (QTY/MODEL)														
RRH 7E 2 (QTY/MODEL)														
RRH 7E 3 (QTY/MODEL)														
Additional Component 1 (QTY/MODEL)														
Additional Component 2 (QTY/MODEL)														
Additional Component 3 (QTY/MODEL)														
Local Market Note 1	Antenna positions left to right facing front of antennas													
Local Market Note 2														
Local Market Note 3														

PORT SPECIFIC FIELDS	PORT NUMBER	USID (CSSng)	USID (Alt)	ATOLL TXID	ATOLL CELL ID	TMRX?	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RAAT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 1	PORT 1	299216.A.700.4G.1		KYL03647_7A_1	KYL03647_7A_1		LTE 700	NNH4-65D-R6_725MHz_03DT	15.6		3	TOP	Fiber	0	NO								
	PORT 2	299216.A.850.5G.1		KYEN303647_N005A_1	KYEN303647_N005A_1		5G 850	NNH4-65D-R6_845MHz_03DT	16.1		3	TOP	Fiber	0	NO								
	PORT 3	299216.A.1900.4G.1,		KYL03647_9A_1,	KYL03647_9A_2,		LTE 1900	NNH4-65D-	17.3		3	TOP	Fiber	0	NO								
		299216.A.1900.4G.2		KYL03647_9A_1	KYL03647_9A_1			R6_1930MHz_03DT															
	PORT 4	299216.A.AWS.4G.1, 299216.A.AWS.4G.2		KYL03647_2A_1, KYL03647_2A_1	KYL03647_2A_2, KYL03647_2A_1		LTE AWS	NNH4-65D-R6_2130MHz_03DT	17.5		3	TOP	Fiber	0	NO								
ANTENNA POSITION 3	PORT 1	299216.A.700.4G.2		KYL03647_7A_2_F	KYL03647_7A_2_F		LTE 700	NNH4-65D-R6_760MHz_02DT	16.8		2	TOP	Fiber	0	NO								

1 RFDS CONFIGURATION TABLE
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5	ISSUED FOR CONSTRUCTION	CES	10/14/21
4	ISSUED FOR CONSTRUCTION	LMG	10/01/21
3	ISSUED FOR CONSTRUCTION	LMG	09/10/21
2	ISSUED FOR CONSTRUCTION	CES	08/25/21
1	ISSUED FOR CONSTRUCTION	CES	08/11/21
0	ISSUED FOR CONSTRUCTION	CES	07/16/21
A	ISSUED FOR REVIEW	CES	06/30/21

Drawn: CES Date: 06/30/21
Designed: CES Date: 06/30/21
Checked: CJW Date: 06/30/21

Project Number: 2136-Z0001-C

Project Title:
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

STATE OF KENTUCKY
CHRISTOPHER WARREN
24023
10-15-21
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Drawing Title: RFDS CONFIGURATION TABLE

Drawing Scale: AS NOTED
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Drawing Number: RF-2

Section 17B - FINAL TOWER CONFIGURATION - SECTOR B

ANTENNA POSITION is LEFT to RIGHT from BACK OF ANTENNA (unless otherwise specified)	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
ANTENNA MAKE - MODEL	NNH4-65D-R6		NNH4-65D-R6				
ANTENNA VENDOR	Commscope		Commscope				
ANTENNA SIZE (H x W x D)	105.8X19.6X7.8		105.8X19.6X7.8				
ANTENNA WEIGHT	88.2		88.2				
AZIMUTH	180		180				
MAGNETIC DECLINATION							
RADIATION CENTER (feet)	143		143				
ANTENNA TIP HEIGHT							
MECHANICAL DOWNTILT	0		0				
FEEDER AMOUNT							
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)							
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from ANOTHER ANTENNA (enter antenna # / # of inches)	3 / 36		1 / 36				
Antenna RET Motor (QTY/MODEL)							
SURGE ARRESTOR (QTY/MODEL)							
DIPLEXER (QTY/MODEL)							
DUPLEXER (QTY/MODEL)							
Antenna RET CONTROL UNIT (QTY/MODEL)							
DC BLOCK (QTY/MODEL)							
TMA/LNA (QTY/MODEL)							
CURRENT INJECTORS FOR TMA (QTY/MODEL)							
FDU FOR TMAS (QTY/MODEL)							
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
REPEATER (QTY/MODEL)							
RRH - 700 band (QTY/MODEL)	1 / 4478 B66/B12		1 / 4478 B14				
RRH - 850 band (QTY/MODEL)	RRH is shared with another band						
RRH - 1900 band (QTY/MODEL)	1 / 8843 B2/B66A						
RRH - AWS band (QTY/MODEL)	RRH is shared with another band						
RRH - WCS band (QTY/MODEL)							
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
RRH TD 1 (QTY/MODEL)							
RRH TD 2 (QTY/MODEL)							
RRH TD 3 (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1	Antenna positions left to right facing front of antennas						
Local Market Note 2							
Local Market Note 3							

PORT SPECIFIC FIELDS	PORT NUMBER	USEID (GSM/up)	USEID (AWS)	ATOLL TXID	ATOLL CELL ID	TXRX #	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDER TYPE	FEEDER LENGTH (feet)	RX/AT R/T MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCH/PLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSAID)
ANTENNA POSITION 1	PORT 1	299215.B.700.4G.1		KYLE9647_7B_1	KYLE9647_7B_1		LTE 700	NNH4-65D-R6_*28MHz_03DT	15.6		3	TOP	Fiber	0	NO								
	PORT 2	299215.B.850.5G.1		KYEN003647_N005B_1	KYEN003647_N005B_1		5G ME	NNH4-65D-R6_340MHz_03DT	16.1		3	TOP	Fiber	0	NO								
	PORT 3	299215.B.1900.4G.1,		KYLE9647_5B_1,	KYLE9647_5B_1,		LTE 1900	NNH4-65D-	17.3		2	TOP	Fiber	0	NO								
		299215.B.1900.4G.2		KY_L09647_5B_1	KYLE9647_5B_2			R8_1930MHz_03DT															
	PORT 4	299215.B.AWS.4G.1, 299215.B.AWS.4G.2		KY_L09647_2B_1, KY_L09647_2B_1	KYLE9647_2B_2, KYLE9647_2B_1		LTE AWS	NNH4-65D-R8_2130MHz_03DT	17.5		3	TOP	Fiber	0	NO								
ANTENNA POSITION 3	PORT 1	299215.B.700.4G.2		KY_L09647_7B_2_F	KYLE9647_7B_2_F		LTE 700	NNH4-65D-R8_786MHz_02DT	15.6		2	TOP	Fiber	0	NO								

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No	Submittal / Revision	App'd	Date
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4	ISSUED FOR CONSTRUCTION	LMG	10/01/21
3	ISSUED FOR CONSTRUCTION	LMG	09/10/21
2	ISSUED FOR CONSTRUCTION	CES	08/25/21
1	ISSUED FOR CONSTRUCTION	CES	08/11/21
0	ISSUED FOR CONSTRUCTION	CES	07/16/21
A	ISSUED FOR REVIEW	CES	06/30/21

Drawn: CES Date: 06/30/21
Designed: CES Date: 06/30/21
Checked: CJW Date: 06/30/21

Project Number: 2136-Z0001-C

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Drawing Title:
RFDS CONFIGURATION TABLE

Drawing Scale: AS NOTED
Date: 06/30/21
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Drawing Number:
RF-3

Section 17C - FINAL TOWER CONFIGURATION - SECTOR C

ANTENNA POSITION is LEFT to RIGHT from BACK OF ANTENNA (unless otherwise specified)	ANTENNA POSITION 1		ANTENNA POSITION 2		ANTENNA POSITION 3		ANTENNA POSITION 4		ANTENNA POSITION 5		ANTENNA POSITION 6		ANTENNA POSITION 7	
ANTENNA MAKE - MODEL	NNH4-65D-R6				NNH4-65D-R6									
ANTENNA VENDOR	Commscope				Commscope									
ANTENNA SIZE (H x W x D)	105.6X19.6X7.8				105.6X19.6X7.8									
ANTENNA WEIGHT	88.2				88.2									
AZIMUTH	300				300									
MAGNETIC DECLINATION														
RADIATION CENTER (feet)	143				143									
ANTENNA TIP HEIGHT														
MECHANICAL DOWNTILT	3				3									
FEEDER AMOUNT														
VERTICAL SEPARATION from ANTENNA ABOVE (TIP to TIP)														
VERTICAL SEPARATION from ANTENNA BELOW (TIP to TIP)														
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)														
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)														
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)	3	14			1	14								
Antenna RET Motor (QTY/MODEL)														
SURGE ARRESTOR (QTY/MODEL)														
DIPLEXER (QTY/MODEL)														
DUPLEXER (QTY/MODEL)														
Antenna RET CONTROL UNIT (QTY/MODEL)														
DC BLOCK (QTY/MODEL)														
TMA/LNA (QTY/MODEL)														
CURRENT INJECTORS FOR TMA (QTY/MODEL)														
PDU FOR TMAS (QTY/MODEL)														
FILTER (QTY/MODEL)														
SQUID (QTY/MODEL)														
FIBER TRUNK (QTY/MODEL)														
DC TRUNK (QTY/MODEL)														
REPEATER (QTY/MODEL)														
RRH - 700 band (QTY/MODEL)	1	4449 B5/B12			1	4478 B14								
RRH - 850 band (QTY/MODEL)		RRH is shared with another band												
RRH - 1900 band (QTY/MODEL)	1	8843 B2/B66A												
RRH - AWS band (QTY/MODEL)		RRH is shared with another band												
RRH - WCS band (QTY/MODEL)														
Additional RRH #1 - any band (QTY/MODEL)														
Additional RRH #2 - any band (QTY/MODEL)														
RRH 7B 1 (QTY/MODEL)														
RRH 7B 2 (QTY/MODEL)														
RRH 7B 3 (QTY/MODEL)														
Additional Component 1 (QTY/MODEL)														
Additional Component 2 (QTY/MODEL)														
Additional Component 3 (QTY/MODEL)														
Local Market Note 1	Antenna positions left to right facing front of antennas													
Local Market Note 2														
Local Market Note 3														

PORT SPECIFIC FIELDS	PORT NUMBER	USID (OSSng)	USID (Atoll)	ATOLL TXID	ATOLL CELL ID	TX/RX	TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	KXAIT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	NATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (OSSNG)
ANTENNA POSITION 1	PORT 1	299215.C.700.4G.1		KYLE3647_7C_1	KYLE3647_7C_1		LTE 700	NNH4-65D-R6_728MHz_03DT	15.2		3	TOP	Fiber	0	NO								
	PORT 2	299215.C.850.5G.1		KYEN03647_N005C_1	KYEN03647_N005C_1		5G 850	NNH4-65D-R6_840MHz_03DT	16.1		3	TOP	Fiber	0	NO								
	PORT 3	299215.C.1900.4G.1,		KYLE3647_9C_1,	KYLE3647_9C_2		LTE 1900	NNH4-65D-	17.3		3	TOP	Fiber	0	NO								
		299215.C.1900.4G.2		KYLE3647_9C_1	KYLE3647_9C_1			R6_1930MHz_03DT															
	PORT 4	299215.C.AWS.4G.1, 299215.C.AWS.4G.2		KYLE3647_2C_1, KYLE3647_2C_2	KYLE3647_2C_2, KYLE3647_2C_1		LTE AWS	NNH4-65D-R6_2130MHz_03DT	17.6		3	TOP	Fiber	0	NO								
ANTENNA POSITION 3	PORT 1	299215.C.700.4G.2		KYLE3647_7C_3_F	KYLE3647_7C_3_F		LTE 700	NNH4-65D-R6_760MHz_03DT	15.8		2	TOP	Fiber	0	NO								

1 RFDS CONFIGURATION TABLE
-- NOT TO SCALE

at&t MOBILITY CORP.
8372 E. BROAD ST. REYNOLDSBURG, OH 43068

TILLMAN INFRASTRUCTURE
152 W. 57TH STREET NEW YORK, NEW YORK 10019 TEL: 212-706-1677

INFINIGY FROM ZERO TO INFINIGY the solutions are endless
INFINIGY ENGINEERING, PLLC 2255 SEWELL MILL ROAD, SUITE 130 MARIETTA, GA 30062

No.	Submittal / Revision	App'd	Date
5	ISSUED FOR CONSTRUCTION	CES	10/14/21
4	ISSUED FOR CONSTRUCTION	LMG	10/01/21
3	ISSUED FOR CONSTRUCTION	LMG	09/10/21
2	ISSUED FOR CONSTRUCTION	CES	08/25/21
1	ISSUED FOR CONSTRUCTION	CES	08/11/21
0	ISSUED FOR CONSTRUCTION	CES	07/16/21
A	ISSUED FOR REVIEW	CES	06/30/21

Drawn: CES Date: 06/30/21
Designed: CES Date: 06/30/21
Checked: CJW Date: 06/30/21

Project Number: 2136-Z0001-C

Project Title:
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

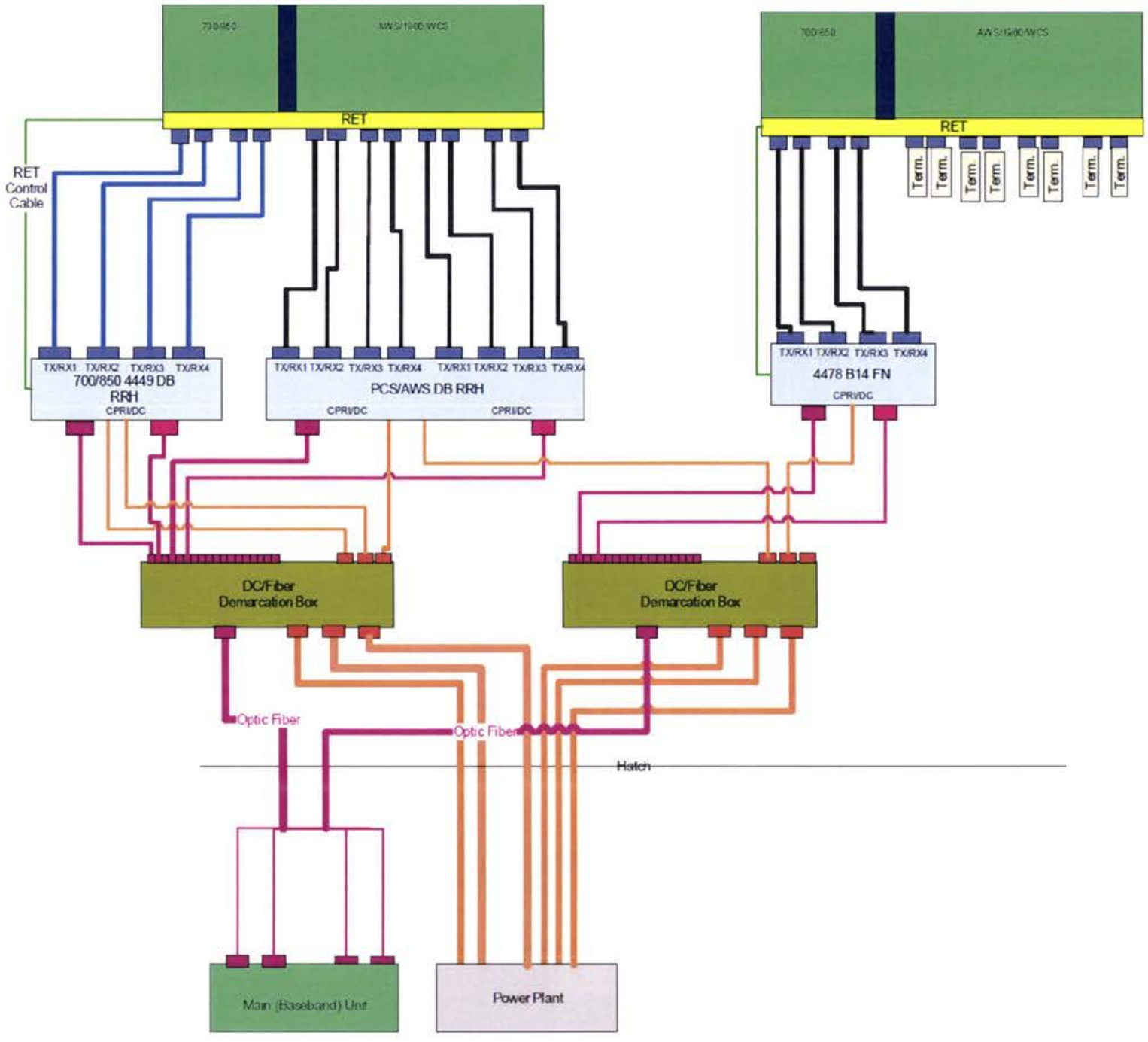
STATE OF KENTUCKY CHRISTOPHER WARREN 24028 LICENSED PROFESSIONAL ENGINEER

Drawing Title: RFDS CONFIGURATION TABLE

Drawing Scale: AS NOTED
Date: 06/30/21
CD

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF APPLICABLE STATE AND/OR LOCAL LAWS

Drawing Number: RF-4



1 RFDS PLUMBING DIAGRAM
-- NOT TO SCALE

at&t MOBILITY CORP.
8372 E. BROAD ST.
REYNOLDSBURG, OH 43068

TILLMAN INFRASTRUCTURE
152 W. 57TH STREET
NEW YORK, NEW YORK 10019
TEL: 212-706-1677

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
INFINIGY ENGINEERING, PLLC
2235 SEWELL MILL ROAD, SUITE 130
MARIETTA, GA 30062

No	Submittal Revision	Appd	Date
5	ISSUED FOR CONSTRUCTION	CES	10/14/21
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1	ISSUED FOR CONSTRUCTION	CES	08/11/21
0	ISSUED FOR CONSTRUCTION	CES	07/14/21
A	ISSUED FOR REVIEW	CES	06/30/21

Drawn: CES Date: 06/30/21
Designed: CES Date: 06/30/21
Checked: GJW Date: 06/30/21

Project Number
2136-Z0001-C

Project Title
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40116

COMMONWEALTH OF KENTUCKY
CHRISTOPHER G. WARNER
24023
10-15-21
LICENSED PROFESSIONAL ENGINEER

Drawing Title
RFDS
PLUMBING
DIAGRAM

Drawing Scale
AS NOTED
Date
06/30/21
CD

Drawing Number
RF-5

EXHIBIT C
TOWER AND FOUNDATION DESIGN

Tillman Infrastructure

August 30,2021

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

RE: Site Name – Falling Branch
Proposed Cell Tower
37° 35' 48.02" North Latitude, -86° 29' 24.53" West Longitude

Dear Commissioners:

The Project / Construction Manager for the proposed new communications facility will be John Lounsbury. His contact information is (770) 865-2254 or jlounsbury@Tillmaninfrastructure.com

John has been in the industry completing civil construction and constructing towers since 1996. He has worked at Tillman Infrastructures since 2018 completing project and construction management on new site build projects.

Thank you,

Jim Horner
Director of Construction East Region- Tillman Infrastructure
407-832-2254

Sabre Industries
INNOVATION DELIVERED

September 21, 2021

Eumie Rosiclair
Project Controls Coordinator
Tillman Infrastructure
299 Market St
Saddle Brook, NJ 07663

RE: 145' Self-Supporting Tower for TI-OPP-17878, KY

Dear Ms. Rosiclair,

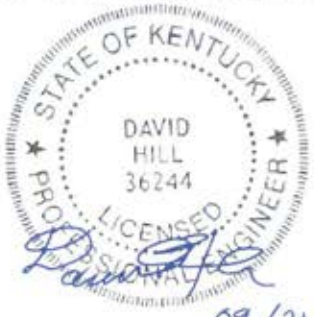
Upon receipt of order, we propose to design and supply the above referenced tower for an Ultimate Wind Speed of 106 mph without ice and 30 mph with 1.5" ice, Risk Category II, Exposure Category C, and Topographic Category 1, in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-G, "Structural Standards for Steel Antenna Towers and Antenna-Supporting Structures".

When designed according to this standard, the wind pressures and steel strength capacities include several safety factors. Therefore, it is highly unlikely that the tower will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the most likely location of the failure would be within one or more of the tower members in the upper portion. This would result in a buckling failure mode, where the loaded member would bend beyond its elastic limit (beyond the point where the member would return to its original shape upon removal of the wind load).

