

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED

JAN 07 2016

PUBLIC SERVICE
COMMISSION

In the Matter of:

**APPLICATION OF CUMBERLAND CELLULAR
PARTNERSHIP FOR ISSUANCE OF
A CERTIFICATE OF PUBLIC CONVENIENCE
AND NECESSITY TO CONSTRUCT A CELL SITE
(ADAIR EAST) IN RURAL SERVICE AREA #5
(ADAIR) OF THE COMMONWEALTH
OF KENTUCKY**

CASE NO. 2015-00314

**APPLICATION FOR A CERTIFICATE
OF PUBLIC CONVENIENCE AND NECESSITY (ADAIR EAST)**

Cumberland Cellular Partnership (“Cumberland Cellular”), through counsel, pursuant to KRS 278.020 and 278.040, hereby submits this application for a certificate of public convenience and necessity to construct a cell site to be known as the Adair East cell site in and for rural service area (“RSA”) #5 of the Commonwealth of Kentucky, namely the counties of Barren, Monroe, Metcalfe, Adair, Cumberland, Russell, Clinton, Wayne, McCreary and Hart, Kentucky.

1. As required by 807 KAR 5:001 § 14 and 807 KAR 5:063, Cumberland Cellular states that it is a Kentucky limited liability partnership whose full name and post office address are: Cumberland Cellular Partnership, 2902 Ring Road, Elizabethtown, Kentucky, 42701. An email address for Cumberland Cellular Partnership is dougu@bluegrasscellular.com. A copy of the Certificate of Assumed Name as a General Partnership for Cumberland Cellular Partnership was previously filed in Kentucky PSC Case No. 2014-00026. This is the only document on file with the Kentucky Secretary of State that identifies all owners of Cumberland Cellular Partnership. (Application of Cumberland Cellular Partnership for issuance of a certificate of public convenience and necessity to construct a cell site (Albany Capacity 1) in rural service area #5 (Clinton) of the Commonwealth of Kentucky).

2. Pursuant to 807 KAR 5:063 § 1(1)(b), a copy of the applicant's applications to Federal Aviation Administration and the Kentucky Airport Zoning Commission are Exhibit "A." Written authorizations from these agencies will be supplied to the Commission upon their approval.

3. Pursuant to 807 KAR 5:063 § 1(1)(d), applicant is attaching as Exhibit "B" a geotechnical investigation report, signed and sealed by a professional engineer registered in Kentucky, that includes boring logs, foundation design recommendations, and a finding as to the susceptibility of the area surrounding the proposed site to flood hazard.

4. Pursuant to 807 KAR 5:063 § 1(1)(e), clear directions from the county seat to the proposed site, including highway numbers and street names, if applicable, with the telephone number of the person who prepared the directions are Exhibit "C".

5. Pursuant to 807 KAR 5:063 § 1(1)(f), a copy of the lease for the property on which the tower is proposed to be located, is Exhibit "D".

6. Pursuant to 807 KAR 5:063 § 1(1)(g), experienced personnel will manage and operate the Adair East cell site. The President of Bluegrass Cellular Inc., Mr. Ron Smith, is ultimately responsible for all construction and operations of the cellular system of Cumberland Cellular, of which system the Adair East cell site will be a part. Bluegrass Cellular Inc. provides management services to Cumberland Cellular under a management contract, just as it does with three (3) other wireless carriers in the Commonwealth. And, Bluegrass Cellular Inc. has been providing these management services to these other wireless carriers for over 20 years. This extensive management experience with Bluegrass Cellular demonstrates that Bluegrass Cellular Inc.'s management and technical ability to supervise the operations of a wireless carrier.

7. Pursuant to 807 KAR 5:063 § 1(1)(g), World Tower Company, Inc. is responsible for the design specifications of the proposed tower (identified in Exhibit "B").

8. Pursuant to 807 KAR 5:063 § 1(1)(h), a site development plan and survey, signed and sealed by a professional engineer registered in Kentucky, that shows the proposed location of the tower and all easements and existing structures within 500 feet of the proposed site on the property on which the tower will be located, and all easements and existing structures within 200 feet of the access drive, including the intersection with the public street system, is Exhibit “B”.

9. Pursuant to 807 KAR 5:063 §1(1)(i), a vertical profile sketch of the tower, signed and sealed by a professional engineer registered in Kentucky, indicating the height of the tower and the placement of all antennas is Exhibit “B”.

10. Pursuant to 807 KAR 5:063 §1(1)(j), the tower and foundation design plans and a description of the standard according to which the tower was designed, signed and sealed by a professional engineer registered in Kentucky, is Exhibit “B”.