Therefore, it is likely that the overall effect of such an extreme wind event would be localized buckling of a tower section. Assuming that the wind pressure profile is similar to that used to design the tower, the tower is most likely to buckle at the location of the highest combined stress ratio in the upper portion of the tower. This would result in the portion of the tower above the failure location "folding over" onto the portion of the tower below the failure location and would effectively result in a fall radius within the 100' × 100' lease area. *Please note that this letter only applies to the above-referenced tower designed and manufactured by Sabre Industries.*

Sincerely,



09/21/21

David Hill, P.E.
Design Engineer II

Sabre Industries™
INNOVATION DELIVERED

Structural Design Report

145' S3TL Series HD1 Self-Supporting Tower
Site: TI-OPP-17878, KY

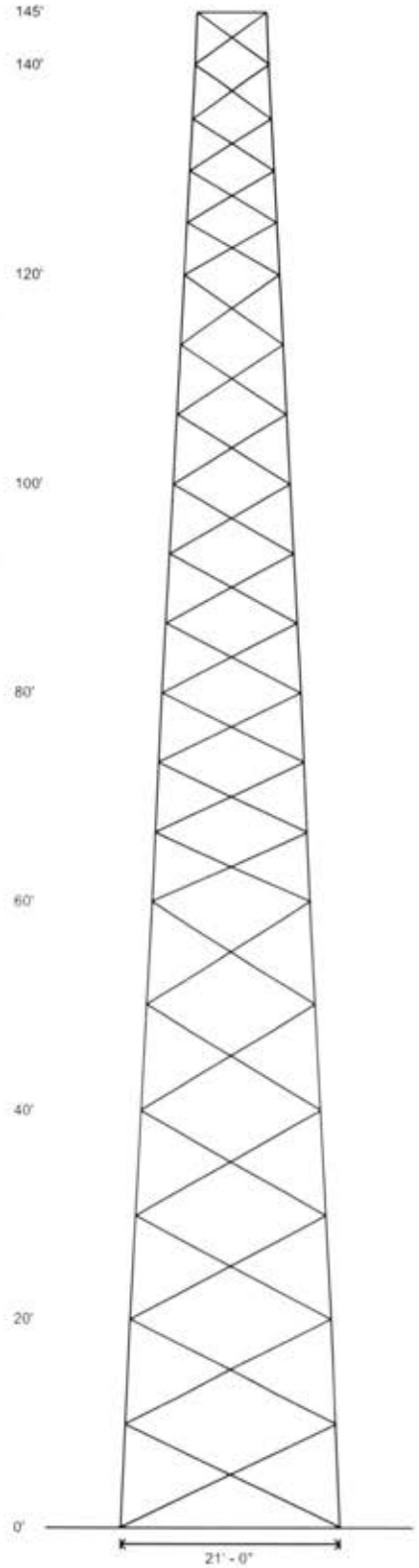
Prepared for: TILLMAN INFRASTRUCTURE, LLC
by: Sabre Industries ™

Job Number: 22-1472-TJH-R2

September 23, 2021

Digitally Signed By Robert Beacom
DN: c=US, st=Texas, l=Alvarado, o=SABRE INDUSTRIES, INC., cn=Robert Beacom, email=rebeacom@sabreindustries.com Date: 2021.09.24 10:54:22

Legs	8.625 OD X .322	5.563 OD X .500	5.563 OD X .375	5.563 OD X .258	4.500 OD X .237	4.000 OD X .226	3.500 OD X .216	A
Diagonals	L 3 1/2 X 3 1/2 X 1/4		L 3 X 3 X 1/4	L 3 X 3 X 3/16	L 2 1/2 X 2 1/2 X 3/16		L 2 X 2 X 1/8	B
Horizontals	NONE							
Brace Bolts	(1) 3/4"				(1) 5/8"			
Top Face Width	19'	17'	15'	13'	11'	9'	7'	6.5'
Panel Count/Height	6 @ 10'				9 @ 6.6667'		5 @ 5'	
Section Weight	3730	3519	2638	2203	1718	1530	1106	369



Designed Appurtenance Loading

Elev	Description	Tx-Line
143	(1) 278 sq. ft. EPA 6000# (no Ice)	(9) 1 5/8"
131	(1) 208 sq. ft. EPA 4000# (no ice)	(9) 1 5/8"
119	(1) 208 sq. ft. EPA 4000# (no ice)	(9) 1 5/8"
99	(2) Leg Dish Mount	
99	(2) 4' Solid Dish w/ Radome	(2) 1 5/8"

Design Criteria - ANSI/TIA-222-G

ASCE 7-16 Ultimate Wind Speed (No Ice)	106 mph
Wind Speed (Ice)	30 mph
Design Ice Thickness	1.50 in
Structure Class	II
Risk Category	II
Exposure Category	C
Topographic Category	1

Base Reactions

Total Foundation		Individual Footing	
Shear (kips)	39.83	Shear (kips)	24.12
Axial (kips)	102.15	Compression (kips)	233
Moment (ft-kips)	3987	Uplift (kips)	203
Torsion (ft-kips)	-17.56		

Material List

Display	Value
A	2.875 OD X .203
B	L 2 1/2 X 2 1/2 X 3/16

Notes

1) Weights shown are estimates. Final weights may vary.
2) All unequal angles are oriented with the short leg vertical.
3) Foundation loads shown are maximums.
4) Azimuths are relative (not based on true north).
5) Transmission lines are to be attached to standard 12 hole waveguide ladders with stackable hangers.
6) The tower model is S3TL Series HD1.
7) All brace bolts are A325-X.
8) All braces are A572 Grade 50.
9) All legs are A500 (50 ksi Min. Yield).
10) This tower design and, if applicable, the foundation design(s) shown on the following page(s) also meet or exceed the requirements of the 2015 International Building Code.
11) Tower Rating: 97.91%
12) No grout is required under the base plates.

Sabre Industries
INNOVATION DELIVERED

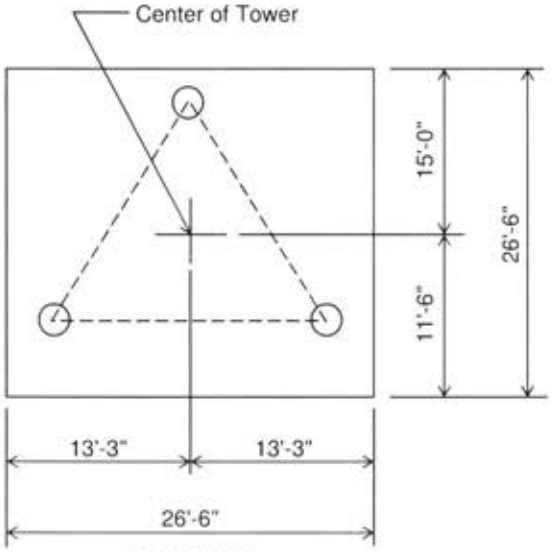
Sabre Industries
7101 Southbridge Drive
P.O. Box 658
Sioux City, IA 51102-0658
Phone (712) 258-6630
Fax (712) 279-0814

Job:	22-1472-TJH-R2
Customer:	TILLMAN INFRASTRUCTURE, LLC
Site Name:	TI-OPP-17878, KY
Description:	145' S3TL
Date:	9/23/2021 By JLG

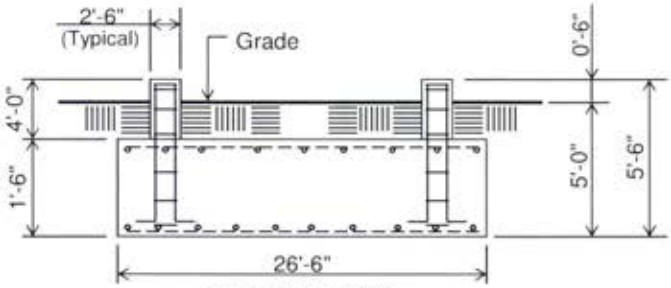
No.: 22-1472-TJH-R2
Date: 09/23/21
By: JLG

Customer: TILLMAN INFRASTRUCTURE, LLC
Site: TI-OPP-17878, KY

145 ft. Model S3TL Series HD1 Self Supporting Tower



PLAN VIEW



ELEVATION VIEW

(41.2 cu. yds.)
(1 REQD.; NOT TO SCALE)

CAUTION: Center of tower is not in center of slab.

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-11.
2) Rebar to conform to ASTM specification A615 Grade 60.
3) All rebar to have a minimum of 3" concrete cover.
4) All exposed concrete corners to be chamfered 3/4".
5) The foundation design is based on the geotechnical report by Delta Oaks Group, Project# GEO21-10085-08 Revision 1, Dated 8/31/2021.
6) See the geotechnical report for compaction requirements, if specified.
7) The foundation is based on the following factored loads:
   Factored download (kips) = 40.41
   Factored overturn (kip-ft) = 3,986.87
   Factored shear (kips) = 39.83
8) 3.5' of soil cover is required over the entire area of the foundation slab.
9) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule per Mat and per Pier	
Pier	(10) #8 vertical rebar w/ hooks at bottom w/ #4 rebar ties, two (2) within top 5" of pier then 12" C/C
Mat	(51) #6 horizontal rebar evenly spaced each way top and bottom. (204 total)
Anchor Bolts per Leg	
(6) 1.25" dia. x 63" F1554-105 on a 12.75" B.C. w/ 8" max. projection above concrete.	

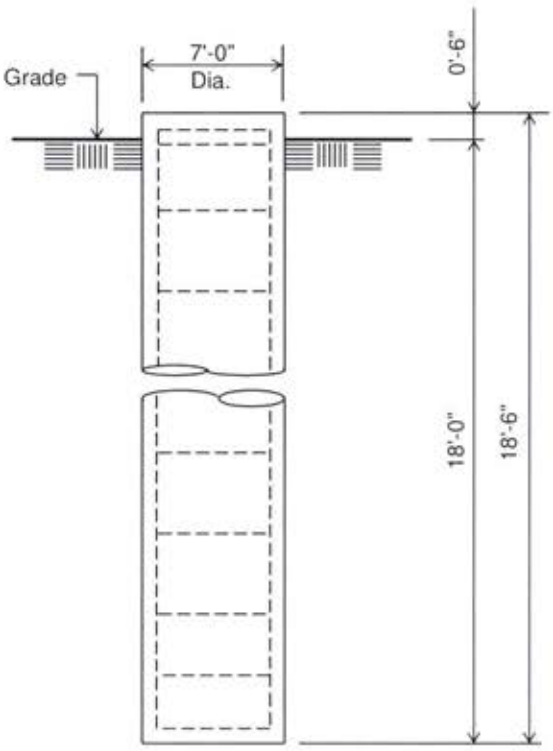
7101 Southbridge Dr - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.258.8250

Sabre Industries
INNOVATION DELIVERED

No.: 22-1472-TJH-R2
Date: 09/23/21
By: JLG

Customer: TILLMAN INFRASTRUCTURE, LLC
Site: TI-OPP-17878, KY

145 ft. Model S3TL Series HD1 Self Supporting Tower



ELEVATION VIEW
(26.4 cu. yds.)
(3 REQUIRED; NOT TO SCALE)

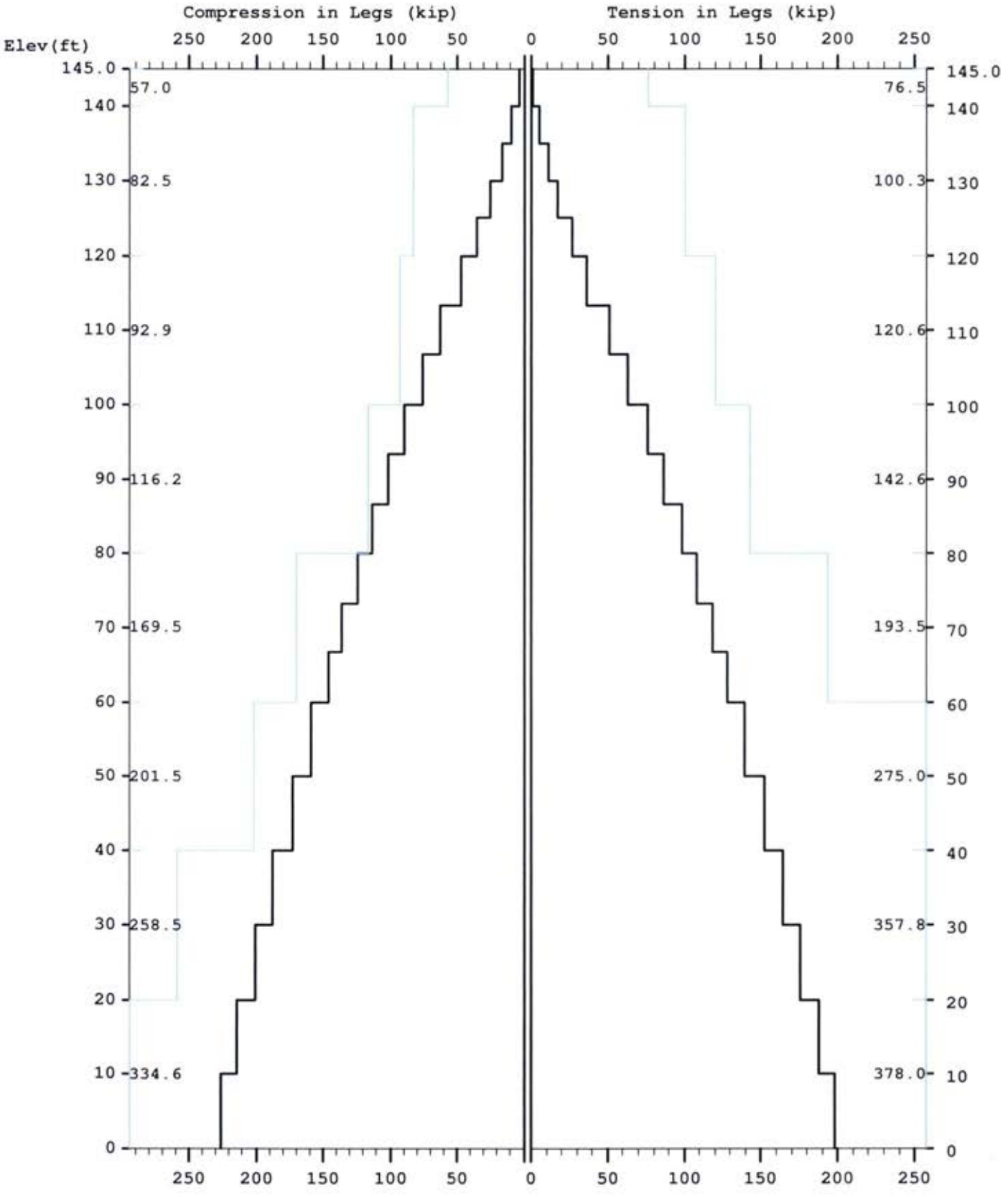
Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-11.
2) Rebar to conform to ASTM specification A615 Grade 60.
3) All rebar to have a minimum of 3" concrete cover.
4) All exposed concrete corners to be chamfered 3/4".
5) The foundation design is based on the geotechnical report by Delta Oaks Group, Project# GEO21-10085-08 Revision 1, Dated 8/31/2021.
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) = 203.00
   Factored download (kips) = 233.00
   Factored shear (kips) = 24.00
8) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

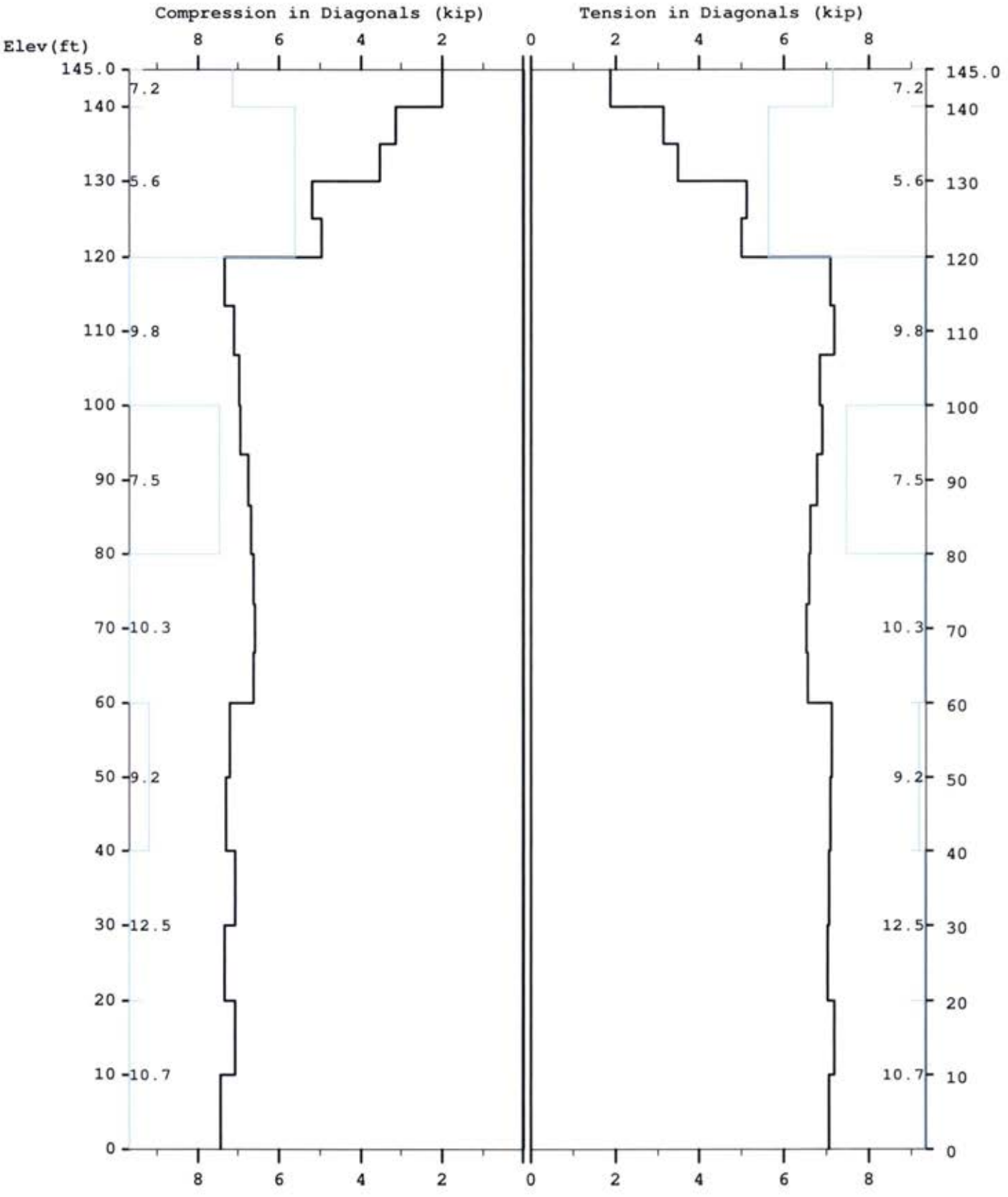
Rebar Schedule per Pier	
Pier	(22) #10 vertical rebar w/ #5 rebar ties, two (2) within top 5" of pier then 12" C/C
Anchor Bolts per Leg	
(6) 1.25" dia. x 63" F1554-105 on a 12.75" B.C. w/ 8" max. projection above concrete.	

7101 Southbridge Dr - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.258.8250

Maximum

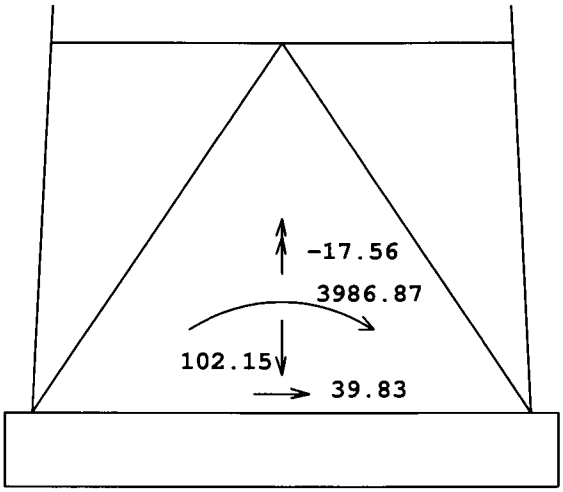

Compression in Legs (kip)
Tension in Legs (kip)
Elev(ft)
250 200 150 100 50 0 50 100 150 200 250
145.0
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
57.0
82.5
92.9
116.2
169.5
201.5
258.5
334.6
76.5
100.3
120.6
142.6
193.5
275.0
357.8
378.0

Maximum

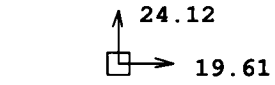

Compression in Diagonals (kip)
Tension in Diagonals (kip)
Elev(ft)
8 6 4 2 0 2 4 6 8
145.0
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
7.2
5.6
9.8
7.5
10.3
9.2
12.5
10.7

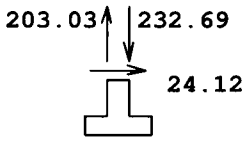
Maximum

TOTAL FOUNDATION LOADS (kip, ft-kip)



INDIVIDUAL FOOTING LOADS (kip)





MAST GEOMETRY (ft)

PANEL TYPE	NO.OF LEGS	ELEV.AT BOTTOM	ELEV.AT TOP	F.W..AT BOTTOM	F.W..AT TOP	TYPICAL PANEL HEIGHT
X	3	140.00	145.00	7.00	6.50	5.00
X	3	120.00	140.00	9.00	7.00	5.00
X	3	100.00	120.00	11.00	9.00	6.67
X	3	80.00	100.00	13.00	11.00	6.67
X	3	60.00	80.00	15.00	13.00	6.67
X	3	40.00	60.00	17.00	15.00	10.00
X	3	20.00	40.00	19.00	17.00	10.00
X	3	0.00	20.00	21.00	19.00	10.00

MEMBER PROPERTIES

MEMBER TYPE	BOTTOM ELEV ft	TOP ELEV ft	X-SECTN AREA in.sq	RADIUS OF GYRAT in	ELASTIC MODULUS ksi	THERMAL EXPANSN /deg
LE	140.00	145.00	1.704	0.947	29000.	0.0000117
LE	120.00	140.00	2.228	0.947	29000.	0.0000117
LE	100.00	120.00	2.680	0.947	29000.	0.0000117
LE	80.00	100.00	3.174	0.947	29000.	0.0000117
LE	60.00	80.00	4.299	0.947	29000.	0.0000117
LE	40.00	60.00	6.111	0.947	29000.	0.0000117
LE	20.00	40.00	7.952	0.947	29000.	0.0000117
LE	0.00	20.00	8.399	0.947	29000.	0.0000117
DI	120.00	145.00	0.484	0.626	29000.	0.0000117
DI	80.00	120.00	0.902	0.626	29000.	0.0000117
DI	60.00	80.00	1.090	0.626	29000.	0.0000117
DI	40.00	60.00	1.438	0.626	29000.	0.0000117
DI	0.00	40.00	1.688	0.626	29000.	0.0000117
HO	140.00	145.00	0.902	0.778	29000.	0.0000117

FACTORED MEMBER RESISTANCES

BOTTOM ELEV ft	TOP ELEV ft	LEGS COMP kip	LEGS TENS kip	DIAGONALS COMP kip	DIAGONALS TENS kip	HORIZONTALS COMP kip	HORIZONTALS TENS kip	INT BRACING COMP kip	INT BRACING TENS kip
140.0	145.0	57.04	76.50	7.16	7.16	13.03	13.03	0.00	0.00
120.0	140.0	82.52	100.35	5.63	5.63	0.00	0.00	0.00	0.00
100.0	120.0	92.93	120.60	9.84	9.84	0.00	0.00	0.00	0.00
80.0	100.0	116.18	142.65	7.46	7.46	0.00	0.00	0.00	0.00
60.0	80.0	169.50	193.50	10.34	10.34	0.00	0.00	0.00	0.00
40.0	60.0	201.46	274.95	9.19	9.19	0.00	0.00	0.00	0.00
20.0	40.0	258.49	357.75	12.53	12.53	0.00	0.00	0.00	0.00
0.0	20.0	334.65	378.00	10.73	10.73	0.00	0.00	0.00	0.00

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

LOADING CONDITION A

106 mph Ultimate wind with no ice. Wind Azimuth: 0♦

MAST LOADING

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	143.0	0.00	0.0	0.0	7.55	7.20	0.00	0.00
C	131.0	0.00	0.0	0.0	5.54	4.80	0.00	0.00
C	119.0	0.00	0.0	0.0	5.43	4.80	0.00	0.00
D	145.0	0.00	47.2	0.0	0.09	0.07	0.03	0.05
D	140.0	0.00	47.2	0.0	0.09	0.07	0.03	0.05
D	140.0	0.00	44.2	0.0	0.10	0.07	0.05	0.09
D	130.0	0.00	43.9	0.0	0.10	0.07	0.06	0.09
D	130.0	0.00	40.8	0.0	0.11	0.08	0.09	0.12
D	120.0	0.00	42.4	0.0	0.12	0.08	0.09	0.12
D	120.0	0.00	49.2	0.0	0.13	0.11	0.11	0.13
D	100.0	0.00	54.5	0.0	0.14	0.12	0.10	0.13
D	100.0	0.00	50.6	0.0	0.14	0.13	0.12	0.14
D	80.0	0.00	54.0	0.0	0.15	0.13	0.11	0.13
D	80.0	0.00	46.9	0.0	0.15	0.16	0.14	0.14
D	60.0	0.00	49.5	0.0	0.16	0.17	0.13	0.14
D	60.0	0.00	43.9	0.0	0.14	0.19	0.15	0.13
D	40.0	0.00	45.4	0.0	0.14	0.19	0.14	0.14
D	40.0	0.00	41.2	0.0	0.13	0.23	0.17	0.12
D	20.0	0.00	42.5	0.0	0.13	0.23	0.16	0.13
D	20.0	0.00	39.0	0.0	0.13	0.24	0.18	0.12
D	0.0	0.00	40.1	0.0	0.13	0.24	0.18	0.12

ANTENNA LOADING
==========

.....ANTENNA..... TYPE	ATTACHMENT ELEV ft	AZI	RAD ft	AZI	.....ANTENNA FORCES..... AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip
STD+R	99.0	0.0	7.9	0.0	0.27	0.00	0.16	0.00
STD+R	99.0	0.0	7.9	120.0	0.27	0.00	0.16	0.00

LOADING CONDITION M

106 mph Ultimate wind with no ice. Wind Azimuth: 0♦

MAST LOADING
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	143.0	0.00	0.0	0.0	7.55	5.40	0.00	0.00
C	131.0	0.00	0.0	0.0	5.54	3.60	0.00	0.00
C	119.0	0.00	0.0	0.0	5.43	3.60	0.00	0.00
D	145.0	0.00	47.2	0.0	0.09	0.05	0.02	0.05
D	140.0	0.00	47.2	0.0	0.09	0.05	0.02	0.05
D	140.0	0.00	44.2	0.0	0.10	0.05	0.04	0.09
D	130.0	0.00	43.9	0.0	0.10	0.05	0.04	0.09
D	130.0	0.00	40.8	0.0	0.11	0.06	0.07	0.12
D	120.0	0.00	42.4	0.0	0.12	0.06	0.07	0.12
D	120.0	0.00	49.2	0.0	0.13	0.09	0.08	0.13
D	100.0	0.00	54.5	0.0	0.14	0.09	0.08	0.13
D	100.0	0.00	50.6	0.0	0.14	0.10	0.09	0.14
D	80.0	0.00	54.0	0.0	0.15	0.10	0.08	0.13
D	80.0	0.00	46.9	0.0	0.15	0.12	0.10	0.14
D	60.0	0.00	49.5	0.0	0.16	0.12	0.09	0.14
D	60.0	0.00	43.9	0.0	0.14	0.14	0.11	0.13
D	40.0	0.00	45.4	0.0	0.14	0.14	0.11	0.14
D	40.0	0.00	41.2	0.0	0.13	0.17	0.13	0.12
D	20.0	0.00	42.5	0.0	0.13	0.17	0.12	0.13
D	20.0	0.00	39.0	0.0	0.13	0.18	0.14	0.12
D	0.0	0.00	40.1	0.0	0.13	0.18	0.13	0.12

ANTENNA LOADING
==========

.....ANTENNA..... TYPE	ATTACHMENT ELEV ft	AZI	RAD ft	AZI	.....ANTENNA FORCES..... AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip

STD+R	99.0	0.0	7.9	0.0	0.27	0.00	0.12	0.00
STD+R	99.0	0.0	7.9	120.0	0.27	0.00	0.12	0.00

LOADING CONDITION Y

30 mph wind with 1.5 ice. Wind Azimuth: 0♦

MAST LOADING

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	143.0	0.00	0.0	0.0	1.07	17.62	0.00	0.00
C	131.0	0.00	0.0	0.0	0.78	11.69	0.00	0.00
C	119.0	0.00	0.0	0.0	0.76	11.62	0.00	0.00
D	145.0	0.00	47.2	0.0	0.01	0.26	0.12	0.01
D	140.0	0.00	47.2	0.0	0.01	0.26	0.12	0.01
D	140.0	0.00	44.2	0.0	0.01	0.25	0.22	0.01
D	135.0	0.00	44.2	0.0	0.01	0.25	0.22	0.01
D	135.0	0.00	44.1	0.0	0.01	0.26	0.24	0.01
D	130.0	0.00	44.1	0.0	0.01	0.26	0.24	0.01
D	130.0	0.00	40.8	0.0	0.01	0.29	0.35	0.01
D	125.0	0.00	40.8	0.0	0.01	0.29	0.35	0.01
D	125.0	0.00	42.4	0.0	0.01	0.30	0.34	0.01
D	120.0	0.00	42.4	0.0	0.01	0.30	0.34	0.01
D	120.0	0.00	54.8	0.0	0.02	0.36	0.35	0.01
D	113.3	0.00	54.8	0.0	0.02	0.36	0.35	0.01
D	113.3	0.00	59.5	0.0	0.02	0.37	0.34	0.01
D	106.7	0.00	59.5	0.0	0.02	0.37	0.34	0.01
D	106.7	0.00	61.8	0.0	0.02	0.38	0.32	0.01
D	100.0	0.00	61.8	0.0	0.02	0.38	0.32	0.01
D	100.0	0.00	58.4	0.0	0.02	0.40	0.38	0.01
D	93.3	0.00	58.4	0.0	0.02	0.40	0.38	0.01
D	93.3	0.00	60.4	0.0	0.02	0.41	0.37	0.01
D	86.7	0.00	60.4	0.0	0.02	0.41	0.37	0.01
D	86.7	0.00	62.3	0.0	0.02	0.41	0.35	0.01
D	80.0	0.00	62.3	0.0	0.02	0.41	0.35	0.01
D	80.0	0.00	54.3	0.0	0.02	0.46	0.42	0.01
D	73.3	0.00	54.3	0.0	0.02	0.46	0.42	0.01
D	73.3	0.00	55.8	0.0	0.02	0.47	0.41	0.01
D	66.7	0.00	55.8	0.0	0.02	0.47	0.41	0.01
D	66.7	0.00	57.3	0.0	0.02	0.48	0.39	0.01
D	60.0	0.00	57.3	0.0	0.02	0.48	0.39	0.01
D	60.0	0.00	50.8	0.0	0.02	0.46	0.46	0.01
D	50.0	0.00	50.8	0.0	0.02	0.46	0.46	0.01
D	50.0	0.00	52.7	0.0	0.02	0.46	0.44	0.01
D	40.0	0.00	52.7	0.0	0.02	0.46	0.44	0.01
D	40.0	0.00	47.5	0.0	0.01	0.51	0.50	0.01
D	30.0	0.00	47.5	0.0	0.01	0.51	0.50	0.01
D	30.0	0.00	49.1	0.0	0.01	0.51	0.48	0.01
D	20.0	0.00	49.1	0.0	0.01	0.51	0.48	0.01
D	20.0	0.00	42.0	0.0	0.01	0.45	0.27	0.01
D	10.0	0.00	42.0	0.0	0.01	0.45	0.27	0.01
D	10.0	0.00	45.6	0.0	0.01	0.49	0.43	0.01
D	0.0	0.00	45.6	0.0	0.01	0.49	0.43	0.01

ANTENNA LOADING

.....ANTENNA..... TYPE	ELEV	AZI	ATTACHMENT RAD	AZI	.....ANTENNA FORCES..... AXIAL	SHEAR	GRAVITY	TORSION
	ft		ft		kip	kip	kip	ft-kip
STD+R	99.0	0.0	7.9	0.0	0.03	0.00	0.39	0.00
STD+R	99.0	0.0	7.9	120.0	0.03	0.00	0.39	0.00

MAXIMUM ANTENNA AND REFLECTOR ROTATIONS:

ELEV	AZI	TYPE	.....BEAM DEFLECTIONS (deg)..... ROLL	YAW	PITCH	TOTAL
ft	deg	*				
99.0	0.0	STD+R	-0.567 G	0.035 F	-0.523 J	0.523 J
99.0	0.0	STD+R	-0.567 G	0.035 F	-0.523 J	0.523 J

MAXIMUM TENSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
145.0			0.50 G	0.00 A
	0.61 M	1.87 M		
140.0			0.05 G	0.00 A
	4.91 M	3.15 H		
135.0			0.11 E	0.00 A
	10.99 M	3.48 N		
130.0			0.09 K	0.00 A
	17.47 M	5.11 T		
125.0			0.18 A	0.00 A
	26.81 M	5.00 B		
120.0			0.06 K	0.00 A
	35.95 M	7.08 M		
113.3			0.18 A	0.00 A
	50.90 M	7.19 B		
106.7			0.05 g	0.00 A
	62.91 M	6.86 T		
100.0			0.15 A	0.00 A
	75.84 M	6.90 H		
93.3			0.03 g	0.00 A
	86.76 M	6.77 B		
86.7			0.13 A	0.00 A
	98.30 M	6.64 H		
80.0			0.04 A	0.00 A
	108.22 M	6.60 B		
73.3			0.13 A	0.00 A
	118.51 M	6.54 H		
66.7			0.04 A	0.00 A
	127.71 M	6.57 B		
60.0			0.09 A	0.00 A
	139.32 M	7.13 H		
50.0			0.09 A	0.00 A
	151.95 M	7.08 B		
40.0			0.08 A	0.00 A
	164.53 M	7.07 G		
30.0			0.06 A	0.00 A
	175.96 M	7.04 B		
20.0			0.01 E	0.00 A
	187.40 M	7.19 G		
10.0			0.06 A	0.00 A
	197.92 M	7.05 B		
0.0			0.00 A	0.00 A

MAXIMUM COMPRESSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
145.0			-0.48 M	0.00 A
	-3.80 e	-2.02 G		
140.0			-0.03 M	0.00 A
	-9.49 G	-3.13 B		
135.0			-0.09 O	0.00 A
	-16.33 G	-3.55 H		
130.0			-0.06 Q	0.00 A
	-25.37 G	-5.18 B		
125.0			-0.15 S	0.00 A
	-35.17 G	-4.98 H		
120.0			-0.03 Q	0.00 A
	-47.00 G	-7.33 G		
113.3			-0.14 S	0.00 A
	-63.30 G	-7.11 T		
106.7			-0.01 S	0.00 A
	-75.81 G	-6.98 B		
100.0			-0.13 S	0.00 A
	-89.83 G	-6.95 B		
93.3			-0.01 S	0.00 A
	-101.46 G	-6.77 H		

86.7	----------		-0.11	S	0.00	A
	-113.75	G -6.68 B				
80.0	----------		-0.03	S	0.00	A
	-124.51	G -6.63 G				
73.3	----------		-0.11	S	0.00	A
	-135.71	G -6.60 B				
66.7	----------		-0.03	S	0.00	A
	-145.87	G -6.63 G				
60.0	----------		-0.08	S	0.00	A
	-158.72	G -7.20 B				
50.0	----------		-0.07	S	0.00	A
	-172.98	G -7.30 G				
40.0	----------		-0.07	S	0.00	A
	-187.32	G -7.09 B				
30.0	----------		-0.05	S	0.00	A
	-200.66	G -7.33 G				
20.0	----------		-0.01	W	0.00	A
	-214.06	G -7.08 G				
10.0	----------		-0.05	S	0.00	A
	-226.58	G -7.45 G				
0.0	----------		0.00	A	0.00	A

FORCE/RESISTANCE RATIO IN LEGS
==========

MAST ELEV ft	-- LEG COMPRESSION - MAX COMP	COMP RESIST	FORCE/ RESIST RATIO	---- LEG TENSION --- MAX TENS	TENS RESIST	FORCE/ RESIST RATIO
145.00						
	3.80	57.04	0.07	0.61	76.50	0.01
140.00						
	9.49	82.52	0.12	4.91	100.35	0.05
135.00						
	16.33	82.52	0.20	10.99	100.35	0.11
130.00						
	25.37	82.52	0.31	17.47	100.35	0.17
125.00						
	35.17	82.52	0.43	26.81	100.35	0.27
120.00						
	47.00	92.93	0.51	35.95	120.60	0.30
113.33						
	63.30	92.93	0.68	50.90	120.60	0.42
106.67						
	75.81	92.93	0.82	62.91	120.60	0.52
100.00						
	89.83	116.18	0.77	75.84	142.65	0.53
93.33						
	101.46	116.18	0.87	86.76	142.65	0.61
86.67						
	113.75	116.18	0.98	98.30	142.65	0.69
80.00						
	124.51	169.50	0.73	108.22	193.50	0.56
73.33						
	135.71	169.50	0.80	118.51	193.50	0.61
66.67						
	145.87	169.50	0.86	127.71	193.50	0.66
60.00						
	158.72	201.46	0.79	139.32	274.95	0.51
50.00						
	172.98	201.46	0.86	151.95	274.95	0.55
40.00						
	187.32	258.49	0.72	164.53	357.75	0.46
30.00						
	200.66	258.49	0.78	175.96	357.75	0.49
20.00						
	214.06	334.65	0.64	187.40	378.00	0.50
10.00						
	226.58	334.65	0.68	197.92	378.00	0.52
0.00						