11. Pursuant to 807 KAR 5:063 § 1(1)(k), a map, drawn to a scale no less than one (1) inch equals 200 feet, that identifies every structure and every owner of real estate within 500 feet of the proposed tower, is Exhibit “E”.

12. Pursuant to 807 KAR 5:063 § 1(1)(l), applicant’s legal counsel hereby affirms that every person who owns property within 500 feet of the proposed tower has been: (i) notified by certified mail, return receipt requested, of the proposed construction; (ii) given the commission docket number under which the application will be processed; and (iii) informed of his or her right to request intervention.

13. Pursuant to 807 KAR 5:063 §1(1)(m), a list of the property owners who received the notice together with copies of the certified letters sent to listed property owners, is Exhibit “F”.

14. Pursuant to 807 KAR 5:063 § 1(1)(n), applicant’s legal counsel hereby affirms that the Office of the Adair County Judge Executive has been: (i) notified by certified mail, return receipt requested, of the proposed construction; (ii) given the commission docket number

under which the application will be processed; and (iii) informed of its right to request intervention.

15. Pursuant to 807 KAR 5:063 § 1(1)(o), a copy of the notice sent to the Adair County Judge Executive is Exhibit "G".

16. Pursuant to 807 KAR 5:063 § 1(1)(p), applicant's legal counsel hereby affirms that (i) two written notices meeting subsection two (2) of this section have been posted, one in a visible location on the proposed site and one on the nearest public road; and (ii) the notices shall remain posted for at least two weeks after the application has been filed.

17. Pursuant to 807 KAR 5:063 § 1(2)(a), applicant's legal counsel affirms that:

(a) A written notice, of durable material at least two (2) feet by four (4) feet in size, stating that "***Cumberland Cellular Partnership proposes to construct a telecommunications tower on this site. If you have questions, please contact Cumberland Cellular Partnership, 2902 Ring Road, Elizabethtown, Kentucky, 42701 or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to Case No. 2015-00314 in your correspondence***" has been posted and shall remain in a visible location on the proposed site until final disposition of the application; and

(b) A written notice, of durable material at least two (2) feet by four (4) feet in size, stating that "***Cumberland Cellular Partnership proposes to construct a telecommunications tower near this site. If you have questions, please contact Cumberland Cellular Partnership, 2902 Ring Road, Elizabethtown, Kentucky, 42701 or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to Case No. 2015-00314 in your correspondence***" has been posted on the public road nearest the site.

A copy of each sign is attached as Exhibit "H".

18. Pursuant to 807 KAR 5:063 § 1(1)(q), Applicant affirms that notice of the location of the proposed construction has been published in a newspaper of general circulation in Adair County. A copy of the affidavit of publication and tears as proof of publication are attached as Exhibit "I."

19. Pursuant to 807 KAR 5:063 § 1(1)(r), the cell site, which has been selected, is in a relatively undeveloped area in Russell Springs, Kentucky.

20. Pursuant to 807 KAR 5:063 § 1(1)(s), Cumberland Cellular has considered the likely effects of the installation on nearby land uses and values and has concluded that there is no more suitable location reasonably available from which adequate service to the area can be provided, and that there is no reasonably available opportunity to co-locate. Cumberland Cellular has attempted to co-locate on towers designed to host multiple wireless service providers' facilities or existing structures, such as a telecommunications tower, or another suitable structure capable of supporting the utility's facilities.

21. Pursuant to 807 KAR 5:063 § 1(1)(t), a map of the area in which the tower is proposed to be located, that is drawn to scale and that clearly depicts the search area in which a site should, pursuant to radio frequency requirements, be located is Exhibit "J".

22. Pursuant to 807 KAR 5:001 § 15(b)(2)(d) and KRS 100.987(2)(a), a grid map, that is drawn to scale, that shows the location of all existing cellular antenna towers and that indicates the general position of proposed construction sites for new cellular antenna towers is Exhibit "K".

23. Pursuant to 807 KAR 5:063 § 2 and KRS 278.665(2), applicant's legal counsel hereby affirms that every person who, according to the records of the property valuation administrator, owns property contiguous to the property where the proposed cellular antenna tower will be located has been: (i) notified by certified mail, return receipt requested, of the proposed construction; (ii) given the commission docket number under which the application will be processed; and (iii) informed of his or her right to request intervention.

24. Pursuant to 807 KAR 5:063 § 1(1)(c), a copy of the applicant's application to, and authorization from, the Federal Communications Commission is Exhibit "L".