FORCE/RESISTANCE RATIO IN DIAGONALS
==========

MAST ELEV ft	- DIAG COMPRESSION - MAX COMP	COMP RESIST	FORCE/ RESIST RATIO	--- DIAG TENSION -- MAX TENS	TENS RESIST	FORCE/ RESIST RATIO

```
145.00 ---------------------------------------------
          2.02    7.16    0.28    1.87    7.16    0.26
140.00 ---------------------------------------------
          3.13    5.63    0.56    3.15    5.63    0.56
135.00 ---------------------------------------------
          3.55    5.63    0.63    3.48    5.63    0.62
130.00 ---------------------------------------------
          5.18    5.63    0.92    5.11    5.63    0.91
125.00 ---------------------------------------------
          4.98    5.63    0.88    5.00    5.63    0.89
120.00 ---------------------------------------------
          7.33    9.84    0.75    7.08    9.84    0.72
113.33 ---------------------------------------------
          7.11    9.84    0.72    7.19    9.84    0.73
106.67 ---------------------------------------------
          6.98    9.84    0.71    6.86    9.84    0.70
100.00 ---------------------------------------------
          6.95    7.46    0.93    6.90    7.46    0.93
 93.33 ---------------------------------------------
          6.77    7.46    0.91    6.77    7.46    0.91
 86.67 ---------------------------------------------
          6.68    7.46    0.90    6.64    7.46    0.89
 80.00 ---------------------------------------------
          6.63   10.34    0.64    6.60   10.34    0.64
 73.33 ---------------------------------------------
          6.60   10.34    0.64    6.54   10.34    0.63
 66.67 ---------------------------------------------
          6.63   10.34    0.64    6.57   10.34    0.64
 60.00 ---------------------------------------------
          7.20    9.19    0.78    7.13    9.19    0.78
 50.00 ---------------------------------------------
          7.30    9.19    0.79    7.08    9.19    0.77
 40.00 ---------------------------------------------
          7.09   12.53    0.57    7.07   12.53    0.56
 30.00 ---------------------------------------------
          7.33   12.53    0.59    7.04   12.53    0.56
 20.00 ---------------------------------------------
          7.08   10.73    0.66    7.19   10.73    0.67
 10.00 ---------------------------------------------
          7.45   10.73    0.69    7.05   10.73    0.66
  0.00 ---------------------------------------------

MAXIMUM INDIVIDUAL FOUNDATION LOADS: (kip)
==========================================

    --------------LOAD---COMPONENTS-------------         TOTAL
    NORTH          EAST          DOWN        UPLIFT        SHEAR

    24.12 G      19.61 K     232.69 G    -203.03 M      24.12 G


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

  ------HORIZONTAL-----     DOWN        ---------OVERTURNING--------- TORSION
  NORTH     EAST    TOTAL                NORTH         EAST        TOTAL
                 @   0.0                                        @   0.0

   39.8     34.4     39.8    102.1       3986.9       3570.9       3986.9   -17.6
     G        J        G       g            G            J            G       F


================================================================================


================================================================================
Latticed Tower Analysis (Unguyed)           (c)2015 Guymast Inc. 416-736-7453
Processed under license at:

Sabre Towers and Poles                              on: 23 sep 2021  at:  9:08:09
================================================================================



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

* Only 1 condition(s) shown in full
* Some wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A

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

MAST LOADING

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	143.0	0.00	0.0	0.0	2.53	6.00	0.00	0.00
C	131.0	0.00	0.0	0.0	1.86	4.00	0.00	0.00
C	119.0	0.00	0.0	0.0	1.82	4.00	0.00	0.00
D	145.0	0.00	47.2	0.0	0.03	0.06	0.02	0.02
D	140.0	0.00	47.2	0.0	0.03	0.06	0.02	0.02
D	140.0	0.00	44.2	0.0	0.03	0.06	0.04	0.03
D	130.0	0.00	43.9	0.0	0.03	0.06	0.05	0.03
D	130.0	0.00	40.8	0.0	0.04	0.07	0.08	0.04
D	120.0	0.00	42.4	0.0	0.04	0.07	0.07	0.04
D	120.0	0.00	49.2	0.0	0.04	0.10	0.09	0.04
D	100.0	0.00	54.5	0.0	0.05	0.10	0.09	0.04
D	100.0	0.00	50.6	0.0	0.05	0.11	0.10	0.05
D	80.0	0.00	54.0	0.0	0.05	0.11	0.09	0.05
D	80.0	0.00	46.9	0.0	0.05	0.13	0.11	0.05
D	60.0	0.00	49.5	0.0	0.05	0.14	0.10	0.05
D	60.0	0.00	43.9	0.0	0.05	0.16	0.13	0.04
D	40.0	0.00	45.4	0.0	0.05	0.16	0.12	0.05
D	40.0	0.00	41.2	0.0	0.05	0.19	0.14	0.04
D	20.0	0.00	42.5	0.0	0.05	0.19	0.13	0.04
D	20.0	0.00	39.0	0.0	0.04	0.20	0.15	0.04
D	0.0	0.00	40.1	0.0	0.04	0.20	0.15	0.04

ANTENNA LOADING

.....ANTENNA..... TYPE	ATTACHMENT ELEV ft	AZI	RAD ft	AZI	.....ANTENNA FORCES..... AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip
STD+R	99.0	0.0	7.9	0.0	0.09	0.00	0.13	0.00
STD+R	99.0	0.0	7.9	120.0	0.09	0.00	0.13	0.00

MAXIMUM MAST DISPLACEMENTS:

ELEV ft	------DEFLECTIONS (ft)----- NORTH	EAST	DOWN	--TILTS (DEG)--- NORTH	EAST	TWIST DEG
145.0	0.351 G	0.323 J	0.008 G	0.258 G	0.241 J	-0.018 F
140.0	0.328 G	0.302 J	0.008 G	0.258 G	0.241 J	-0.018 F
135.0	0.305 G	0.280 J	0.007 G	0.256 G	0.239 J	-0.017 F
130.0	0.282 G	0.259 J	0.007 G	0.253 G	0.235 J	-0.016 F
125.0	0.259 G	0.237 J	0.007 G	0.247 G	0.229 J	-0.015 F
120.0	0.237 G	0.217 J	0.007 G	0.239 G	0.222 J	-0.014 F
113.3	0.208 G	0.190 J	0.006 G	0.227 G	0.210 J	-0.013 F
106.7	0.182 G	0.166 J	0.006 G	0.212 G	0.196 J	-0.012 F
100.0	0.157 G	0.143 J	0.005 G	0.194 G	0.179 J	-0.011 F
93.3	0.135 G	0.122 J	0.005 G	0.177 G	0.163 J	-0.010 F
86.7	0.114 G	0.103 J	0.004 G	0.159 G	0.146 J	-0.009 F
80.0	0.095 G	0.086 J	0.004 G	0.139 G	0.127 J	-0.008 F
73.3	0.079 G	0.071 J	0.003 G	0.124 G	0.113 J	-0.007 F
66.7	0.065 G	0.058 J	0.003 G	0.109 G	0.099 J	-0.006 F
60.0	0.052 G	0.047 J	0.003 G	0.092 G	0.084 J	-0.005 F
50.0	0.036 G	0.033 J	0.002 G	0.075 G	0.068 J	-0.004 F
40.0	0.024 G	0.021 J	0.002 B	0.057 G	0.051 J	-0.004 F
30.0	0.015 G	0.013 J	0.001 H	0.042 G	0.038 J	-0.003 F
20.0	0.007 G	0.007 J	0.001 B	0.028 G	0.025 J	-0.002 F
10.0	0.002 G	-0.002 D	0.000 B	0.014 G	0.013 J	-0.001 F
0.0	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A	0.000 A

MAXIMUM ANTENNA AND REFLECTOR ROTATIONS:

ELEV ft	AZI deg	TYPE *	.....BEAM DEFLECTIONS (deg)..... ROLL	YAW	PITCH	TOTAL
99.0	0.0	STD+R	-0.191 G	0.011 F	-0.177 J	0.177 J
99.0	0.0	STD+R	-0.191 G	0.011 F	-0.177 J	0.177 J

MAXIMUM TENSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
145.0	----------		0.18 G	0.00 A
	0.00 A	0.59 A		
140.0	----------		0.02 G	0.00 A
	0.16 A	1.07 B		
135.0	----------		0.04 I	0.00 A
	2.00 A	1.15 B		
130.0	----------		0.04 K	0.00 A
	3.37 A	1.71 B		
125.0	----------		0.07 A	0.00 A
	6.42 A	1.69 B		
120.0	----------		0.03 K	0.00 A
	8.67 A	2.34 A		
113.3	----------		0.07 A	0.00 A
	13.34 A	2.44 B		
106.7	----------		0.02 A	0.00 A
	17.30 A	2.28 H		
100.0	----------		0.06 A	0.00 A
	21.38 A	2.33 H		
93.3	----------		0.01 H	0.00 A
	24.90 A	2.27 B		
86.7	----------		0.05 A	0.00 A
	28.61 A	2.23 H		
80.0	----------		0.02 A	0.00 A
	31.77 A	2.22 B		
73.3	----------		0.05 A	0.00 A
	35.04 A	2.20 H		
66.7	----------		0.02 A	0.00 A
	37.93 A	2.21 B		
60.0	----------		0.04 A	0.00 A
	41.58 A	2.40 H		
50.0	----------		0.03 A	0.00 A
	45.49 A	2.39 B		
40.0	----------		0.03 A	0.00 A
	49.35 A	2.38 G		
30.0	----------		0.02 A	0.00 A
	52.78 A	2.37 B		
20.0	----------		0.00 E	0.00 A
	56.20 A	2.43 G		
10.0	----------		0.02 A	0.00 A
	59.33 A	2.39 B		
0.0	----------		0.00 A	0.00 A

MAXIMUM COMPRESSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
145.0	----------		-0.15 A	0.00 A
	-1.74 G	-0.72 G		
140.0	----------		0.00 A	0.00 A
	-4.49 G	-1.05 B		
135.0	----------		-0.03 C	0.00 A
	-6.98 G	-1.22 B		
130.0	----------		-0.01 E	0.00 A
	-10.73 G	-1.77 H		
125.0	----------		-0.04 G	0.00 A
	-14.13 G	-1.67 H		
120.0	----------		0.00 E	0.00 A
	-18.84 G	-2.52 G		

113.3	----------		-0.04 G	0.00 A
	-24.65 G	-2.38 H		
106.7	----------		0.00 A	0.00 A
	-28.94 G	-2.38 B		
100.0	----------		-0.03 G	0.00 A
	-33.90 G	-2.34 B		
93.3	----------		0.00 A	0.00 A
	-37.96 G	-2.29 H		
86.7	----------		-0.03 G	0.00 A
	-42.25 G	-2.25 B		
80.0	----------		0.00 G	0.00 A
	-46.04 G	-2.24 G		
73.3	----------		-0.03 G	0.00 A
	-49.99 G	-2.23 B		
66.7	----------		-0.01 G	0.00 A
	-53.60 G	-2.24 G		
60.0	----------		-0.02 G	0.00 A
	-58.18 G	-2.44 B		
50.0	----------		-0.02 G	0.00 A
	-63.32 G	-2.47 G		
40.0	----------		-0.02 G	0.00 A
	-68.51 G	-2.41 B		
30.0	----------		-0.01 G	0.00 A
	-73.41 G	-2.49 G		
20.0	----------		0.00 C	0.00 A
	-78.34 G	-2.41 B		
10.0	----------		-0.01 G	0.00 A
	-82.99 G	-2.54 G		
0.0	----------		0.00 A	0.00 A

MAXIMUM INDIVIDUAL FOUNDATION LOADS: (kip)

-----LOAD---COMPONENTS-----				TOTAL
NORTH	EAST	DOWN	UPLIFT	SHEAR
8.53 G	6.96 K	85.27 G	-60.83 A	8.53 G

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

------HORIZONTAL-----			DOWN	---------OVERTURNING---------			TORSION
NORTH	EAST	TOTAL @ 0.0		NORTH	EAST	TOTAL @ 0.0	
13.4 G	-11.6 D	13.4 G	33.7 L	1346.6 G	1207.5 J	1346.6 G	-5.9 F

Leg Connection Details												
Bottom Elevation (ft)	Top Elevation (ft)	Pipe Dimensions	Top Splice					Bottom Splice/Base				
			Bolt Qty.	Bolt Dia. (in)	Bolt Circle (in)	Plate Thickness (in)	Plate Dia. (in)	Bolt Qty.	Bolt Dia. (in)	Bolt Circle (in)	Plate Thickness (in)	Plate Dia. (in)
140	145	2.875 OD X .203						6	0.75	6.50	1.00	8.50
120	140	3.500 OD X .216	6	0.75	6.50	1.00	8.50	6	1.00	9.00	1.25	11.50
100	120	4.000 OD X .226	6	1.00	9.00	1.25	11.50	6	1.00	9.00	1.25	11.50
80	100	4.500 OD X .237	6	1.00	9.00	1.25	11.50	6	1.00	9.00	1.25	11.50
60	80	5.563 OD X .258	6	1.00	9.00	1.25	11.50	6	1.00	9.00	1.25	11.50
40	60	5.563 OD X .375	6	1.00	9.00	1.25	11.50	6	1.00	9.00	1.25	11.50
20	40	5.563 OD X .500	6	1.00	9.00	1.25	11.50	6	1.25	12.50	1.75	15.75
0	20	8.625 OD X .322	6	1.25	12.50	1.50	15.75	6	1.25	12.75	1.50	16.00

Diagonal Bracing Connection Details								
Bottom Elevation (ft)	Top Elevation (ft)	Angle Shape	Bolt Qty.	Bolt Dia. (in)	Bolt End Distance (in)	Bolt Spacing (in)	Gage Distance From Heel (in)	Gusset Plate Thickness (in)
140	145	L 2 X 2 X 1/8	1	0.625	1.500		1.125	0.375
120	140	L 2 X 2 X 1/8	1	0.625	1.500		1.125	0.375
100	120	L 2 1/2 X 2 1/2 X 3/16	1	0.625	1.500		1.375	0.375
80	100	L 2 1/2 X 2 1/2 X 3/16	1	0.625	1.500		1.375	0.375
60	80	L 3 X 3 X 3/16	1	0.750	1.500		1.750	0.375
40	60	L 3 X 3 X 1/4	1	0.750	1.625		1.750	0.375
20	40	L 3 1/2 X 3 1/2 X 1/4	1	0.750	1.625		1.750	0.375
0	20	L 3 1/2 X 3 1/2 X 1/4	1	0.750	1.625		1.750	0.375

MAT FOUNDATION DESIGN BY SABRE INDUSTRIES

145' S3TL Series HD1 TILLMAN INFRASTRUCTURE, LLC TI-OPP-17878, KY (22-1472-TJH-R2) 09/23/21 JLG

Overall Loads:	
Factored Moment (ft-kips)	3986.87
Factored Axial (kips)	102.15
Factored Shear (kips)	39.83
Individual Leg Loads:	
Factored Uplift (kips)	203.00
Factored Download (kips)	233.00
Factored Shear (kips)	24.00
Width of Tower (ft)	21
Ultimate Bearing Pressure	11.23
Bearing Φs	0.75
Bearing Design Strength (ksf)	8.4225
Water Table Below Grade (ft)	999
Width of Mat (ft)	26.5
Thickness of Mat (ft)	1.5
Depth to Bottom of Slab (ft)	5
Bolt Circle Diameter (in)	12.75
Top of Concrete to Top of Bottom Threads (in)	52.125
Diameter of Pier (ft)	2.5
Ht. of Pier Above Ground (ft)	0.5
Ht. of Pier Below Ground (ft)	3.5
Quantity of Bars in Mat	51
Bar Diameter in Mat (in)	0.75
Area of Bars in Mat (in^2)	22.53
Spacing of Bars in Mat (in)	6.23
Quantity of Bars Pier	10
Bar Diameter in Pier (in)	1
Tie Bar Diameter in Pier (in)	0.5
Spacing of Ties (in)	12
Area of Bars in Pier (in^2)	7.85
Spacing of Bars in Pier (in)	6.80
f'c (ksi)	4.5
fy (ksi)	60
Unit Wt. of Soil (kcf)	0.11
Unit Wt. of Concrete (kcf)	0.15
Volume of Concrete (yd^3)	41.20

Tower eccentric from mat (ft)=	1.75
Allowable Bearing Pressure (ksf)	5.62
Safety Factor	2.00
Max. Factored Net Bearing Pressure (ksf)	2.66
Minimum Mat Width (ft)	26.17
Minimum Pier Diameter (ft)	2.40
Equivalent Square b (ft)	2.22
Recommended Spacing (in)	6 to 12
Minimum Pier A_s (in^2)	3.53
Recommended Spacing (in)	5 to 12

MAT FOUNDATION DESIGN BY SABRE INDUSTRIES (CONTINUED)

Two-Way Shear:

Average d (in)	14.25		
ϕv_c (ksi)	0.228	v_u (ksi)	0.130
$\phi v_c = \phi(2 + 4/\beta_c)f'_c{}^{1/2}$	0.342		
$\phi v_c = \phi(\alpha_s d/b_o+2)f'_c{}^{1/2}$	0.354		
$\phi v_c = \phi 4f'_c{}^{1/2}$	0.228		
Shear perimeter, b_o (in)	135.51		
β_c	1		

Stability:

Overturning Design Strength (ft-k)	5456.9	Factored Overturning Moment (ft-k)	4205.9

One-Way Shear:

ϕV_c (kips)	516.8	V_u (kips)	250.0

Pier Design:

Design Tensile Strength (kips)	424.1	Tu (kips)	203.0
ϕV_n (kips)	75.0	V_u (kips)	24.0
$\phi V_c = \phi 2(1+N_u/(500A_g))f'_c{}^{1/2}b_w d$	34.9		
V_s (kips)	47.1	*** V_s max = $4\ f'_c{}^{1/2}b_w d$ (kips)	193.2
Maximum Spacing (in)	12.00	(Only if Shear Ties are Required)	
Actual Hook Development (in)	13.50	Req'd Hook Development l_{dh} (in)	12.52
		*** Ref. ACI 11.5.5 & 11.5.6.3	

Anchor Bolt Pull-Out:

$\phi P_c = \phi\lambda(2/3)f'_c{}^{1/2}(2.8A_{SLOPE} + 4A_{FLAT})$	106.6	P_u (kips)	203.0
Pier Rebar Development Length (in)	44.50	Required Length of Development (in)	21.41

Flexure in Slab:

ϕM_n (ft-kips)	1388.5	M_u (ft-kips)	1380.3
a (in)	1.11		
Steel Ratio	0.00497		
β_1	0.825		
Maximum Steel Ratio (ρ_t)	0.0197		
Minimum Steel Ratio	0.0018		

Condition	1 is OK, 0 Fails
Minimum Mat Width	1
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Two-Way Shear	1
Overturning	1
Anchor Bolt Pull-Out	1
Flexure	1
Steel Ratio	1
Interaction Diagram	1
One-Way Shear	1
Hook Development	1
Minimum Mat Depth	1

DRILLED STRAIGHT PIER DESIGN BY SABRE INDUSTRIES

145' S3TL Series HD1 TILLMAN INFRASTRUCTURE, LLC TI-OPP-17878, KY (22-1472-TJH-R2) 09/23/21 JI

Factored Uplift (kips)	203
Factored Download (kips)	233
Factored Shear (kips)	24
Ultimate Bearing Pressure	34.62
Bearing Φs	0.75
Bearing Design Strength (ksf)	25.965
Water Table Below Grade (ft)	999
Bolt Circle Diameter (in)	12.75
Top of Concrete to Top of Bottom Threads (in)	52.125
Pier Diameter (ft)	7
Ht. Above Ground (ft)	0.5
Pier Length Below Ground (ft)	18
Rebar Quantity	22
Rebar Diameter (in)	1.27
Rebar Area (in²)	27.87
Rebar Spacing (in)	10.74
Tie Diameter (in)	0.625
Tie Spacing (in)	12
f'c (ksi)	4.5
fy (ksi)	60
Unit Wt. of Concrete (kcf)	0.15
Volume of Concrete (yd³)	26.37

Minimum Pier Diameter (ft): 2.40

Minimum Area of Steel (in²): 27.71

Length to ignore download (ft): 0

Ignore bottom length in download? ☐

Depth at Bottom of Layer (ft)	Ult. Skin Friction (ksf)	Ult. Skin Friction (Uplift)	γ (kcf)
3	0.00	0.00	0.105
4	0.55	0.55	0.105
6	0.25	0.19	0.11
9	0.39	0.29	0.115
14	0.61	0.46	0.125
19	0.88	0.66	0.135
20	1.05	0.78	0.135

DRILLED STRAIGHT PIER DESIGN BY SABRE INDUSTRIES (CONTINUED)

Download:

Φ_s, Download Friction	0.75		
Q_f, Skin Friction (kips)	193.3	W_s (kips)	82.7
Q_b, End Bearing Strength (kips)	1332.3	W_c (kips)	106.8
Download Design Strength (kips)	1144.2	Factored Net Download (kips)	261.9

Uplift (skin friction):

Φ_s, Uplift	0.75		
Q_f, Skin Friction (kips)	148.2		
W_c (kips)	106.8		
W_w (kips)	0.0		
Uplift Design Strength (kips)	207.3	Factored Uplift (kips)	203.0

Uplift (cone):

$W_{s.cone}$ (kips)	457.2		
$W_{w.cone}$ (kips)	0.0		
W_c (kips)	106.8		
$W_{w.cyl}$ (kips)	0.0		
Uplift Design Strength (kips)	507.6	Factored Uplift (kips)	203.0

Tension:

Design Tensile Strength (kips)	1504.9	Tu (kips)	203.0

Shear:

ϕV_n (kips)	596.6	V_u (kips)	24.0
$\phi V_c=\phi 2(1+N_u/(500A_g))f'_c{}^{1/2}b_wd$ (kips)	596.6		
V_s (kips)	0.0	*** V_s max = 4 $f'_c{}^{1/2}b_wd$ (kips)	1514.7
Maximum Spacing (in)	8.71	(Only if Shear Ties are Required)	
		*** Ref. ACI 11.5.5 & 11.5.6.3	

Anchor Bolt Pull-Out:

$\phi P_c=\phi\lambda(2/3)f'_c{}^{1/2}(2.8A_{SLOPE}+4A_{FLAT})$	834.4	P_u (kips)	203.0
Rebar Development Length (in)	17.76	Required Development Length (in)	N/A

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

EXHIBIT D
COMPETING UTILITIES, CORPORATIONS, OR PERSONS LIST

KY Public Service Commission

Master Utility Search

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

Utility ID	Utility Name	Address/City/Contact	Utility Type	Status
				Active

Search

	Utility ID	Utility Name	Utility Type	Class	City	State
View	4111300	2600Hz, Inc. dba ZSWITCH	Cellular	D	San Francisco	CA
View	4108300	Air Voice Wireless, LLC	Cellular	B	Bloomfield Hill	MI
View	4110650	Alliant Technologies of KY, L.L.C.	Cellular	D	Morristown	NJ
View	4111900	ALLNETAIR, INC.	Cellular	D	West Palm Beach	FL
View	44451184	Alltel Corporation d/b/a Verizon Wireless	Cellular	A	Lisle	IL
View	4110850	AltaWorx, LLC	Cellular	D	Fairhope	AL
View	4107800	American Broadband and Telecommunications Company	Cellular	D	Toledo	OH
View	4108650	AmeriMex Communications Corp.	Cellular	A	Safety Harbor	FL
View	4105100	AmeriVision Communications, Inc. d/b/a Affinity 4	Cellular	D	Virginia Beach	VA
View	4105700	Assurance Wireless USA, L.P.	Cellular	A	Atlanta	GA
View	4108600	BCN Telecom, Inc.	Cellular	D	Morristown	NJ
View	4106000	Best Buy Health, Inc. d/b/a GreatCall d/b/a Jitterbug	Cellular	A	San Diego	CA
View	4110550	Blue Casa Mobile, LLC	Cellular	D	Santa Barbara	CA
View	4111050	BlueBird Communications, LLC	Cellular	D	New York	NY
View	4202300	Bluegrass Wireless, LLC	Cellular	A	Elizabethtown	KY
View	4107600	Boomerang Wireless, LLC	Cellular	C	Hiawatha	IA

View	4105500	BullsEye Telecom, Inc.	Cellular	D	Southfield	MI
View	4100700	Cellco Partnership dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
View	4106600	Cintex Wireless, LLC	Cellular	D	Houston	TX
View	4111150	Comcast OTR1, LLC	Cellular	B	Phoeniexville	PA
View	4101900	Consumer Cellular, Incorporated	Cellular	A	Portland	OR
View	4106400	Credo Mobile, Inc.	Cellular	A	San Francisco	CA
View	4108850	Cricket Wireless, LLC	Cellular	A	San Antonio	TX
View	4111500	CSC Wireless, LLC d/b/a Altice Wireless	Cellular	D	Long Island City	NY
View	10640	Cumberland Cellular Partnership	Cellular	A	Elizabethtown	KY
View	4111650	DataBytes, Inc.	Cellular	D	Rogers	AR
View	4112000	DISH Wireless L.L.C.	Cellular	A	Englewood	CO
View	4111200	Dynalink Communications, Inc.	Cellular	C	Brooklyn	NY
View	4111800	Earthlink, LLC	Cellular	D	Atlanta	GA
View	4101000	East Kentucky Network, LLC dba Appalachian Wireless	Cellular	A	Ivel	KY
View	4002300	Easy Telephone Service Company dba Easy Wireless	Cellular	D	Ocala	FL
View	4109500	Enhanced Communications Group, LLC	Cellular	D	Bartlesville	OK
View	4110450	Excellus Communications, LLC	Cellular	D	Chattanooga	TN
View	4112400	Excess Telecom Inc.	Cellular	C	Beverly Hills	CA
View	4105900	Flash Wireless, LLC	Cellular	C	Concord	NC
View	4104800	France Telecom Corporate Solutions L.L.C.	Cellular	D	Herndon	VA
View	4111750	Gabb Wireless, Inc.	Cellular	D	Provo	UT
View	4112300	Gen Mobile Inc.	Cellular	C	Redondo Beach	CA
View	4109350	Global Connection Inc. of America	Cellular	D	Newport	KY
View	4102200	Globalstar USA, LLC	Cellular	B	Covington	LA
View	4112050	GLOTELL US, Corp.	Cellular	D	Hallandale	FL
View	4109600	Google North America Inc.	Cellular	A	Mountain View	CA
View	33350363	Granite Telecommunications, LLC	Cellular	D	Quincy	MA
View	4111350	HELLO MOBILE TELECOM LLC	Cellular	D	Dania Beach	FL
View	4103100	i-Wireless, LLC	Cellular	B	Newport	KY
View	4109800	IM Telecom, LLC d/b/a Infiniti Mobile	Cellular	D	Plano	TX
View	4111950	J Rhodes Enterprises LLC	Cellular	D	Gulf Breeze	FL
View	22215360	KDDI America, Inc.	Cellular	D	Staten Island	NY
View	10872	Kentucky RSA #1 Partnership	Cellular	A	Basking Ridge	NJ
View	10680	Kentucky RSA #3 Cellular General	Cellular	A	Elizabethtown	KY
View	10681	Kentucky RSA #4 Cellular	Cellular	A	Elizabethtown	KY

		General				
View	4109550	Kynect Communications, LLC	Cellular	D	Dallas	TX
View	4112200	Lexvor Inc.	Cellular	D	Irvine	CA
View	4111250	Liberty Mobile Wireless, LLC	Cellular	A	Sunny Isles Beach	FL
View	4111400	Locus Telecommunications, LLC	Cellular	A	Fort Lee	NJ
View	4107300	Lycamobile USA, Inc.	Cellular	D	Newark	NJ
View	4112500	Marconi Wireless Holdings, LLC	Cellular	C	Westlake Village	CA
View	4112450	Matrix Telecom, LLC dba Excel Telecommunications	Cellular	C	Irving	TX
View	4108800	MetroPCS Michigan, LLC	Cellular	A	Bellevue	WA
View	4111700	Mint Mobile, LLC	Cellular	D	Costa Mesa	CA
View	4109650	Mitel Cloud Services, Inc.	Cellular	D	Mesa	AZ
View	4111850	Mobi, Inc.	Cellular	D	Honolulu	HI
View	4109400	NetZero Wireless, Inc. dba magicJack Wireless	Cellular	D	Westlake Village	CA
View	4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular	A	San Antonio	TX
View	4112350	NewPhone Wireless, L.L.C.	Cellular	C	Houston	TX
View	4000800	Nextel West Corporation	Cellular	D	Overland Park	KS
View	4110700	Norcell, LLC	Cellular	D	Buford	GA
View	4001300	NPCR, Inc. dba Nextel Partners	Cellular	D	Overland Park	KS
View	4001800	OnStar, LLC	Cellular	A	Detroit	MI
View	4110750	Onvoy Spectrum, LLC	Cellular	D	Chicago	IL
View	4109050	Patriot Mobile LLC	Cellular	D	Irving	TX
View	4110250	Plintron Technologies USA LLC	Cellular	D	Bellevue	WA
View	33351182	PNG Telecommunications, Inc. dba PowerNet Global Communications	Cellular	D	Cincinnati	OH
View	4107700	Puretalk Holdings, Inc.	Cellular	A	Covington	GA
View	4106700	Q Link Wireless, LLC	Cellular	A	Dania	FL
View	4108700	Ready Wireless, LLC	Cellular	C	Hiawatha	IA
View	4110500	Republic Wireless, Inc.	Cellular	A	Raleigh	NC
View	4106200	Rural Cellular Corporation	Cellular	A	Basking Ridge	NJ
View	4108550	Sage Telecom Communications, LLC dba TruConnect	Cellular	B	Los Angeles	CA
View	4109150	SelecTel, Inc. d/b/a SelecTel Wireless	Cellular	D	Fremont	NE
View	4110150	Spectrotel of the South LLC dba Touch Base Communications	Cellular	D	Neptune	NJ
View	4111450	Spectrum Mobile, LLC	Cellular	A	St. Louis	MO
View	4200100	Sprint Spectrum, L.P.	Cellular	A	Atlanta	GA
View	4200500	SprintCom, Inc.	Cellular	A	Atlanta	GA
View	4111600	STX Group LLC dba Twigby	Cellular	D	Murfreesboro	TN
View	4202200	T-Mobile Central, LLC dba T-Mobile	Cellular	A	Bellevue	WA

View	4002500	TAG Mobile, LLC	Cellular	D	Plano	TX
View	4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular	D	Portland	ME
View	4107200	Telefonica USA, Inc.	Cellular	D	Miami	FL
View	4112100	Tello LLC	Cellular	D	Atlanta	GA
View	4108900	Telrite Corporation	Cellular	D	Covington	GA
View	4108450	Tempo Telecom, LLC	Cellular	C	Atlanta	GA
View	4109000	Ting, Inc.	Cellular	B	Toronto	ON
View	4110400	Torch Wireless Corp.	Cellular	D	Jacksonville	FL
View	4103300	Touchtone Communications, Inc.	Cellular	D	Cedar Knolls	NJ
View	4104200	TracFone Wireless, Inc.	Cellular	D	Miami	FL
View	4112250	TROOMI WIRELESS, Inc.	Cellular	C	Lehi	UT
View	4002000	Truphone, Inc.	Cellular	D	Durham	NC
View	4110300	UVNV, Inc. d/b/a Mint Mobile	Cellular	D	Costa Mesa	CA
View	10630	Verizon Americas LLC dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
View	4110800	Visible Service LLC	Cellular	D	Basking Ridge	NJ
View	4106500	WiMacTel, Inc.	Cellular	D	Palo Alto	CA
View	4110950	Wing Tel Inc.	Cellular	D	New York	NY
View	4112150	Zefcom, LLC	Cellular	C	Wichita Falls	TX

EXHIBIT E
FAA

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2021-ASO-10679-OE

Issued Date: 05/24/2021

Donna-Marie Stipo
Tillman Infrastructure, LLC
152 West 57th Street
8th Floor
New York, NY 10019

**** 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:

Structure:	Antenna Tower Falls of Rough KY - TI-17878
Location:	Falls of Rough, KY
Latitude:	37-35-48.02N NAD 83
Longitude:	86-29-24.53W
Heights:	640 feet site elevation (SE) 150 feet above ground level (AGL) 790 feet above mean sea level (AMSL)

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:

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)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 11/24/2022 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.
(c) 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 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.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

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 (817) 222-5928, or chris.smith@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-ASO-10679-OE.

Signature Control No: 475713080-481729083 (DNE)
Chris Smith
Specialist

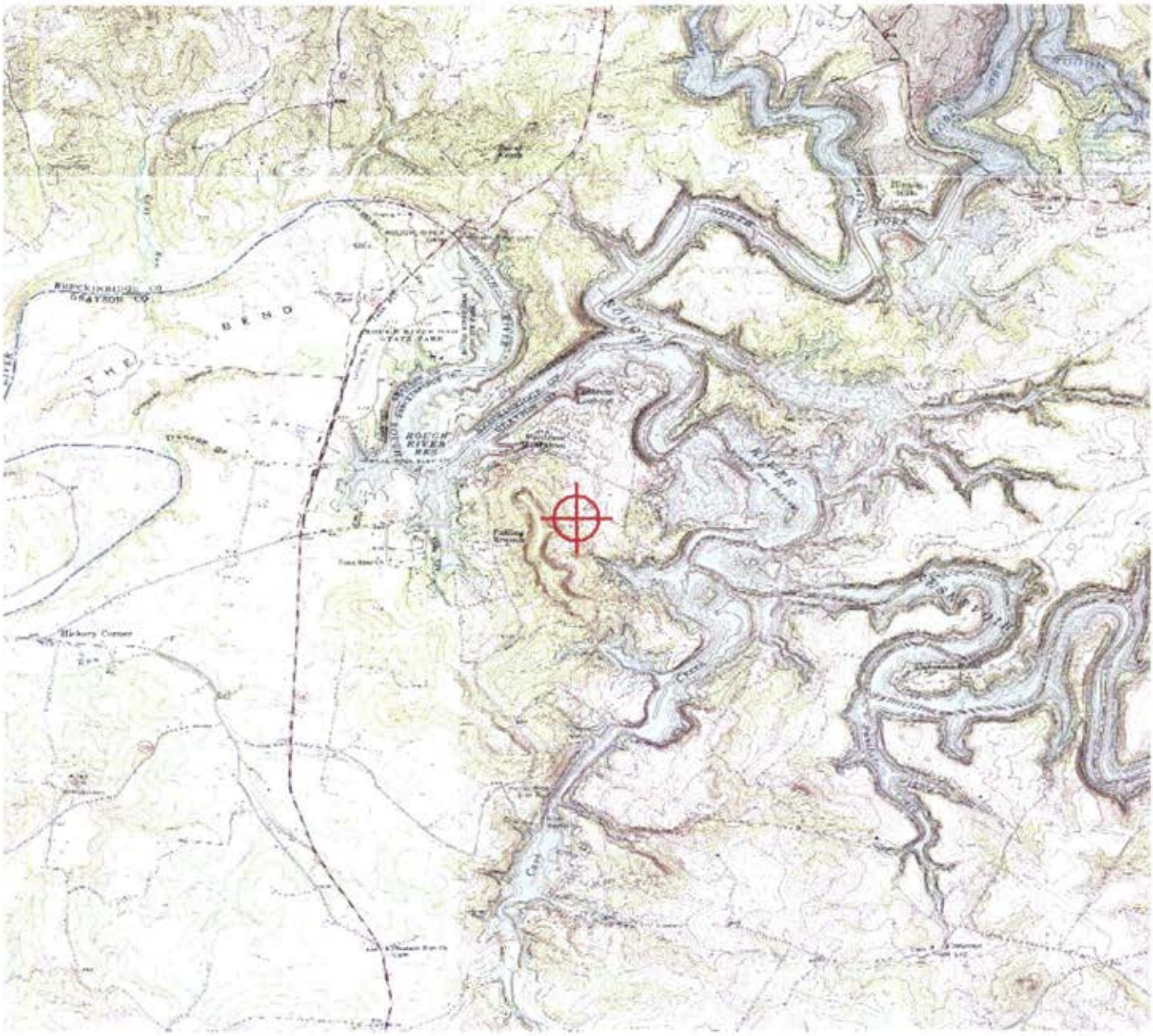
Attachment(s)
Frequency Data
Map(s)

cc: FCC

Frequency Data for ASN 2021-ASO-10679-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W

TOPO Map for ASN 2021-ASO-10679-OE



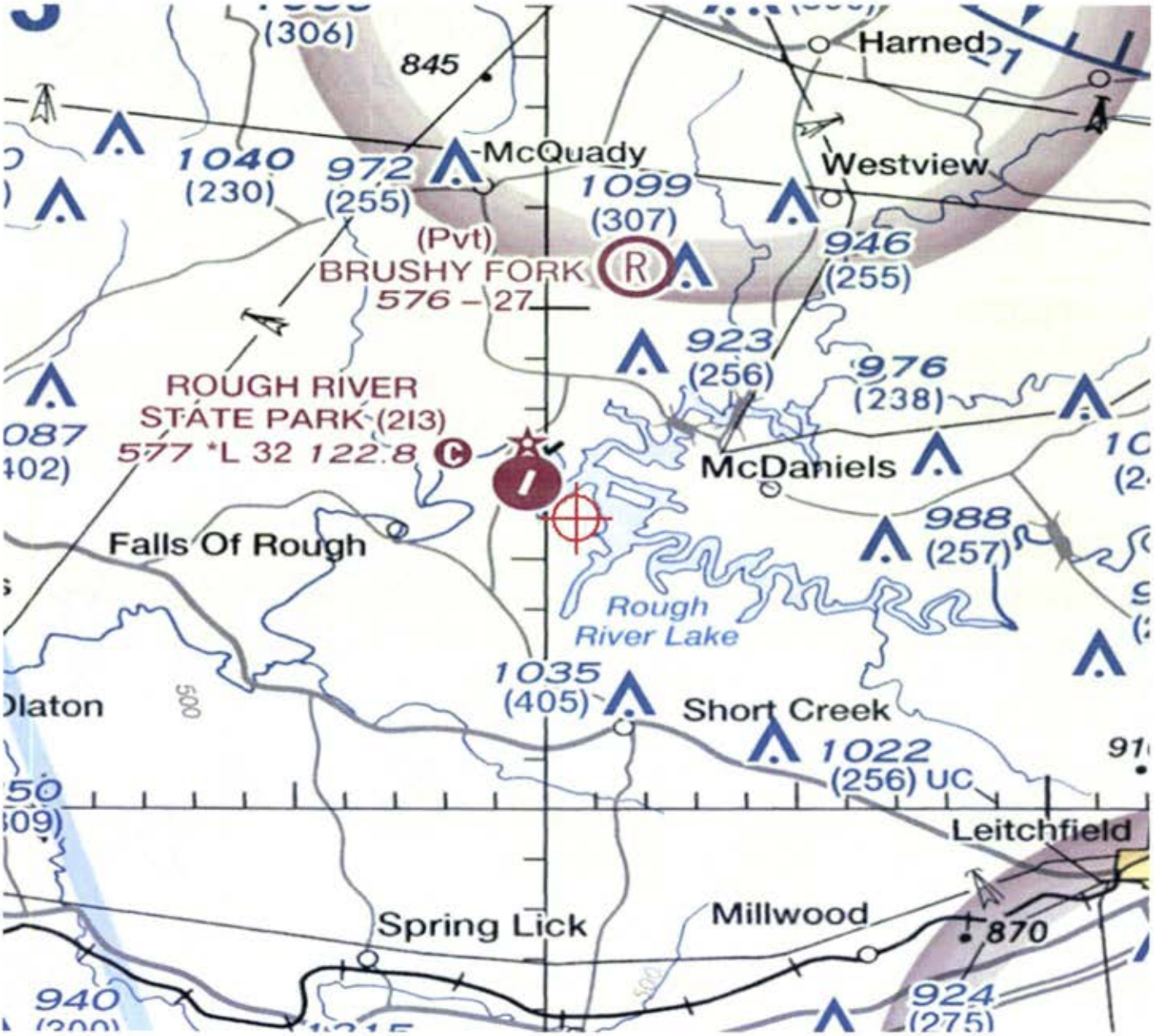

(306)
845
Harned
McQuady
Westview
1040
(230)
972
(255)
1099
(307)
(Pvt)
BRUSHY FORK
576 – 27
946
(255)
923
(256)
976
(238)
ROUGH RIVER
STATE PARK (213)
577 *L 32 122.8
McDaniels
Falls Of Rough
988
(257)
Rough
River Lake
1035
(405)
Short Creek
1022
(256) UC
Leitchfield
Spring Lick
Millwood
870
924
(275)
940

EXHIBIT F
KENTUCKY AIRPORT ZONING COMMISSION

KENTUCKY AIRPORT ZONING COMMISSION

ANDY BESHEAR
Governor

Office of Audits, 200 Mero Street, 4th floor
Frankfort, KY 40622
www.transportation.ky.gov
502-782-4043

JIM GRAY
Secretary

APPROVAL OF APPLICATION

August 19, 2021

APPLICANT
Tillman Infrastructure, LLC
Tillman Infrastructure, LLC
147 West 57th St. 27th Floor
New York, NY 10019

SUBJECT: AS-BRECKINRIDGE-2I3-2021-073

STRUCTURE:	Antenna Tower
LOCATION:	Falls of Rough, KY
COORDINATES:	37° 35' 48.02" N / 86° 29' 24.53" W
HEIGHT:	150' AGL/790' AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 150' AGL/790' AMSL Antenna Tower near Falls of Rough, KY 37° 35' 48.02" N / 86° 29' 24.53" 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.

No Hazard, Medium Dual Obstruction Lighting Required.

Randall S. Royer

Randall S. Royer, Executive Director
Office of Audits
Acting Administrator
Randall.Royer@ky.gov
Jason.Salazar-Munoz@ky.gov

Kentucky
UNBRIDLED SPIRIT

EXHIBIT G
GEOTECHNICAL REPORT

GEOTECHNICAL INVESTIGATION REPORT

August 31, 2021

Prepared For:

LCS Wireless Inc.

TI-OPP-17878 (Falling Branch)
15346957
Proposed 145-Foot Self-Supporting Tower
2589 Blue Bird Road, Falls of Rough (Grayson County), Kentucky 40119
Latitude N 37° 35' 48.0" Longitude W 86° 29' 24.5"

Delta Oaks Group Project GEO21-10085-08
Revision 1
geotech@deltaoaksgroup.com

Performed By:

Blake Hash

Blake A. Hash, E.I.

Reviewed By:

Joseph V. Borrelli, Jr., P.E.

COMMONWEALTH OF KENTUCKY
JOSEPH V. BORRELLI
30809
LICENSED PROFESSIONAL ENGINEER
8/31/21

INTRODUCTION

This geotechnical investigation report has been completed for the proposed 145-foot self-supporting tower located at 2589 Blue Bird Road, Falls of Rough (Grayson County), Kentucky. The purpose of this investigation was to provide engineering recommendations and subsurface condition data at the proposed tower location. A geotechnical engineering interpretation of the collected information was completed and utilized to suggest design parameters regarding the adequacy of the structure's proposed foundation capacity under various loading conditions. This report provides the scope of the geotechnical investigation; geologic material identification; results of the geotechnical laboratory testing; and design parameter recommendations for use in the design of the telecommunication facility's foundation and site development.

SITE CONDITION SUMMARY

The proposed tower and compound are located on a grass covered lot exhibiting a gradually sloping topography from west to east across the tower compound and subject property.

REFERENCES

- TIA Standard (TIA-222-G), dated August 2005

SUBSURFACE FIELD INVESTIGATION SUMMARY

The subsurface field investigation was conducted through the advancement of three mechanical soil test borings to the auger refusal depths ranging between of 5.0 to 13.25 feet bgs. Samples were obtained at selected intervals in accordance with ASTM D 1586. Upon encountering auger refusal 10.0 feet of rock coring was conducted in accordance with ASTM D 2113. Soil and rock samples were transported to our laboratory and classified by a geotechnical engineer in accordance with ASTM D 2487. A detailed breakdown of the material encountered in our subsurface field investigation can be found in the boring logs presented in the Appendix of this report.

A boring plan portraying the spatial location of the boring in relation to the proposed tower, tower compound and immediate surrounding area can be found in the Appendix.

SUBSURFACE CONDITION SUMMARY

The following provides a general overview of the site's subsurface conditions based on the data obtained during our field investigation.

FILL

Topsoil material was encountered during the subsurface field investigation from the existing ground surface to a depth of 0.5 feet bgs.

SOIL

The residual soil encountered in the subsurface field investigation began at a depth of 0.5 feet bgs in the boring and consisted of lean clay and silty clay. The materials ranged from a medium dense to very dense relative density and a firm to stiff cohesion.

Auger advancement refusal was encountered during the subsurface field investigation at a depth of 5.5, 5.0, and 13.25 feet bgs in borings B-1 through B-3, respectively.

ROCK

Rock was encountered during the subsurface investigation at a depth of 5.5 and 13.5 feet bgs in borings B-1 and B-3, respectively. The rock can be described as moderately to highly fractured, slightly to completely weathered, hard to soft limestone with silty clay seams.

SUBSURFACE WATER

At the time of drilling, subsurface water was not encountered during the subsurface investigation. However, subsurface water elevations can fluctuate throughout the year due to variations in climate, hydraulic parameters, nearby construction activity and other factors.

FROST PENETRATION

The frost penetration depth for Grayson County, Kentucky is 20 inches (1.7 feet).

CORROSIVITY

Soil resistivity was performed in accordance with ASTM G187 with a test result of 1,600 ohms-cm.

FOUNDATION DESIGN SUMMARY

In consideration of the provided tower parameters and the determined soil characteristics, Delta Oaks Group recommends utilizing a shallow foundation and/or drilled shaft foundation for the proposed structure. The strength parameters presented in the following sections can be utilized for design of the foundation.

GENERAL SUBSURFACE STRENGTH PARAMETERS

Boring	Depth (bgs)	USCS	Moist/Buoyant Unit Weight (pcf)	Phi Angle (degrees)	Cohesion (psf)
B-1	0.0 – 0.5	TOPSOIL	105	0	0
	0.5 – 3.5	CL	105	0	500
	3.5 – 5.5	ML	110	31	0
	5.5 – 10.5	LIMESTONE	135	0	5,000

Boring	Depth (bgs)	USCS	Moist/Buoyant Unit Weight (pcf)	Phi Angle (degrees)	Cohesion (psf)
B-2	0.0 – 0.5	TOPSOIL	105	0	0
	0.5 – 3.5	CL	110	0	1,000
	3.5 – 5.0	ML	130	40	0

Boring	Depth (bgs)	USCS	Moist/Buoyant Unit Weight (pcf)	Phi Angle (degrees)	Cohesion (psf)
B-3	0.0 – 0.5	TOPSOIL	105	0	0
	0.5 – 3.5	CL	110	0	1,000
	3.5 – 8.5	CL	115	0	1,750
	8.5 – 13.25	ML	125	37	0
	13.25 – 18.25	LIMESTONE	135	0	5,000

- The unit weight provided assumes overburden soil was compacted to a minimum of 95% of the maximum dry density as obtained by the standard Proctor method (ASTM D 698) and maintained a moisture content within 3 percent of optimum
- The values provided for phi angle and cohesion should be considered ultimate.

SUBSURFACE STRENGTH PARAMETERS – SHALLOW FOUNDATION

Boring	Dimensions (feet)	Depth (feet bgs)	Net Ultimate Bearing Capacity (psf)
B-1	5.0 x 5.0	3.0	3,450
		4.0	20,810
		5.0	24,860
		Greater than 6.0	30,000
	10.0 x 10.0	3.0	3,270
		4.0	26,660
		Greater than 5.0	30,000
	15.0 x 15.0	3.0	3,210
		Greater than 4.0	30,000
	20.0 x 20.0	3.0	3,180
		Greater than 4.0	30,000
	25.0 x 25.0	3.0	3,160
		Greater than 4.0	30,000

Boring	Dimensions (feet)	Depth (feet bgs)	Net Ultimate Bearing Capacity (psf)
B-2	5.0 x 5.0	3.0	6,910
		Greater than 4.0	30,000
	10.0 x 10.0	3.0	6,540
		Greater than 4.0	30,000
	15.0 x 15.0	3.0	6,410
		Greater than 4.0	30,000
	20.0 x 20.0	3.0	6,350
		Greater than 4.0	30,000
	25.0 x 25.0	3.0	6,320
		Greater than 4.0	30,000

Boring	Dimensions (feet)	Depth (feet bgs)	Net Ultimate Bearing Capacity (psf)
B-3	5.0 x 5.0	3.0	6,910
		4.0	12,520
		5.0	12,950
		6.0	13,380
	10.0 x 10.0	3.0	6,540
		4.0	11,660
		5.0	11,870
		6.0	12,090
	15.0 x 15.0	3.0	6,410
		4.0	11,370
		5.0	11,510
		6.0	11,660
	20.0 x 20.0	3.0	6,350
		4.0	11,230
		5.0	11,330
		6.0	11,440
	25.0 x 25.0	3.0	6,320
		4.0	11,140
		5.0	11,230
		6.0	11,310

- Delta Oaks Group recommends the foundation bear a minimum of 3.0 feet bgs.
- A sliding friction factor of 0.30 can be utilized along the base of the proposed foundation.
- An Ultimate Passive Pressure Table with a reduction due to frost penetration to a depth of 1.7 feet bgs is presented on the following page.
- Delta Oaks Group recommends an appropriate factor of safety be utilized for the design of the foundation.

ULTIMATE PASSIVE PRESSURE VS. DEPTH -NORTHEAST TOWER LEG FOUNDATION

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0.0	105	0	0	0.00	1.00	0.00
Bottom	0.5	105	0	0	52.50	1.00	26.25
Top	0.5	105	0	500	52.50	1.00	526.25
Bottom	1.7	105	0	500	178.50	1.00	589.25
Top	1.7	105	0	500	178.50	1.00	1,178.50
Bottom	3.5	105	0	500	367.50	1.00	1,367.50
Top	3.5	110	31	0	367.50	3.12	1,148.08
Bottom	5.5	110	31	0	587.50	3.12	1,835.37
Top	5.5	135	0	5,000	587.50	1.00	10,587.50
Bottom	10.0	135	0	5,000	1,195.00	1.00	11,195.00

ULTIMATE PASSIVE PRESSURE VS. DEPTH – SOUTHEAST TOWER LEG FOUNDATION

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0.0	105	0	0	0.00	1.00	0.00
Bottom	0.5	105	0	0	52.50	1.00	26.25
Top	0.5	110	0	1,000	52.50	1.00	1,026.25
Bottom	1.7	110	0	1,000	184.50	1.00	1,092.25
Top	1.7	110	0	1,000	184.50	1.00	2,184.50
Bottom	3.5	110	0	1,000	382.50	1.00	2,382.50
Top	3.5	130	40	0	382.50	4.60	1,759.08
Bottom	10.0	130	40	0	1,227.50	4.60	5,645.16

ULTIMATE PASSIVE PRESSURE VS. DEPTH – SOUTHWEST TOWER LEG FOUNDATION

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0.0	105	0	0	0.00	1.00	0.00
Bottom	0.5	105	0	0	52.50	1.00	26.25
Top	0.5	110	0	1,000	52.50	1.00	1,026.25
Bottom	1.7	110	0	1,000	184.50	1.00	1,092.25
Top	1.7	110	0	1,000	184.50	1.00	2,184.50
Bottom	3.5	110	0	1,000	382.50	1.00	2,382.50
Top	3.5	115	0	1,750	382.50	1.00	3,882.50
Bottom	8.5	115	0	1,750	957.50	1.00	4,457.50
Top	8.5	125	37	0	957.50	4.02	3,851.82
Bottom	10.0	125	37	0	1,145.00	4.02	4,606.10

SUBSURFACE STRENGTH PARAMETERS - DRILLED SHAFT FOUNDATION

Boring	Depth (bgs)	Net Ultimate Bearing Capacity (psf)	Ultimate Skin Friction - Compression (psf)	Ultimate Skin Friction - Uplift (psf)
B-1	0.0 – 3.0	-	-	-
	3.0 – 4.0	40,640	270	270
	4.0 – 6.0	44,690	150	110
	6.0 – 9.0	44,700	2,310	2,310
	9.0 – 14.0	44,620	2,310	2,310
	14.0 – 19.0	44,550	2,310	2,310
	19.0 – 20.0	44,530	2,310	2,310

Boring	Depth (bgs)	Net Ultimate Bearing Capacity (psf)	Ultimate Skin Friction - Compression (psf)	Ultimate Skin Friction - Uplift (psf)
B-2	0.0 – 3.0	-	-	-
	3.0 – 4.0	14,890	550	550
	4.0 – 6.0	16,690	250	190
	6.0 – 9.0	20,270	390	290
	9.0 – 14.0	25,660	610	460
	14.0 – 19.0	34,620	880	660
	19.0 – 20.0	43,590	1,050	780

Boring	Depth (bgs)	Net Ultimate Bearing Capacity (psf)	Ultimate Skin Friction - Compression (psf)	Ultimate Skin Friction - Uplift (psf)
B-3	0.0 – 3.0	-	-	-
	3.0 – 4.0	14,750	550	550
	4.0 – 6.0	14,010	960	960
	6.0 – 9.0	14,300	960	960
	9.0 – 14.0	29,210	510	380
	14.0 – 19.0	44,470	2,310	2,310
	19.0 – 20.0	44,450	2,310	2,310

- The top 3.0 feet of soil should be ignored due to the frost penetration, the potential soil disturbance during construction, and the presence of fill material.
- The values presented assume the concrete is cast-in-place against earth walls and any casing utilized during construction of the foundation was removed.
- Delta Oaks Group recommends an appropriate factor of safety be utilized for the design of the foundation.

SUBSURFACE STRENGTH PARAMETERS – SUPPORT STRUCTURE FOUNDATION

Boring	Depth (bgs)	Net Ultimate Bearing Capacity (psf)	Minimum Design Footing Width (ft)	Modulus of Subgrade Reaction (pci)
B-1	2.0	3,110	2.0	100
	3.0	3,370		
	4.0	6,210		90
	5.0	8,020		

- Delta Oaks Group recommends utilizing a slab on grade in conjunction with continuous perimeter footings that bear on residual soil or properly compacted structural fill placed in accordance with the recommendations provided in the *CONSTRUCTION* section of this report.
- The slab on grade should be properly reinforced to prevent concrete cracking and shrinkage.
- The foundation should bear a minimum of 2.0 feet bgs.
- A sliding friction factor of 0.30 can be utilized along the base of the proposed foundation.
- An Ultimate Passive Pressure Table is presented on the following page. An appropriate reduction should be considered in accordance with local building code frost penetration depth.
- Delta Oaks Group recommends an appropriate factor of safety be utilized for the design of the foundation.

ULTIMATE PASSIVE PRESSURE VS. DEPTH – SUPPORT STRUCTURE FOUNDATION

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0.0	105	0	0	0.00	1.00	0.00
Bottom	0.5	105	0	0	52.50	1.00	26.25
Top	0.5	105	0	500	52.50	1.00	526.25
Bottom	1.7	105	0	500	178.50	1.00	589.25
Top	1.7	105	0	500	178.50	1.00	1,178.50
Bottom	3.5	105	0	500	367.50	1.00	1,367.50
Top	3.5	110	31	0	367.50	3.12	1,148.08
Bottom	5.5	110	31	0	587.50	3.12	1,835.37
Top	5.5	135	0	5,000	587.50	1.00	10,587.50
Bottom	10.0	135	0	5,000	1,195.00	1.00	11,195.00

CONSTRUCTION

SITE DEVELOPMENT

The proposed access road and tower compound should be evaluated by a Geotechnical Engineer, or their representative, after the removal or "cutting" of the areas to design elevation but prior to the placement of any structural fill material to verify the presence of unsuitable or weak material. Unsuitable or weak materials should be undercut to a suitable base material as determined by a Geotechnical Engineer, or their representative. Backfill of any undercut area(s) should be conducted in accordance with the recommendations provided in the *STRUCTURAL FILL PLACEMENT* section of this report.

Excavations should be sloped or shored in accordance and compliance with OSHA 29 CFR Part 1926, Excavation Trench Safety Standards as well as any additional local, state and federal regulations.

STRUCTURAL FILL PLACEMENT