25. No reasonably available telecommunications tower, or other suitable structure capable of supporting the cellular facilities of Cumberland Cellular and which would provide adequate service to the area exists.

26. Correspondence and communication with regard to this application should be addressed to:

John E. Selent
Felix H. Sharpe
DINSMORE & SHOHL LLP
101 South Fifth Street
Suite 2500
Louisville, Kentucky 40202
(502) 540-2300
john.selent@dinsmore.com
felix.sharpe@dinsmore.com

WHEREFORE, Cumberland Cellular Partnership requests the Commission to enter an order:

1. Granting a certificate of public convenience and necessity to construct the Adair East cell site; and
2. Granting all other relief as appropriate.

Respectfully submitted,



John E. Selent
Felix H. Sharpe
DINSMORE & SHOHL LLP
101 South Fifth Street
Suite 2500
Louisville, Kentucky 40202
(502) 540-2300
john.selent@dinsmore.com
felix.sharpe@dinsmore.com



Federal Aviation Administration

« OE/AAA

Notice of Proposed Construction or Alteration - Off Airport

Add a new Case Off Airport - Desk Reference Guide V_2015.3.0

Add a New Case Off Airport for Wind Turbines - Met Towers - Desk Reference Guide V_2015.3.0

Project Name: BLUEG-000341535-15 Sponsor: Bluegrass Cellular, Inc.

Details for Case : Adair East

Show Project Summary

Case Status

ASN: 2015-ASO-15210-OE
 Status: Accepted

Date Accepted: 09/15/2015
 Date Determined:
 Letters: None
 Documents: 09/15/2015 2C Certification ...

Public Comments: None

Project Documents:
 None

Construction / Alteration Information

Notice Of: Construction
 Duration: Permanent
 if Temporary : Months: Days:
 Work Schedule - Start: 11/01/2015
 Work Schedule - End: 11/10/2015

Structure Summary

Structure Type: Antenna Tower
 Structure Name: Adair East
 FDC NOTAM:
 NOTAM Number:
 FCC Number:
 Prior ASN:

*For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.

State Filing:

Structure Details

Latitude: 37° 4' 30.16" N
 Longitude: 85° 10' 8.56" W
 Horizontal Datum: NAD83
 Site Elevation (SE): 983 (nearest foot)
 Structure Height (AGL): 250 (nearest foot)
 Current Height (AGL): (nearest foot)
 * For notice of alteration or existing provide the current AGL height of the existing structure. Include details in the Description of Proposal
 Minimum Operating Height (AGL): (nearest foot)
 * For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.

Common Frequency Bands

Low Freq	High Freq	Freq Unit	ERP	ERP Unit
698	806	MHz	1000	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
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
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W

Nacelle Height (AGL): (nearest foot)
 * For Wind Turbines 500ft AGL or greater

Specific Frequencies

Requested Marking/Lighting: Dual-red and medium intensity

Other :

Recommended Marking/Lighting:

Current Marking/Lighting: N/A Proposed Structure

Other :

Nearest City: Russell Springs

Nearest State: Kentucky

Description of Location: Site is located at:
 348 R Grider Road
 Russell Springs, KY 42642

Description of Proposal: Proposed self-supporting tower with top-mounted antennas for overall height of 250' AGL.



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

Aeronautical Study No.
2015-ASO-15210-OE

Issued Date: 11/17/2015

Scott McCloud
Bluegrass Cellular, Inc.
2902 Ring Road
Elizabethtown, KY 42701

**** 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 Adair East
Location:	Rusell Springs, KY
Latitude:	37-04-30.16N NAD 83
Longitude:	85-10-08.56W
Heights:	983 feet site elevation (SE) 250 feet above ground level (AGL) 1233 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:

As a condition to this Determination, the structure is marked/lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

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)
 Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 05/17/2017 unless:

- the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- extended, revised, or terminated by the issuing office.
- the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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

This determination 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 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 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.

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

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 (718) 553-2611. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2015-ASO-15210-OE.

Signature Control No: 265719361-272957823

(DNE)

Angelique Eersteling
Technician

Attachment(s)
Frequency Data

cc: FCC

Frequency Data for ASN 2015-ASO-15210-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
698	806	MHz	1000	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
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
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W

8300 Greensboro Dr.
Suite 1200
McLean, VA 22102
(703) 584-8678
WWW.FCCLAW.COM

Leila Rezanavaz
(703) 584-8668
leila@fcclaw.com

LNGS | LUKAS,
NACE,
GUTIERREZ
& SACHS, LLP

September 16, 2015

Via Email

Mr. John Houlihan
Kentucky Airport Zoning Commission
90 Airport Road, Building 400
Frankfort, Kentucky 40601

Dear Mr. Houlihan:

Enclosed please find two completed TC 56-50 forms, Application for Permit to Construct or Alter a Structure, for a new tower (Adair East) near Russell Springs, Kentucky. The Structure, including top-mounted antennas will have an overall height of 250 feet Above Ground Level.