Structural fill materials should be verified, prior to utilization, to have a minimum unit weight of 110 pcf (pounds per cubic foot) when compacted to a minimum of 95% of its maximum dry density and within plus or minus 3 percentage points of optimum moisture. Materials utilized should not contain more than 5 percent by weight of organic matter, waste, debris or any otherwise deleterious materials. The Liquid Limit should be no greater than 40 with a Plasticity Index no greater than 20. Structural fill material should contain a maximum particle size of 4 inches with 20 percent or less of the material having a particle size between 2 and 4 inches. Backfill should be placed in thin horizontal lifts not to exceed 8 inches (loose) in large grading areas and 4 inches (loose) where small handheld or walk-behind compaction equipment will be utilized. The potential suitability of on-site materials to be utilized as fill should be evaluated by a Geotechnical Engineer, or their representative just prior to construction.

During construction structural fill placement should be monitored and tested. This should include at minimum, visual observation as well as a sufficient amount of in-place field density tests by a Geotechnical Engineer, or their representative. Materials should be compacted to a minimum of 95% of the maximum dry density as determined by ASTM D 698 (standard Proctor method). Moisture contents should be maintained to within plus or minus 3 percentage points of the optimum moisture content.

SHALLOW FOUNDATIONS

Foundation excavation(s) should be evaluated by a Geotechnical Engineer, or their representative, prior to reinforcing steel and concrete placement. This evaluation should include visual observation to verify a level bearing surface; vertical side-walls with no protrusions, sloughing or caving; and the exposed bearing surface is free of deleterious material, loose soil and standing water. Excavation dimensions should be verified and testing performed on the exposed bearing surface to verify compliance with design recommendations. Bearing testing should be conducted in accordance with ASTM STP399 (Dynamic Cone Penetrometer). A 6-inch layer of compacted crushed stone should be installed prior to reinforcing steel and concrete placement. If subsurface water is encountered during excavation dewatering methods such as sump pumps or well points may be required.

Rock was encountered at variable depths in the boring and offset borings. If the foundation excavation shows that only a portion of the foundation will bear on rock, with a portion bearing on soil, then the entire footprint should be over-excavated by a minimum of 6 inches and the bearing elevation should be re-established with a coarse graded aggregate.

DRILLED SHAFT FOUNDATIONS

Drilled shaft foundations (caissons) are typically installed utilizing an earth auger to reach the design depth of the foundation. Specialized roller bits or core bits can be utilized to penetrate boulders or rock. The equipment utilized should have cutting teeth to result in an excavation with little or no soil smeared or caked on the excavation sides with spiral-like corrugated walls. The drilled shaft design diameter should be maintained throughout the excavation with a plumbness tolerance of 2 percent of the length and an eccentricity tolerance of 3 inches from plan location. A removable steel casing can be installed in the shaft to prevent caving of the excavation sides due to soil relaxation. Upon completion of the drilling and casing placement, loose soils and subsurface water greater than 3-inches in depth should be removed from the bottom of the excavation for the "dry" installation method. The drilled shaft installation should be evaluated by a Geotechnical Engineer, or their representative, to verify suitable end bearing conditions, design diameter and bottom cleanliness. The evaluation should be conducted immediately prior to as well as during concrete placement operations.

The drilled shaft should be concreted as soon as reasonably practical after excavation to reduce the deterioration of the supporting soils to prevent potential caving and water intrusion. A concrete mix design with a slump of 6 to 8 inches employed in conjunction with the design concrete compressive strength should be utilized for placement. Super plasticizer may be required to obtain the recommended slump range. During placement, the concrete may fall freely through the open area in the reinforcing steel cage provided it does not strike the reinforcing steel and/or the casing prior to reaching the bottom of the excavation. The removable steel casing should be extracted as concrete is placed. During steel casing removal a head of concrete should be maintained above the bottom of the casing to prevent soil and water intrusion into the concrete below the bottom of the casing.

If subsurface water is anticipated and/or weak soil layers are encountered drilled shafts are typically installed utilizing the "wet" method by excavating beneath a drilling mud slurry. The drilling mud slurry is added to the drilled shaft excavation after groundwater has been encountered and/or the sides of the excavation are observed to be caving or sloughing. Additional inspection by a Geotechnical Engineer, or their representative, during the "wet" method should consist of verifying maintenance of sufficient slurry head, monitoring the specific gravity, pH and sand content of the drilling slurry, and monitoring any changes in the depth of the excavation between initial approval and just prior to concreting.

Concrete placement utilizing the "wet" method is conducted through a tremie pipe at the bottom of the excavation with the drilling mud slurry level maintained at a minimum of 5 feet or one shaft diameter, whichever is greater, above the ground water elevation. The bottom of the tremie should be set one tremie pipe diameter above the excavation. A closure flap at the bottom of the tremie or a sliding plug introduced into the tremie before the concrete is recommended to reduce the potential contamination of the concrete by the drilling mud slurry. The bottom of the tremie must be maintained in the concrete during placement.

Additional concrete should be placed through the tremie causing the slurry to overflow from the excavation in order to reduce the potential for the development of "slurry pockets" remaining in the drilled shaft.

QUALIFICATIONS

The design parameters and conclusions provided in this report have been determined in accordance with generally accepted geotechnical engineering practices and are considered applicable to a rational degree of engineering certainty based on the data available at the time of report preparation and our practice in this geographic region. All recommendations and supporting calculations were prepared based on the data available at the time of report preparation and knowledge of typical geotechnical parameters in the applicable geographic region.

The subsurface conditions used in the determination of the design recommendations contained in this report are based on interpretation of subsurface data obtained at specific boring locations. Irrespective of the thoroughness of the subsurface investigation, the potential exists that conditions between borings will differ from those at the specific boring locations, that conditions are not as anticipated during the original analysis, or that the construction process has altered the soil conditions. That potential is significantly increased in locations where existing fill materials are encountered. Additionally, the nature and extent of these variations may not be evident until the commencement of construction. Therefore, a geotechnical engineer, or their representative, should observe construction practices to confirm that the site conditions do not differ from those conditions anticipated in design. If such variations are encountered, Delta Oaks Group should be contacted immediately in order to provide revisions and/or additional site exploration as necessary

Samples obtained during our subsurface field investigation will be retained by Delta Oaks Group for a period of 30 days unless otherwise instructed by LCS Wireless. No warranty, expressed or implied, is presented.

Delta Oaks Group appreciates the opportunity to be of service for this Geotechnical Investigation Report. Please do not hesitate to contact Delta Oaks Group with any questions or should you require additional service on this project.

APPENDIX

BORING PLAN


Mick Ridge Rd
Blue Bird Rd
Circle Hill Rd
Fortress Lookout Rd
110
Paradise Acres Rd
Paradise Acres Rd
B-1
B-3
B-2

PROJECT NAME TI-OPP-17878

PROJECT NUMBER GEO21-10085-08

PROJECT LOCATION 2589 Blue Bird Rd, Falls of Rough, KY 40119

CLIENT LCS Wireless

Boring No.: B-1 PAGE 1 OF 1

DATE DRILLED : 7/15/2021

DRILLING METHOD : Hollow Stem Auger & Rock Coring

GROUND ELEVATION : 642

BORING DEPTH (ft) : 10.5

GROUND WATER LEVELS:

AT TIME OF DRILLING : --- Not Encountered

AT END OF DRILLING : --- Not Measured

AFTER DRILLING : --- Not Measured

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE	MATERIAL CLASSIFICATION	Pocket Penetrometer (tsf)	BLOWS 1st	BLOWS 2nd	BLOWS 3rd	N VALUE	▲ SPT N VALUE ▲ 10 20 30 40 50 60 70 80 90
0	TOPSOIL								
	LEAN CLAY (CL), firm, brown, moist		CL		2	2	3	5	
5	SILT (ML), medium dense, brown, trace clay, moist		ML		3	4	8	12	
10	LIMESTONE, moderately to highly fractured, slightly to completely weathered, hard to soft				REC = 32%	RQD = 12%			
	Refusal at 5.5 feet. Bottom of borehole at 10.5 feet.								
15									
20									

PROJECT NAME TI-OPP-17878

PROJECT NUMBER GEO21-10085-08

PROJECT LOCATION 2589 Blue Bird Rd, Falls of Rough, KY 40119

CLIENT LCS Wireless

Boring No.: B-2

DATE DRILLED : 7/15/2021

DRILLING METHOD : Hollow Stem Auger

GROUND ELEVATION : 642

BORING DEPTH (ft) : 5

GROUND WATER LEVELS:

AT TIME OF DRILLING : — Not Encountered

AT END OF DRILLING : --- Not Measured

AFTER DRILLING : --- Not Measured

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE	MATERIAL CLASSIFICATION	Pocket Penetrometer (tsf)	BLOWS 1st	BLOWS 2nd	BLOWS 3rd	N VALUE
0	TOPSOIL							
	LEAN CLAY (CL), stiff, brown, moist		CL		4	4	5	9
	SILT (ML), very dense, brown, moist		ML		3	4	50/5"	100
5	Refusal at 5.0 feet. Bottom of borehole at 5.0 feet.							
10								
15								
20								

▲ SPT N VALUE ▲

10 20 30 40 50 60 70 80 90

PROJECT NAME TI-OPP-17878

CLIENT LCS Wireless

PROJECT NUMBER GEO21-10085-08

Boring No.: B-3 PAGE 1 OF 1

PROJECT LOCATION 2589 Blue Bird Rd, Falls of Rough, KY 40119

DATE DRILLED : 7/15/2021

DRILLING METHOD : Hollow Stem Auger & Rock Coring

GROUND ELEVATION : 642

BORING DEPTH (ft) : 18.25

GROUND WATER LEVELS:

AT TIME OF DRILLING : — Not Encountered

AT END OF DRILLING : — Not Measured

AFTER DRILLING : — Not Measured

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE	MATERIAL CLASSIFICATION	Pocket Penetrometer (tsf)	BLOWS 1st	BLOWS 2nd	BLOWS 3rd	N VALUE
0	TOPSOIL							
	LEAN CLAY (CL), stiff, brown, moist		CL		2	2	3	5
	-- Stiff				3	4	8	12
5								
	SILT (ML), dense, brown, moist		ML		10	18	21	39
10								
	LIMESTONE, moderately to highly fractured, slightly to completely weathered, hard to soft				REC = 63%	RQD = 15%		
15								
	Refusal at 13.3 feet. Bottom of borehole at 18.3 feet.							
20								

▲ SPT N VALUE ▲

10 20 30 40 50 60 70 80 90

EXHIBIT H
DIRECTIONS TO WCF SITE

Driving Directions to Proposed Tower Site

1. Beginning at 130 E. Market Street, Leitchfield, KY 42754, head west on E Market Street toward S Heyser Drive and travel approximately 459 feet.
2. Turn right at the 2nd cross street onto S Main Street and travel approximately 459 feet.
3. At the traffic circle, take the 3rd exit onto Public Square and travel approximately 410 feet.
4. Follow Public Square as it turns slightly right and becomes W Main Street and travel approximately 0.9 miles.
5. Continue onto KY-54 W / Owensboro Road and travel approximately 10.0 miles.
6. Turn right onto KY-79 N and travel approximately 5.8 miles.
7. Turn right onto KY-110 and travel approximately 0.4 miles.
8. Turn right to stay on KY-110 and travel approximately 0.9 miles.
9. Turn left to stay on KY-110 and travel approximately 1.3 miles.
10. The site is located on the right at 2589 Blue Bird Road, Falls of Rough, KY 40119.
11. The site coordinates are:
    a. North 37 deg 35 min 48.02 sec
    b. West 86 deg 29 min 24.53 sec

Prepared by:
Chris Shouse
Pike Legal Group
1578 Highway 44 East, Suite 6
P.O. Box 396
Shepherdsville, KY 40165-3069
Telephone: 502-955-4400 or 800-516-4293

EXHIBIT I
COPY OF REAL ESTATE AGREEMENT

Market: Northeast/TNKY
Cell Site Number: _____
Cell Site Name: _____
Search Ring Name: Falling Branch
Fixed Asset Number: 15346957

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 Terry L. Newton and Kimberly D. Newton, a married couple, having a mailing address of 2589 Blue Bird Road, Falls of Rough, Kentucky 40119 ("**Landlord**") and Tillman Infrastructure LLC, a Delaware limited liability company, having an address at 152West 57th Street, New York, New York 10019 ("**Tenant**").

BACKGROUND

Landlord owns or controls that certain plot, parcel or tract of land, as described on **Exhibit 1,** together with all rights and privileges arising in connection therewith, located at 2589 Blue Bird Road, in the County of Grayson, State of Kentucky (collectively, the "**Property**"). Landlord desires to grant to Tenant the right to use a portion of the Property in accordance with this Agreement.

The parties agree as follows:

1. OPTION TO LEASE.

(a) Landlord grants to Tenant an exclusive option (the "**Option**") to lease a certain portion of the Property consisting of a 100' x 100' parcel of property including the air space above such ground space, as described on attached **Exhibit 1**, (the "**Premises**"), for the placement of a Communication Facility in accordance with the terms of this Agreement.

(b) During the Option Term, and during the Term, 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, registrations with the Federal Communications Commissions and construction permits (collectively, the "**Government Approvals**"), initiate the ordering and/or scheduling of necessary utilities, and otherwise to do those things on or off the Property that, in the opinion of Tenant, are necessary in Tenant's sole discretion to determine the physical condition of the Property, the environmental history of the Property, Landlord's title to the Property and the feasibility or suitability of the Property for Tenant's Permitted Use, all at Tenant's expense. Tenant will not be liable to Landlord or any third party on account of any pre-existing defect or condition on or with respect to the Property, whether or not such defect or condition is disclosed by Tenant's inspection. Tenant will restore the Property to its condition as it existed at the commencement of the Option Term, reasonable wear and tear and loss by casualty or other causes beyond Tenant's control excepted.

(c) In consideration of Landlord granting Tenant the Options contained in this Agreement, Tenant agrees to pay Landlord the sum of [redacted] Dollars [redacted] within thirty (30) business days after the Effective Date. The Option may be exercised during an initial term of [redacted] commencing on the Effective Date (the "**Initial Option Term**"). If the Option is not exercised during the Initial Term, the term shall automatically renew for an additional [redacted] (the "**Renewal Option Term**"). Tenant shall pay Landlord an additional [redacted] Dollars [redacted] within thirty (30) business days after to the start date of the Renewal Option Term. The Initial Option Term and any Renewal Option Term are collectively referred to as the "**Option Term**."

(d) The Option may be sold, assigned or transferred at any time by Tenant without the written consent of Landlord. Upon notification to Landlord of such sale, assignment or transfer, 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, then 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 if the Option is exercised, Landlord decides to subdivide, sell, or change the status of the zoning of the Premises, the Property or any of Landlord's contiguous, adjoining or surrounding property (the "**Surrounding Property**"), or in the event of a threatened foreclosure on any of the foregoing, Landlord shall immediately notify Tenant in writing. Landlord agrees that during the Option Term, or during the Term if the Option is exercised, Landlord shall not initiate or consent to any change in the zoning of the Premises, the Property or the 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 related activities, and the installation, construction, maintenance, operation, repair, replacement and upgrade of communications fixtures and related equipment, cables, accessories and improvements, which may include a suitable tower and support structure ("**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 one hundred twenty (120) days following the start of construction, Landlord grants Tenant, its subtenants, licensees and sublicensees, the right to use such portions of the Surrounding Property 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 shelters or cabinets to the antennas, electric lines from the main feed to the equipment shelters or cabinets and communication lines from the Property's main entry point to the equipment shelters or cabinets, install a generator(s) and to make other improvements, additions, alterations, upgrades or additions appropriate for Tenant's Permitted Use, including the right to construct a fence around the Premises or equipment, install warning signs to make individuals aware of risks, install protective barriers, install any other control measures reasonably required by Tenant's safety procedures or applicable law, and undertake any other appropriate means to secure the Premises or equipment at Tenant's expense. Tenant has the right to modify, supplement, replace, upgrade, expand the Communication Facility (including, for example, increasing the number of antennas or adding microwave dishes to the Structure or relocate the Communication Facility or add additional cabinets within the Premises at any time during the Term. Tenant will be allowed to make such alterations to the Property in order to ensure that the Communication Facility complies with all applicable federal, state or local laws, rules or regulations. In the event Tenant desires to modify or upgrade the Communication Facility, in a manner that requires an additional portion of the Property (the "**Additional Premises**") for such modification or upgrade, Landlord agrees to lease to Tenant the Additional Premises, upon the same terms and conditions set forth herein, except that the Rent shall increase, in conjunction with the lease of the Additional Premises by the amount equivalent to the then-current per square foot rental rate charged by Landlord to Tenant times the square footage of the Additional Premises. Landlord agrees to take such actions and enter into and deliver to Tenant such documents as Tenant reasonably requests in order to effect and memorialize the lease of the Additional Premises to Tenant.

3. **TERM.**

(a) The initial lease term 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 (5th) anniversary of the Term Commencement Date.

(b) This Agreement will automatically renew for seventeen (17) additional five (5) year term(s) (each additional five (5) year term shall be defined as an "**Extension Term**"), upon the same terms and conditions set forth herein 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 the 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, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of one (1) year, and for annual terms thereafter ("**Annual Term**") until terminated by either party hereto by giving to the other party hereto written notice of its intention to so terminate at least six (6) months prior to the end of any such Annual Term. Monthly rent 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**."

4. **RENT.**

(a) Commencing on the first day of the calendar month following the date that Tenant commences construction (the "**Rent Commencement Date**"), Tenant will pay Landlord on or before the tenth (10th) day of each calendar month in advance, [redacted] Dollars [redacted] (the "**Rent**"), at the address set forth above. In any partial month occurring after the Rent Commencement Date, the Rent will be prorated. The initial Rent payment will be forwarded by Tenant to Landlord within forty-five (45) days after the Rent Commencement Date.

(b) Upon the commencement of each Extension Term, the monthly Rent will increase by [redacted] over the Rent paid during the previous term.

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

5. **APPROVALS.**

(a) Landlord agrees that Tenant's ability to use the Premises is contingent upon the suitability of the Premises and Property for the 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 the Permitted Use and agrees to reasonably assist Tenant with such applications and with obtaining and maintaining the Government Approvals.

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

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

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

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

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

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

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

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

7. **INSURANCE.** During the Option Term and throughout the Term, Tenant will purchase and maintain in full force and effect such general liability policy as Tenant may deem necessary. Said policy of general liability insurance will at a minimum provide a combined single limit of One Million and No/100 Dollars ($1,000,000.00). Notwithstanding the foregoing, Tenant shall have the right to self-insure such general liability coverage or by adding this site as an endorsement on a pre-existing master policy which contains the above limit.

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 the 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 Effective Date, a lease, license or any other right to any third party, if the exercise of such grant may in any way adversely affect or interfere with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will notify Tenant in writing prior to granting any third party the right to install and operate communications equipment on the Property.

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

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

9. **INDEMNIFICATION.**

(a) Tenant agrees to indemnify, defend and hold Landlord harmless from and against any and all injury, loss, damage or liability , costs or expenses in connection with a third party claim (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, invitees, 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 , costs or expenses in connection with a third party claim (including reasonable attorneys' fees and court costs) arising directly from the actions or failure to act of Landlord, its employees, invitees, agents or independent contractors, 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 9 and provide the indemnifying party with copies of any demands, notices, summonses, or legal papers received in connection with such claim, demand, lawsuit, or the like; (ii) shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of the indemnifying party; and (iii) shall fully cooperate with the indemnifying party in the defense of the claim, demand, lawsuit, or the like. A delay in notice shall not relieve the indemnifying party of its indemnity obligation, except (1) to the extent the indemnifying party can show it was prejudiced by the delay; and (2) the indemnifying party shall not be liable for any settlement or litigation expenses incurred before the time when notice is given.

10. WARRANTIES.

(a) Each of Tenant and Landlord (to the extent not a natural person) each acknowledge and represent that it is duly organized, validly existing and in good standing and has the right, power, and authority or capacity, as applicable, to enter into this Agreement and bind itself hereto through the party or individual 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) Landlord grants to Tenant sole, actual, quiet and peaceful use, enjoyment and possession of the Premises in accordance with the terms of this Agreement 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, then 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 in the form attached hereto as Exhibit 2.

11. ENVIRONMENTAL.

(a) Landlord represents and warrants, except as may be identified in **Exhibit 3** attached to this Agreement, (i) the Property, as of the Effective Date, 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 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 indemnification provisions contained in 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 materials 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, then 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, it's subtenants, lessees assigns and licensees 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 (the "Access Easement"). 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 4**, and 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. If Tenant elects to utilize an Unmanned Aircraft System ("UAS") in connection with its installation, construction, monitoring, suite audits, inspections, maintenance, repair, modification, or alteration activities at the Property, Landlord hereby grants Tenant, as any UAS operator acting on Tenant's behalf, express permission to fly over the applicable Property and Premises, and consents to the use of audio and video navigation and recording in connection with the use of the UAS. 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, [redacted] per day in 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. Notwithstanding the foregoing, Tenant will not be responsible for the replacement of any trees, shrubs or other vegetation.

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 sub-meter from Landlord. When sub-metering is required under this Agreement, Landlord will read the meter and provide Tenant with an invoice and usage data on a monthly basis. Tenant shall reimburse Landlord for such utility usage at the same rate charged to Landlord by the utility service provider. 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 sixty (60) days of receipt of the usage data and required forms. Landlord shall maintain accurate and detailed records of all utility expenses, invoices and payments applicable to Tenant's reimbursement obligations hereunder. Within fifteen (15) days after a request from Tenant, Landlord shall provide copies of such utility billing records to the Tenant in the form of copies of invoices, contracts and cancelled checks. If the utility billing records reflect an overpayment by Tenant, Tenant shall have the right to deduct the amount of such overpayment from any monies due to Landlord from Tenant.

(c) 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.

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

15. <u>DEFAULT AND RIGHT TO CURE.</u>

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

cure Landlord's default and to deduct the costs of such cure from any monies due to Landlord from Tenant, and (ii) any and all other rights available to it under law and equity.

16. ASSIGNMENT/SUBLEASE.

(a) 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. Landlord shall have the right to assign or otherwise transfer all or a portion of this Agreement and Easement granted herein, upon written notice to Tenant except for the following; any assignment or transfer in whole or part of this Agreement which is separate and distinct from a transfer of Landlord's entire right title and interest in the Property, shall require the prior written consent of Tenant which may be withheld in tenant's sole discretion.

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 hereto as follows:

If to Tenant:	Tillman Infrastructure LLC 152 West 57th Street 27th Floor New York, New York 10019 Attn: Lease Administration
With a copy to:	Tillman Infrastructure LLC 152 West 57th Street 27th Floor New York, New York 10019 Attn: Suruchi Ahuja
If to Landlord:	Terry L. Newton and Kimberly D. Newton 2589 Blue Bird Road Falls of Rough, Kentucky 40119

Either party hereto may change the place for the giving of notice to it by thirty (30) days' prior written notice to the other party hereto 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 twenty-four (24) 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 Structure and Communication Facility, moving expenses, prepaid Rent, and business dislocation expenses. Tenant will be entitled to reimbursement for any prepaid Rent on a *pro rata* basis.

19. CASUALTY. Landlord will provide notice to Tenant of any casualty or other harm affecting the Property within twenty-four (24) hours of the casualty or other harm. If any part of the Communication Facility or the 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 *pro rata* 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 this 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 19, 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 including the Structure or any portion thereof. The Communication Facility shall be deemed personal property for purposes of this Agreement, regardless of whether any portion is deemed real or personal property under applicable law; Landlord consents to Tenant's right to remove all or any portion of the Communication Facility from time to time in Tenant's sole discretion and without Landlord's consent.

21. TAXES.

(a) Landlord shall be responsible for (i) all taxes and assessments levied upon the lands, improvements and other property of Landlord including any such taxes that may be calculated by a taxing authority using any method, including the income method (ii) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with this Agreement and (iii) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with a sale of the Property or assignment of Rent payments by Landlord. Tenant shall be responsible for (i) 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 and (ii) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with an assignment of this Agreement or sublease by Tenant. 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 in a timely manner and Tenant's rights with respect to such taxes are prejudiced by the delay, Landlord shall reimburse Tenant for any increased costs directly resulting from the delay and 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 permitted by law. This right shall include the ability to institute any legal,

regulatory or informal action in the name of Landlord, Tenant, or both, with respect to the valuation of the Premises. Landlord shall cooperate with respect to the commencement and prosecution of any such proceedings and will execute any documents required therefor. The expense of any such proceedings shall be borne by Tenant and any refunds or rebates secured as a result of Tenant's action shall belong to Tenant, to the extent the amounts were originally paid by Tenant. In the event Tenant notifies Landlord by the due date for assessment of Tenant's intent to contest the assessment, Landlord shall not pay the assessment pending conclusion of the contest, unless required by applicable law.

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

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

(f) Any tax-related notices shall be sent to Tenant in the manner set forth in Section 17 and, in addition, a copy of any such notices shall be sent to the below 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 address changes by notice to Landlord, Landlord shall be required to provide Tenant's new tax address to the taxing authority or authorities.

Tillman Infrastructure LLC
152 W 57th Street
New York, New York 10017
Attn: Network Real Estate Administration--Taxes

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

22. SALE OF PROPERTY.

(a) Landlord may sell the Property or a portion thereof to a third party, provided: (i) the sale is made subject to the terms of this Agreement; and (ii) if the sale does not include the assignment of Landlord's full interest in this Agreement, the purchaser must agree to perform, without requiring compensation from Tenant or any subtenant, any obligation of Landlord under this Agreement, including Landlord's obligation to cooperate with Tenant as provided hereunder.

(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 the 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 Section 22(b) to Tenant. Until Tenant receives all such documents, Tenant's failure to make payments under this Agreement shall not be an event of default and Tenant reserves the right to hold payments due under this Agreement.

i. Old deed to Property
ii. New deed to Property
iii. Bill of Sale or Transfer
iv. Copy of current Tax Bill
v. New IRS Form W-9
vi. Completed and Signed Tenant Payment Direction Form

vii. Full contact information for new Landlord including phone number(s)

(c) Landlord agrees not to sell, lease or use any areas of the Property or the Surrounding Property for the installation, operation or maintenance of other wireless communication 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 communication facility or equipment.

(d) The provisions of this Section 22 shall in no way limit or impair the obligations of Landlord under this Agreement, including interference and access obligations.

23. **RIGHT OF FIRST REFUSAL**. Notwithstanding the provisions contained in Section 22, if at any time after the Effective Date, Landlord receives a bona fide written offer from a third party seeking any sale, conveyance, assignment or transfer, whether in whole or in part, of any property interest in or related to the Premises, including without limitation any offer seeking an assignment or transfer of the Rent payments associated with this Agreement or an offer to purchase an easement with respect to the Premises ("**Offer**"), Landlord shall immediately furnish Tenant with a copy of the Offer. Tenant shall have the right within ninety (90) days after it receives such copy to match the financial terms of the Offer and agree in writing to match such terms of the Offer and Tenant may assign its rights to a third party. If Tenant chooses not to exercise this right or fails to provide written notice to Landlord within the ninety (90) day period, Landlord may sell, convey, assign or transfer such property interest in or related to the Premises pursuant to the Offer, subject to the terms of this Agreement. If Landlord attempts to sell, convey, assign or transfer such property interest in or related to the Premises without complying with this Section 23, the sale, conveyance, 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 23. Tenant's failure to exercise the right of first refusal shall not be deemed a waiver of the rights contained in this Section 23 with respect to any future proposed conveyances as described.

24. **ELECTRONIC SIGNATURE**. The parties acknowledge and agree that this Lease may be executed by electronic signature, which shall be considered as an original signature for all purposes and shall have the same force and effect as an original signature. Without limitation, "electronic signature" shall include faxed version of an original signature or electronically scanned and transmittal version (e.g. via pdf) of an original signature.

25. **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 of Lease substantially in the form attached as **Exhibit 5.** Either party may record this Memorandum of Lease at any time during the Term, in its absolute discretion. Thereafter during the Term, 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 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 the Agreement or as same may be duplicative, such consent will not be unreasonably withheld, conditioned or delayed; (iv) exhibits are an integral part of this Agreement and are incorporated by reference into this Agreement; (v) use of the terms "termination" or "expiration" are interchangeable; (vi) reference to a default will take into consideration any applicable notice, grace and cure periods; (vii) to the extent there is any issue with respect to any alleged, perceived or actual ambiguity in this Agreement, the ambiguity shall not be resolved on the basis of who drafted the Agreement; (viii) the singular use of words includes the plural where appropriate; and (ix) if any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions of this Agreement shall remain in full force if the overall purpose of the Agreement is not rendered impossible and the original purpose, intent or consideration is not materially impaired.

(i) **Affiliates.** All references to "Tenant" shall be deemed to include any Affiliate of Tillman Infrastructure 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.

(l) **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 reasonable attorneys' fees and expenses. Prevailing party means the party determined by the court to have most nearly prevailed even

if such party did not prevail in all matters. This provision will not be construed to entitle any party other than Landlord, Tenant and their respective Affiliates to recover their fees and expenses.

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

(o) **Incidental Fees.** Unless specified in this Agreement, no unilateral fees or additional costs or expenses are to be applied by either party to the other party, including review of plans, structural analyses, consents, provision of documents or other communications between the parties.

(p) **Further Acts.** Upon request, Landlord will cause to be promptly and duly taken, executed, acknowledged and delivered all such further acts, documents, and assurances as Tenant may request from time to time in order to effectuate, carry out and perform all of the terms, provisions and conditions of this Agreement and all transactions and permitted use contemplated by this Agreement, including any Subordination, Non-Disturbance and Attornment Agreement.