Enclosed Form TC 56-50 and the attached exhibit include all the pertinent information for this existing tower structure. Also enclosed are copies of the completed FAA Form 7460-1 for the proposed site, a non-reduced 7-1/2' U.S. Geological Survey map indicating the exact location of the site, and a 2-C survey.

Please do not hesitate to contact the undersigned if there are questions regarding this matter.

Sincerely,

Leila Rezanavaz
Consulting Engineer

Enclosures

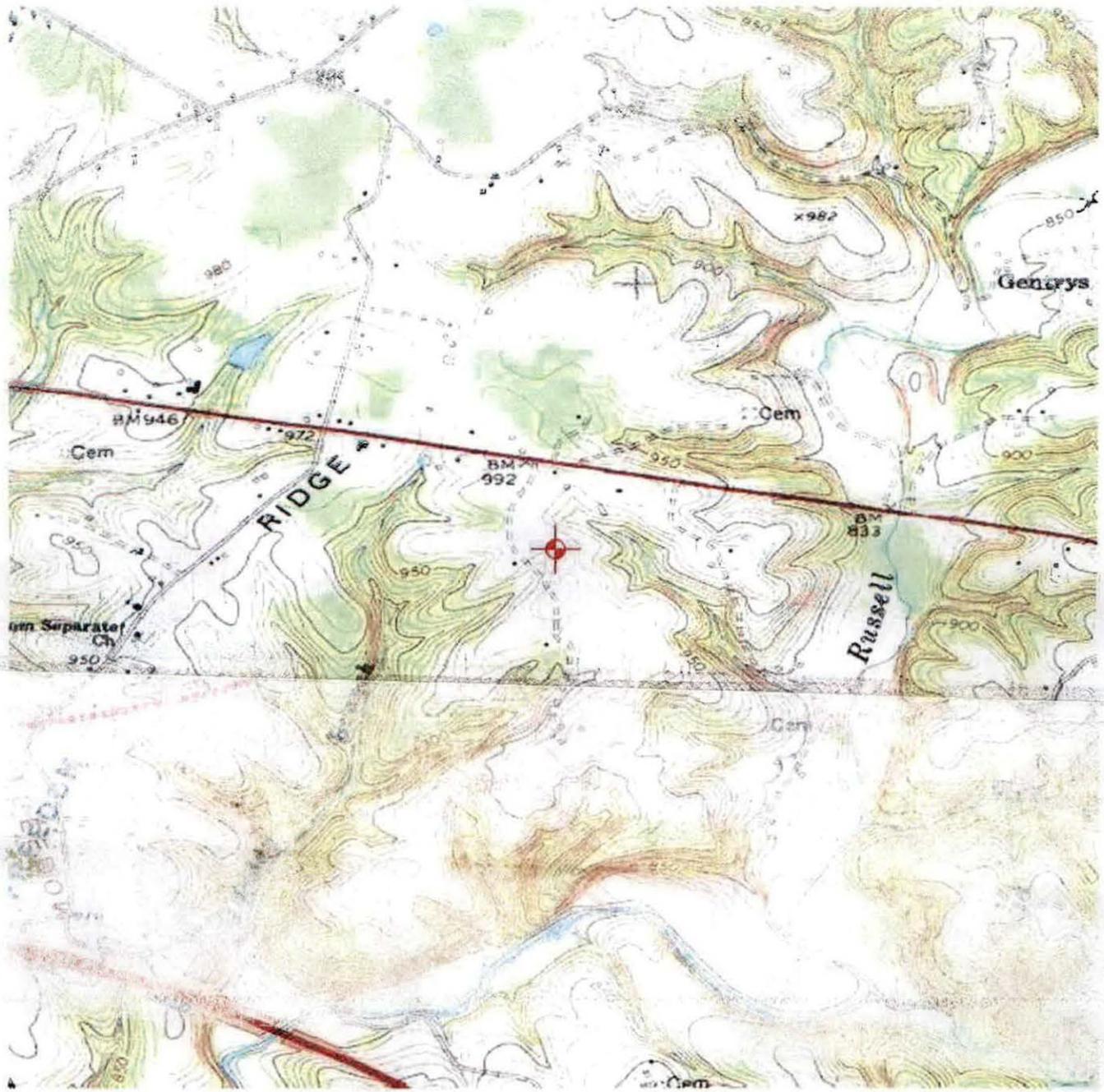


KENTUCKY AIRPORT ZONING COMMISSION

APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

APPLICANT (name) Scott McCloud		PHONE 270-769-0339	FAX 270-737-0580	KY AERONAUTICAL STUDY #	
ADDRESS (street) 2902 Ring Road		CITY Elizabethtown		STATE KY	ZIP 42702
APPLICANT'S REPRESENTATIVE (name) Leila Rezanavaz		PHONE 703-584-8668	FAX 703-584-8696		
ADDRESS (street) 8300 Greensboro Dr. Ste 1200		CITY McLean		STATE VA	ZIP 22102
APPLICATION FOR <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing				WORK SCHEDULE	
DURATION <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days)				Start 11/01/15 End 11/10/15	
TYPE <input type="checkbox"/> Crane <input type="checkbox"/> Building <input checked="" type="checkbox"/> Antenna Tower <input type="checkbox"/> Power Line <input type="checkbox"/> Water Tank <input type="checkbox"/> Landfill <input type="checkbox"/> Other		MARKING/PAINTING/LIGHTING PREFERRED <input type="checkbox"/> Red Lights & Paint <input type="checkbox"/> White- medium intensity <input type="checkbox"/> White- high intensity <input checked="" type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white <input type="checkbox"/> Other			
LATITUDE 37°04'30.16"		LONGITUDE 85°10'08.56"		DATUM <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27 <input type="checkbox"/> Other	
NEAREST KENTUCKY City Russell Springs County Adair		NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT Russell County Airport			