(q) **Confidentiality**. The terms and conditions of this Agreement are confidential between the parties and Landlord shall not disclose the same to anyone else, except to Landlord's accountant, attorney and as agreed to by the Parties (except as to sublessees), or as is necessary to effectuate the terms of this Agreement. Any Disclosure in violation of this Section shall be deemed a material breach of this Agreement.

(r) **Estoppel**. Either party will, at any time upon twenty (20) business days prior written notice from the other, execute, acknowledge and deliver to the other a statement in writing (i) certifying that this Agreement is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying this Agreement, as so modified, is in full force and effect) and the date to which the Rent and other charges are paid in advance, if any, and (ii) acknowledging that there are not, to such party's knowledge, any uncured defaults on the part of the other party hereunder, or specifying such defaults if any are claimed.

(s) **Rules Against Perpetuities**. If this Agreement or any covenants or provisions herein would otherwise be unlawful, void or voidable for violation of the Rule against Perpetuities, then the same shall continue until 20 years and 6 months after the date of death of the last survivor of the members of Congress of the United States of America (including the House of Representatives and the Senate) representing the State in which the Premises is located who are serving on the date of this Agreement

(t) **Security Interest**. Tenant has the right to assign, mortgage or grant a security interest in all or a portion of Tenant's interest in and to this Agreement, Premises, the Structure, Communication Facility, equipment and Easements, and may assign such Tenant's interests to any such assignee, mortgagees, or holders of security interests, all without Landlord's consent ("Secured Party" or, collectively, "Secured Parties"). If requested, Lessor shall execute such consent to Tenant's financing as may reasonably be required by Secured Parties.

[SIGNATURE PAGES TO FOLLOW]

IN WITNESS WHEREOF, the parties have caused this Agreement to be effective as of the Effective Date.

"WITNESSES"

Tiffany Chaffins
Name: Tiffany Chaffins

Alexis Reynolds
Name: Alexis Reynolds

Tiffany Chaffins
Name: Tiffany Chaffins

Alexis Reynolds
Name: Alexis Reynolds

"LANDLORD"

TERRY L. NEWTON and KIMBERLY D. NEWTON, a married couple

By: Terry L. Newton
Print Name: Terry L. Newton
Date: 2-19-21

By: Kimberly D. Newton
Print Name: Kimberly D. Newton
Date: 02/19/21

LANDLORD ACKNOWLEDGMENTS

STATE OF KENTUCKY)
) ss:
COUNTY OF GRAYSON)

BE IT REMEMBERED, that on this 19 day of February, 2021 before me, the subscriber, a person authorized to take oaths in the State of Kentucky, personally appeared **Terry L. Newton**, who, being duly sworn on his/her/their oath, deposed and made proof to my satisfaction that he/she/they is/are the person(s) named in the within instrument; and I, having first made known to him/her/them the contents thereof, he/she/they did acknowledge that he/she/they signed, sealed and delivered the same as his/her/their voluntary act and deed for the purposes therein contained.

Jonathan Caswell
Notary Public: Jonathan Caswell #610834
My Commission Expires: 10-19-2022

STATE OF KENTUCKY)
) ss:
COUNTY OF GRAYSON)

BE IT REMEMBERED, that on this 19 day of February, 2021 before me, the subscriber, a person authorized to take oaths in the State of Kentucky, personally appeared **Kimberly D. Newton**, who, being duly sworn on his/her/their oath, deposed and made proof to my satisfaction that he/she/they is/are the person(s) named in the within instrument; and I, having first made known to him/her/them the contents thereof, he/she/they did acknowledge that he/she/they signed, sealed and delivered the same as his/her/their voluntary act and deed for the purposes therein contained.

Jonathan Caswell
Notary Public: Jonathan Caswell #610834
My Commission Expires: 10-19-2022

IN WITNESS WHEREOF, the parties have caused this Agreement to be effective as of the Effective Date.

"WITNESSES"

_____
Name: _____

_____
Name: _____

"TENANT"

TILLMAN INFRASTRUCTURE LLC,
a Delaware limited liability company

By: _____
Name: Shruchi Ahuja
Its: Authorized Signatory
Date: 3-19-2021

ACKNOWLEDGMENT FOR TENANT

STATE)
) **ss.**
COUNTY OF)

On the 19th day of March in the year of 2021, before me, the undersigned, a Notary Public in and for said state, personally appeared Shruchi Ahuja, Authorized Signatory of Tillman Infrastructure LLC, a Delaware limited liability company, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the individual or the entity upon behalf of which the individual acted, executed the instrument.

WITNESS my hand and official seal.

Signature: _____
My Commission Expires: _____
Commission Number: _____

Chris Mularadelis
Notary Public, State of New York
No. 02MU6126986
Qualified in New York County
Commission Expires September 3, 2021

Exhibit 1

Description of the Premises & Access and Utility Easements:

to the Option and Lease Agreement dated March 19, 20 21, by and between Terry L. Newton and Kimberly D. Newton, a married couple, as Landlord, and Tillman Infrastructure LLC, a Delaware limited liability company, as Tenant.

The Property is legally described as follows:

Certain tract or parcel of land lying on or being near the waters of Rough Creek, in Grayson County, Kentucky. and being more fully described as follows:

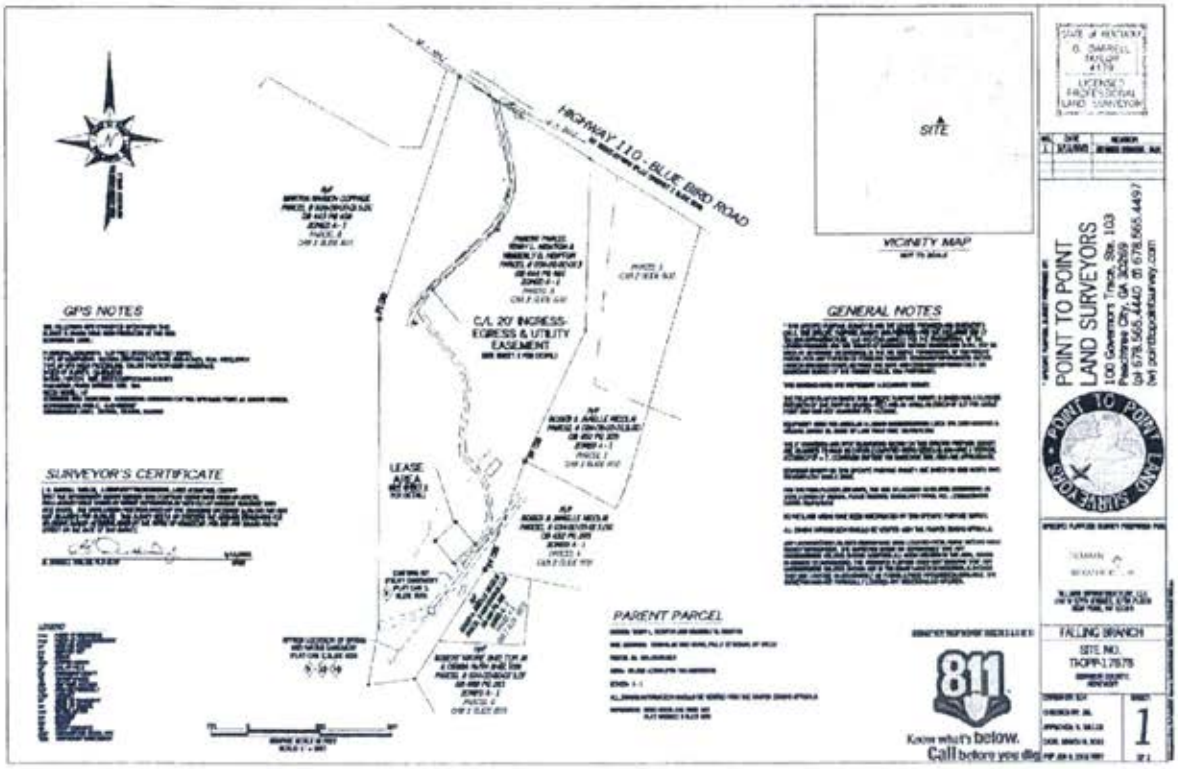
Being PARCEL NUMBER 5 (22.555 acres) of THE KENNETH AND MYRNA FENTRESS FARM DIVISION, as shown by plat completed September 28, 2015, appearing of record in Plat Cabinet 2, Slide 600, records of the Grayson County Clerk's Office.

BEING SUBJECT TO AN EASEMENT granted to the owners of Parcels # 1, #2 and #6 for the use water from the spring located subject property together with the 30' utility easement designated on Plat appearing in Plat Cabinet 2, Slide 600. as "water line easement leading from spring to house and barn".

Being a new survey description of a portion of that property conveyed to Frances Edwards and Beverly Razor by deed from Myrna Frances Fentress, a widow and single person, dated April 29, 2008, appearing in Deed Book 382, Page 440, records of the Grayson County Clerk.

Being the same property conveyed to Terry L. Newton and Kimberly D. Newton, his wife from Frances Edwards and Joseph Eugene Edwards, her husband by deed dated December 11, 2015 and recorded on December 23, 2015, in Deed Book 444, Page 461.

The Premises are described and/or depicted as follows:



Notes:

1. THIS EXHIBIT MAY BE REPLACED BY A LAND SURVEY AND/OR CONSTRUCTION DRAWINGS OF THE PREMISES ONCE RECEIVED BY TENANT.
2. ANY SETBACK OF THE PREMISES FROM THE PROPERTY'S BOUNDARIES SHALL BE THE DISTANCE REQUIRED BY THE APPLICABLE GOVERNMENT AUTHORITIES.
3. WIDTH OF ACCESS ROAD SHALL BE THE WIDTH REQUIRED BY THE APPLICABLE GOVERNMENT AUTHORITIES, INCLUDING POLICE AND FIRE DEPARTMENTS.
4. THE TYPE, NUMBER AND MOUNTING POSITIONS AND LOCATIONS OF ANTENNAS AND TRANSMISSION LINES ARE ILLUSTRATIVE ONLY. ACTUAL TYPES, NUMBERS AND MOUNTING POSITIONS MAY VARY FROM WHAT IS SHOWN ABOVE.

EXHIBIT J
NOTIFICATION LISTING

Falling Branch – Notice List

NEWTON TERRY L & KIMBERLY D
2589 BLUEBIRD RD
FALLS OF ROUGH, KY 40119

NICOLAI ROGER & JANELLE
2663 BLUE BIRD RD
FALLS OF ROUGH, KY 40119

SHELTON ROBERT WAYNE JR & DEBRA R
362 CHERRY HILL PARKWAY
MT WASHINGTON, KY 40047

COPPAGE MARTHA RAASCH
187 CHIPMUNK LN
FALLS OF ROUGH, KY 40119

EDWARDS CHARLES B & PAULINE S
10141 FALLS OF ROUGH RD
FALLS OF ROUGH, KY 40119

GRANT RONNIE DEAN & PATRICIA
142 QUEENS CT
BEAVER DAM, KY 42320

STREBLE NICHOLAS & WHITNEY
2878 WEAVERS RUN RD
WEST POINT, KY 40177

STREBLE NICHOLAS & WHITNEY
2878 WEAVERS RUN RD
WEST POINT, KY 40177

GITTINGS GEORGE L JR & SUE ANN
C/O ADAM THOMPSON & TRAVIS MICHELS
261 N SKYLINE DR
LOUISVILLE, KY 40229

EXHIBIT K
COPY OF PROPERTY OWNER NOTIFICATION

PIKE LEGAL

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

Notice of Proposed Construction of Wireless Communications Facility Site Name: Falling Branch

Dear Landowner:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC, a Delaware limited liability company have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 2589 Blue Bird Road, Falls of Rough, KY 40119 (37° 35' 48.02" North latitude, 86° 29' 24.53" West longitude). The proposed facility will include a 145-foot tall tower, with an approximately 4-foot tall lightning arrestor attached at the top, for a total height of 149-feet, plus 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 2021-00398 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. AT&T Mobility's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the area. Please feel free to contact us toll free at (800) 516-4293 if you have any comments or questions about this proposal.

Sincerely,
David A. Pike
Attorney for Applicants

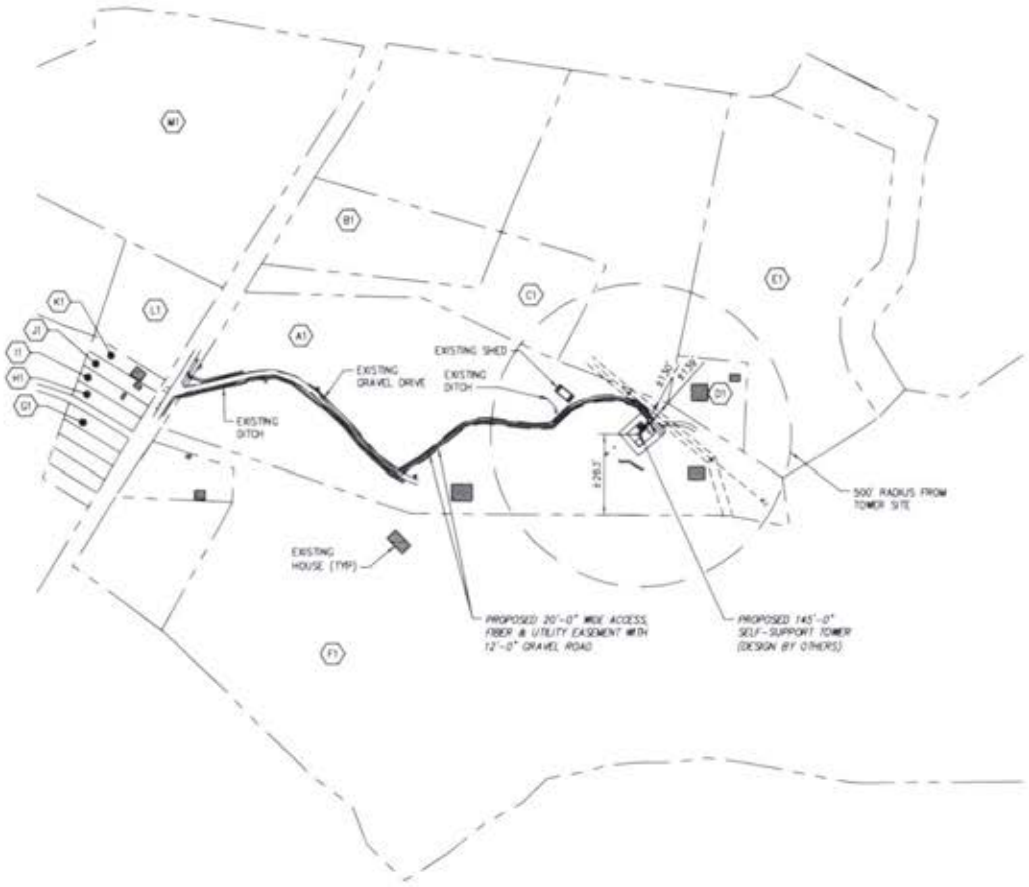
enclosures

Driving Directions to Proposed Tower Site

1. Beginning at 130 E. Market Street, Leitchfield, KY 42754, head west on E Market Street toward S Heyser Drive and travel approximately 459 feet.
2. Turn right at the 2nd cross street onto S Main Street and travel approximately 459 feet.
3. At the traffic circle, take the 3rd exit onto Public Square and travel approximately 410 feet.
4. Follow Public Square as it turns slightly right and becomes W Main Street and travel approximately 0.9 miles.
5. Continue onto KY-54 W / Owensboro Road and travel approximately 10.0 miles.
6. Turn right onto KY-79 N and travel approximately 5.8 miles.
7. Turn right onto KY-110 and travel approximately 0.4 miles.
8. Turn right to stay on KY-110 and travel approximately 0.9 miles.
9. Turn left to stay on KY-110 and travel approximately 1.3 miles.
10. The site is located on the right at 2589 Blue Bird Road, Falls of Rough, KY 40119.
11. The site coordinates are:
    a. North 37 deg 35 min 48.02 sec
    b. West 86 deg 29 min 24.53 sec

Prepared by:
Chris Shouse
Pike Legal Group
1578 Highway 44 East, Suite 6
P.O. Box 396
Shepherdsville, KY 40165-3069
Telephone: 502-955-4400 or 800-516-4293

DIRECTIONS:
DEPART LOUISVILLE INTERNATIONAL AIRPORT ON LOCAL ROAD(S) (EAST) FOR 142 YDS TOWARD REMOTE PARKING. TURN LEFT (NORTH-WEST) ONTO LOCAL ROAD(S) FOR 0.3 MI. ROAD NAME CHANGES TO TOLL PLAZA DR FOR 0.2 MI. MERGE ONTO LOWER TERMINAL DR FOR 0.1 MI TOWARD I-264 / I-65 / PARKING / TERMINAL RETURN / DOWNTOWN. MERGE ONTO TERMINAL DR FOR 0.2 MI. KEEP RIGHT ONTO RAMP FOR 0.6 MI TOWARD I-264 / I-65 / DOWNTOWN. KEEP LEFT TO STAY ON RAMP FOR 0.3 MI TOWARD. TAKE RAMP (RIGHT) ONTO I-65 FOR 39.4 MI TOWARD I-65 / US-61 / NASHVILLE. AT EXIT 91, TURN RIGHT ONTO RAMP FOR 0.2 MI TOWARD US-31W / KY-61 / WK PARKWAY / HODGENVILLE / PADUCAH. KEEP RIGHT TO STAY ON RAMP FOR 0.2 MI TOWARD US-31W / KY-61 / WK PARKWAY / ELIZABETHTOWN / OWENSBORO. TAKE RAMP (LEFT) ONTO WENDELL H FORD WESTERN KENTUCKY PKWY FOR 29.3 MI TOWARD WK PARKWAY WEST / OWENSBORO / PADUCAH. AT EXIT 107, KEEP RIGHT ONTO RAMP FOR 0.2 MI TOWARD KY-259 / LEITCHFIELD / BROWNSVILLE. TURN RIGHT (NORTH) ONTO SR-259 FOR 0.7 MI. KEEP STRAIGHT ONTO US-62 FOR 0.2 MI. AT ROUNDABOUT, TAKE THE THIRD EXIT ONTO W MAIN ST FOR 142 YDS. BEAR RIGHT (WEST) ONTO SR-54 FOR 10.8 MI. TURN RIGHT (NORTH) ONTO SR-79 FOR 5.7 MI. TURN RIGHT (EAST) ONTO SR-110 FOR 0.4 MI. TURN RIGHT TO STAY ON SR-110 FOR 0.9 MI. TURN LEFT TO STAY ON SR-110 FOR 1.5 MI. TURN RIGHT (SOUTH) ONTO PARADISE ACRES RD FOR 0.3 MI. BEAR RIGHT (SOUTH) ONTO BLUE RIDGE RD FOR 0.3 MI. CHECK LOCAL TIME, THIS STOP IS IN A DIFFERENT TIME ZONE. TURN RIGHT (NORTH) ONTO LOCAL ROAD(S) FOR 0.2 MI. ARRIVE 2589 BLUE BIRD ROAD FALLS OF ROUGH, KY 40116



PARCEL KEY:

A1 PARCEL ID: 034-00-00-013
TERRY L. NEWTON & KIMBERLY D. NEWTON
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40119

B1 PARCEL ID: 034-00-00-013.00
NICOLAI ROGER & JANELLE
2663 BLUE BIRD RD
FALLS OF ROUGH, KY 40119

C1 PARCEL ID: 034-00-00-013.0C
NICOLAI ROGER & JANELLE
2663 BLUE BIRD RD
FALLS OF ROUGH, KY 40119

D1 PARCEL ID: 034-00-00-013.0J
NICOLAI ROGER & JANELLE
2663 BLUE BIRD RD
FALLS OF ROUGH, KY 40119

E1 PARCEL ID: 034-00-00-013.0F
SHELTON ROBERT WAYNE JR & DEBRA R.
362 CHERRY HILL PARKWAY
MT WASHINGTON, KY 40047

F1 PARCEL ID: 034-00-00-013.0C
COPPAGE MARTHA RAASCH
187 CHIPMUNK LN
FALLS OF ROUGH, KY 40119

G1 PARCEL ID: FENTRS CS-057
EDWARDS CHARLES B & PAULINE S
10141 FALLS OF ROUGH RD
FALLS OF ROUGH, KY 40119

H1 PARCEL ID: FENTRS CS-058
GRANT RONNIE DEAN & PATRICIA
142 QUEENS CT
BEAVER DAM, KY 42320

I1 PARCEL ID: FENTRS CS-059
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J1 PARCEL ID: FENTRS CS-060
STREBLE NICHOLAS & MHITNEY
2878 WEAVERS RUN RD
WEST POINT, KY 40177

K1 PARCEL ID: FENTRS CS-061
STREBLE NICHOLAS & MHITNEY
2878 WEAVERS RUN RD
WEST POINT, KY 40177

L1 PARCEL ID: FENTRS CS-062
QITTINOS GEORGE L JR & SUE ANN
C/O ADAM THOMPSON & TRAVIS MICHELS
261 N SKYLINE DR
LOUISVILLE, KY 40229

M1 PARCEL ID: LOOK 0-00X
LANDOWNER INFORMATION FOR PARCEL UNAVAILABLE PER GRAYSON COUNTY PVA OFFICE

GENERAL NOTE:
1. ALL INFORMATION SHOWN HEREIN WAS OBTAINED FROM THE RECORDS OF THE WARREN COUNTY KENTUCKY PROPERTY VALUATION ADMINISTRATION OFFICE ON 08/31/21. THE PROPERTY VALUATION ADMINISTRATION MAY NOT REFLECT THE CURRENT OWNERS AND ADDRESSES DUE TO INACCURACIES AND TIME LAPSE IN UPDATING FILES. MORRISON HERSHFIELD CORPORATION AND THE COUNTY PROPERTY VALUATION ADMINISTRATION EXPRESSLY DISCLAIM ANY WARRANTY FOR THE CONTENT AND ANY ERRORS CONTAINED IN THEIR FILES.
2. THIS MAP IS FOR GENERAL INFORMATIONAL PURPOSES ONLY AND IS NOT A BOUNDARY SURVEY.
3. NOT FOR RECORDING OR PROPERTY TRANSFER.

GRAYSON COUNTY KY PVA
ERNIE PERKINS, PVA
110 PUBLIC SQUARE
LEITCHFIELD, KY 42754
OFFICE: (270) 259-4838
FAX: (270) 259-3918

NOTE:
PARCEL NUMBERS ARE OF RECORD IN THE GRAYSON COUNTY PROPERTY VALUATION ADMINISTRATOR OFFICE

NOTE:
IN COMPLIANCE WITH LOCAL REGULATIONS, CONTRACTOR TO PRESERVE EXISTING VEGETATION NEAR THE SITE.

Z CALLED NORTH

1 500' RADIUS AND ABUTTERS MAP
SCALE: 100' 0 100' 200' 400'
1 in FEET)
SCALE: 11"x17" SHEET 1" = 400'-0"
SCALE: 22"x34" SHEET 1" = 200'-0"

at&t MOBILITY CORP
5373 E. BROAD ST
REYNOLDSBURG, OH 43068

TILLMAN INFRASTRUCTURE
152 W. 57TH STREET
NEW YORK, NEW YORK 10019
TEL: 212-706-1877

INFINIGY8

9	ISSUED FOR CONSTRUCTION	CD	10/14/21
8	ISSUED FOR CONSTRUCTION	CD	10/07/21
7	ISSUED FOR CONSTRUCTION	CD	09/15/21
6	ISSUED FOR CONSTRUCTION	CD	09/08/21
5	ISSUED FOR CONSTRUCTION	CD	08/11/21
4	ISSUED FOR CONSTRUCTION	CD	07/14/21
3	ISSUED FOR REVIEW	CD	06/30/21

Drawn: GD Date: 06/30/21
Designed: GD Date: 06/30/21
Reviewed: CJM Date: 06/30/21

Project Number: 15346957

Project Title:
15346957
TI-OPP-17878
FALLING BRANCH
2589 BLUE BIRD ROAD
FALLS OF ROUGH, KY 40119

COMMONWEALTH OF KENTUCKY
CHRISTOPHER J. MORRISON
21402
LICENSED
PROFESSIONAL ENGINEER

Drawing Title:
500' RADIUS AND ABUTTERS MAP & ADDRESSES

Drawing Scale: AS NOTED
Date: 10/14/21
CD

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF APPLICABLE STATE AND/OR LOCAL LAWS

Drawing Number:
C3

EXHIBIT L
COPY OF COUNTY JUDGE/EXECUTIVE NOTICE

PIKE LEGAL

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

VIA CERTIFIED MAIL

Kevin Henderson
County Judge Executive
130 E. Market Street
Leitchfield, KY 42754

RE: Notice of Proposal to Construct Wireless Communications Facility
Kentucky Public Service Commission Docket No. 2021-00398
Site Name: Falling Branch

Dear Judge/Executive:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC, a Delaware limited liability company have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 2589 Blue Bird Road, Falls of Rough, KY 40119 (37° 35' 48.02" North latitude, 86° 29' 24.53" West longitude). The proposed facility will include a 145-foot tall tower, with an approximately 4-foot tall lightning arrestor attached at the top, for a total height of 149-feet, plus 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 2021-00398 in any correspondence sent in connection with this matter.

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

Sincerely,
David A. Pike
Attorney for Applicants
enclosures

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    a. North 37 deg 35 min 48.02 sec
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Prepared by:
Chris Shouse
Pike Legal Group
1578 Highway 44 East, Suite 6
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DIRECTIONS:
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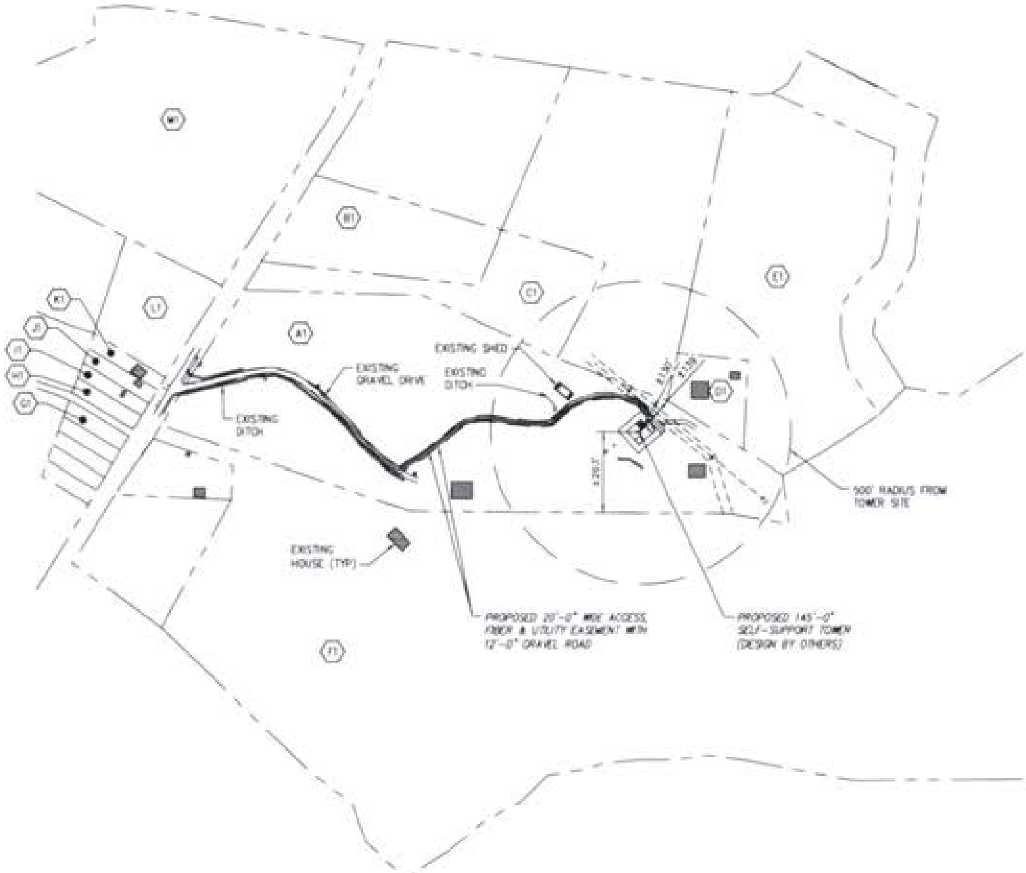

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FALLS OF ROUGH, KY 40119

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2663 BLUE BIRD RD
FALLS OF ROUGH, KY 40119

(D1) PARCEL ID: 034-00-00-013.0J
NICOLAI ROGER & JANELLE
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FALLS OF ROUGH, KY 40119

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SHELTON ROBERT WAYNE JR & DEBRA R
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(IN FEET)
SCALE: 11"x17" SHEET 1" = 400'-0"
SCALE: 22"x34" SHEET 1" = 200'-0"

GRAYSON COUNTY KY PVA
ERNIE PERKINS, PVA
10 PUBLIC SQUARE
LEITCHFIELD, KY 42754
OFFICE: (270) 259-4838
FAX: (270) 259-3918

at&t

TILLMAN INFRASTRUCTURE
152 W 57TH STREET
NEW YORK, NEW YORK 10019

INFINIGY

15346957
TI-OPP-17878
FALLING BRANCH

STATE OF KENTUCKY
CHRISTOPHER WARREN
LICENSED PROFESSIONAL ENGINEER

500' RADIUS AND ABUTTERS MAP & ADDRESSES

CD

Drawing Number
C3

EXHIBIT M
COPY OF POSTED NOTICES
AND NEWSPAPER NOTICE ADVERTISEMENT

SITE NAME: FALLING BRANCH
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 and Tillman Infrastructure LLC, a Delaware limited liability company propose to construct a telecommunications **tower** on this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; 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 2021-00398 in your correspondence.

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC, a Delaware limited liability company propose 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 2021-00398 in your correspondence.

PIKE LEGAL

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

VIA TELEPHONE: (270) 259-6061
VIA EMAIL: news@graysonrecord.com

The Record
20 Public Square
Leitchfield, KY 42754

RE: Legal Notice Advertisement
Site Name: Falling Branch

Dear Staff:

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

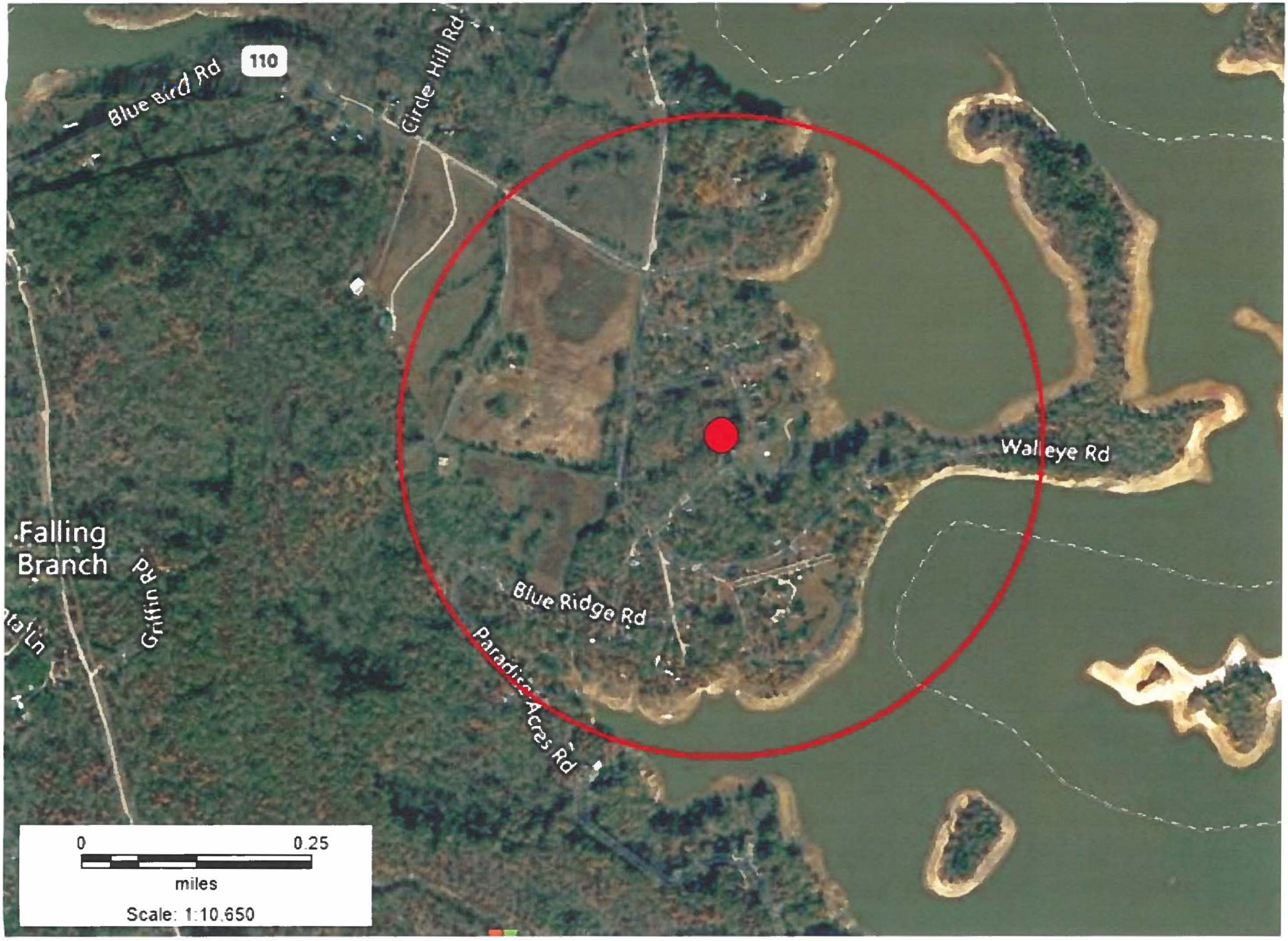
NOTICE

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC, a Delaware limited liability company have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located on 2589 Blue Bird Road, Falls of Rough, KY 40119 (37° 35' 48.02" North latitude, 86° 29' 24.53" 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 2021-00398 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,
Chris Shouse
Pike Legal Group, PLLC

EXHIBIT N
COPY OF RADIO FREQUENCY DESIGN SEARCH AREA



Lat: 37.596529
Long: -86.484175
Radius: .35 miles

Falling Branch Search Area