SITE ELEVATION (AMSL, feet) 983		TOTAL STRUCTURE HEIGHT (AGL, feet) 250		CURRENT (FAA aeronautical study #) 2015-ASO-15210-OE	
OVERALL HEIGHT (site elevation plus total structure height, feet) 1233				PREVIOUS (FAA aeronautical study #) N/A	
DISTANCE (from nearest Kentucky public use or Military airport to structure) 5.9 Miles				PREVIOUS (KY aeronautical study #) N/A	
DIRECTION (from nearest Kentucky public use or Military airport to structure) Northwest					
DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.) Site is located at: 348 R. Grider Road Russell Springs, KY 42642					
DESCRIPTION OF PROPOSAL Proposed self-supporting tower with top-mounted antennas for overall height of 250' AGL.					
FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes, when? 9/15/2015					
CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)					
PENALTIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)					
NAME Leila Rezanavaz	TITLE Consultg Engineer	SIGNATURE <i>Leila Rezanavaz</i>		DATE 9/16/2015	
COMMISSION ACTION		<input type="checkbox"/> Chairperson, KAZC <input type="checkbox"/> Administrator, KAZC			
<input type="checkbox"/> Approved	SIGNATURE			DATE	
<input type="checkbox"/> Disapproved					

Close Print





KENTUCKY AIRPORT ZONING COMMISSION

STEVEN BESHEAR
Governor

90 Airport Road, Bldg 400
Frankfort, KY 40601
www.transportation.ky.gov/aviation
502 564-4480

December 2, 2015

APPROVAL OF APPLICATION

APPLICANT:
BLUEGRASS CELLULAR
BLUEGRASS CELLULAR
2902 Ring Road
Elizabethtown, KY 42702

SUBJECT: AS-001-K24-2015-076

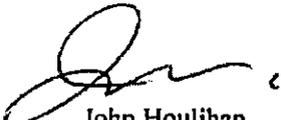
STRUCTURE: Antenna Tower
LOCATION: Russell Springs, KY
COORDINATES: 37° 4' 30.16" N / 85° 10' 8.56" W
HEIGHT: 250' AGL/1233' AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 250' AGL/ 1233' AMSL Antenna Tower near Russell Springs, KY 37° 4' 30.16" N / 85° 10' 8.56" W.

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

A copy of the approved application is enclosed for your files.

Medium Dual Obstruction Lighting is required in accordance with 602 KAR 50:100.


John Houlihan
Administrator



An Equal Opportunity Employer M/F/D



KENTUCKY AIRPORT ZONING COMMISSION

STEVEN BESHEAR
Governor

90 Airport Road, Bldg 400
Frankfort, KY 40601
www.transportation.ky.gov/aviation
502 564-4480

CONSTRUCTION/ALTERATION STATUS REPORT

December 2, 2015

AERONAUTICAL STUDY NUMBER: AS-001-K24-2015-076

BLUEGRASS CELLULAR
BLUEGRASS CELLULAR
2902 Ring Road
Elizabethtown, KY 42702

This concerns the permit which was issued to you by the Kentucky Airport Zoning Commission on December 2, 2015. This permit is valid for a period of 18 Month(s) from its date of issuance. If construction is not completed within the said 18-Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit. When appropriate, please indicate the status of the project in the place below and return this letter to John Houlihan, Administrator, Kentucky Airport Zoning Commission, 90 Airport Road, Bldg 400, Frankfort, KY, 40601. 502 564-4480.

STRUCTURE: Antenna Tower
LOCATION: Russell Springs, KY
COORDINATES: 37° 4' 30.16" N / 85° 10' 8.56" W
HEIGHT: 250' AGL /1233' AMSL

CONSTRUCTION/ALTERATION STATUS

- The project () is abandoned. () is not abandoned.
- Construction status is as follows:
 Structure reached its greatest height of _____ ft. AGL
 _____ ft. AMSL on _____ (date).
 Date construction was completed. _____
 Type of obstruction marking/painting. _____
 Type of obstruction lighting. _____
 As built coordinates. _____
 Miscellaneous Information. _____
 DATE _____
 SIGNATURE/TITLE _____



An Equal Opportunity Employer M/F/D



World Tower
COMPANY, INC.

1213 Compressor Drive
P.O. Box 508
Mayfield, KY 42066
270-247-3642
FAX: 270-247-0909
E-mail: worldtower@worldtower.com
Web: www.worldtower.com

240' MODEL WSST TOWER
FOR: BLUEGRASS WIRELESS
SITE: ADAIR EAST
ADAIR COUNTY, KY
DESIGN PACKAGE



K. Hall

12-3-2015

GENERAL NOTES

1. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISION OF THE AMERICAN WELDING SOCIETY AWS. D 1.1.
2. TOWER AND ALL FABRICATED ACCESSORIES ARE HOT-DIP GALVANIZED.
3. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO THE STANDARD SPECIFICATION FOR ZINC COATING OF IRON AND STEEL HARDWARE ASTM A153.
4. LEG STEEL IS 50 KSI MIN YIELD SOLID ROUND OR PIPE AND BRACING STEEL IS 36 KSI MIN YIELD SOLID ROUND OR STRUCTURAL ANGLE.
5. ALL STRUCTURAL BOLTS ARE ASTM A325.
6. TOWER SHOULD BE INSPECTED IN ACCORDANCE WITH TIA-222-G EVERY 5 YEARS.
7. TOWER INSPECTION SHOULD ONLY BE PERFORMED BY EXPERIENCED QUALIFIED PERSONNEL. FOR ASSISTANCE IN PROPER MAINTENANCE OF YOUR TOWER, CALL WORLD TOWER AT 270-247-3642.

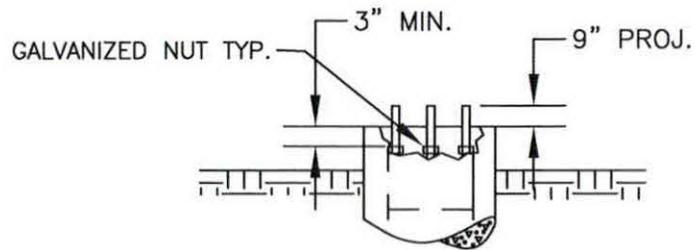


WORLD TOWER

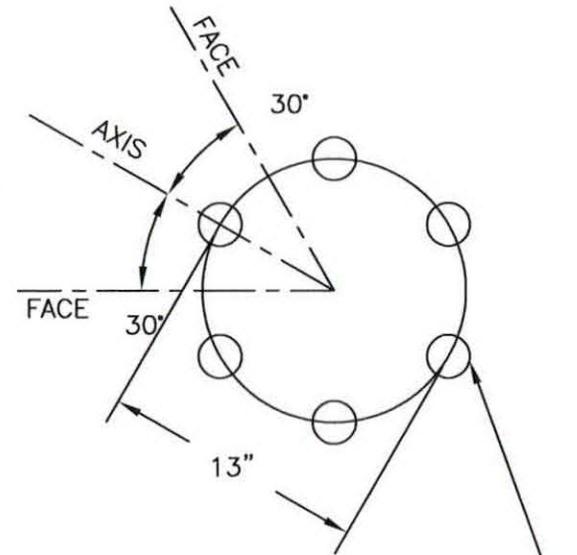
TITLE:

240' MODEL WSST TOWER
FOR: BLUEGRASS CELLULAR
SITE: ADAIR EAST
ADAIR COUNTY, KY

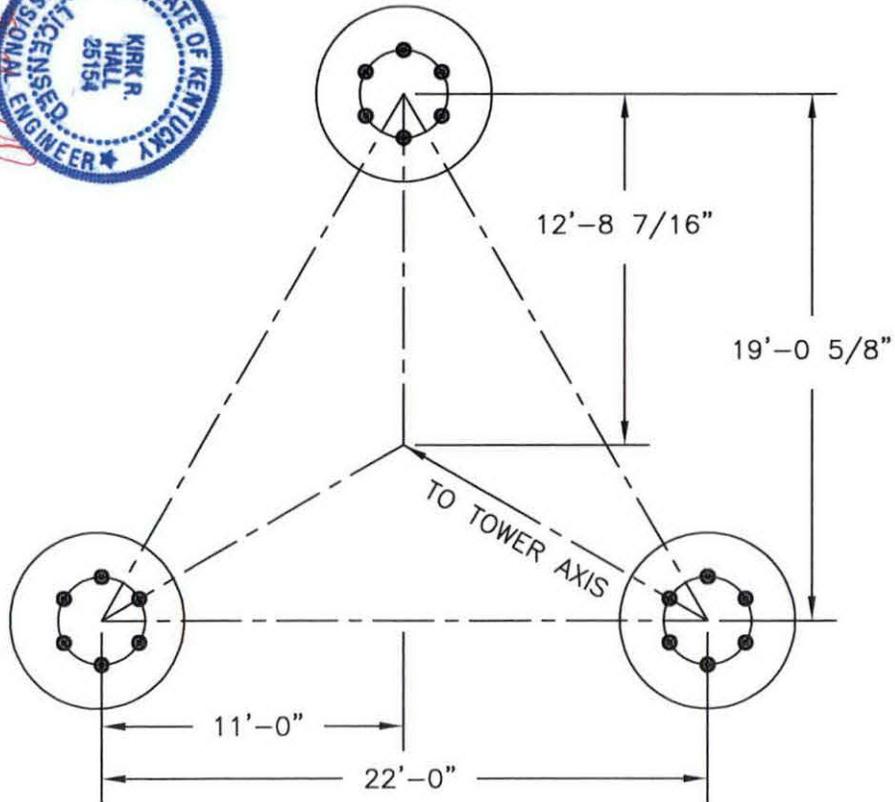
SCALE	DWN.	LKG	CKD.	DATE 11-23-15
			DWG. NO.	Q15828N



PIER ELEVATION



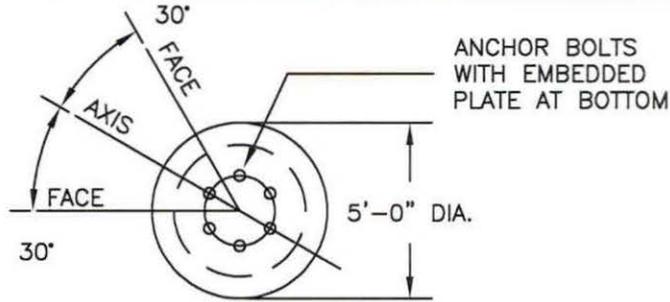
ANCHOR BOLTS 6 (18 TOTAL)
 1 3/4"φ X 80" ASTM A354 GR. BC
 EQUALLY SPACED ON A 13"
 DIA. BOLT CIRCLE WITH TOP TEMPLATE
 AND EMBEDDED PLATE



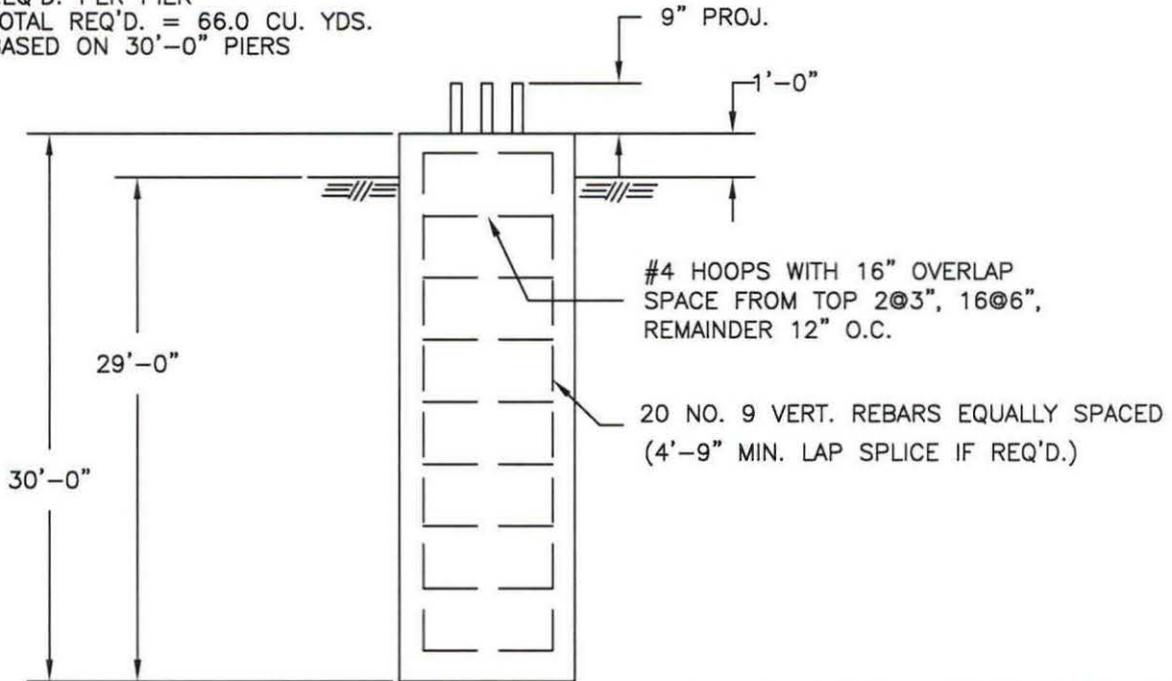
WORLD TOWER

TITLE: ANCHOR BOLT LAYOUT
 240' MODEL WSST TOWER
 FOR: BLUEGRASS CELLULAR
 SITE : ADAIR EAST
 ADAIR COUNTY, KY

SCALE NONE	DWN.	LKG	CKD.	DATE 11-23-15
FILE	DWG. NO.			Q15828AB



22.0 CU. YDS. CONCRETE
 REQ'D. PER PIER
 TOTAL REQ'D. = 66.0 CU. YDS.
 BASED ON 30'-0" PIERS



12-3-2015

GENERAL NOTES

1. CONCRETE TO HAVE 4000 PSI MIN. COMPRESSIVE STRENGTH AFTER 28 DAYS.
2. ALL REINFORCMENT STEEL IS DEFORMED AND MEETS THE STRENGTH REQUIREMENTS OF ASTM A615 GRADE 60.
3. EMBEDDED STEEL TO HAVE 3" MIN. CONCRETE COVER.
4. FOUNDATION DESIGN IS BASED ON CUSTOMER SUPPLIED SOIL DATA FROM TERRACON. PROJECT NUMBER 5715061 DATED SEPTEMBER 13, 2015.

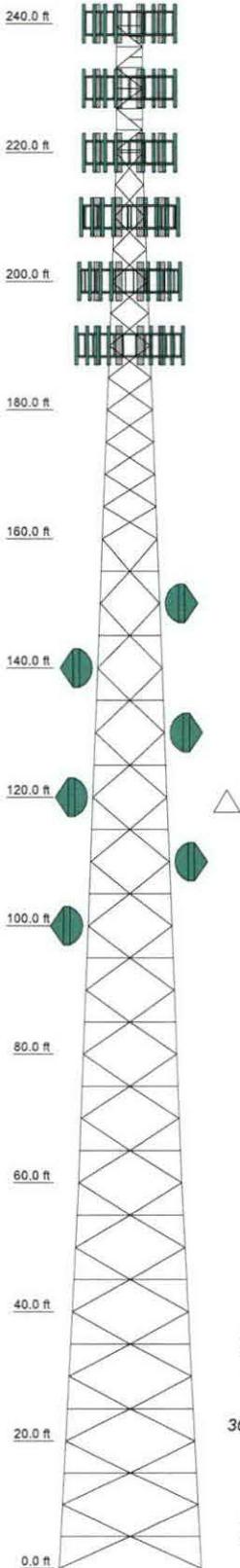
BASE REACTIONS	
OTM:	13741.0 FT. KIPS
COMP.	765.0 KIPS
UPLIFT	662.0 KIPS
SHEAR (3 LEGS)	98.0 KIPS
WT. NO ICE	132.0 KIPS
WT. 3/4" ICE	360.0 KIPS

TITLE: FOUNDATION DETAIL
 240' MODEL WSST TOWER
 FOR: BLUEGRASS CELLULAR
 SITE: ADAIR EAST
 ADAIR COUNTY, KY

WORLD TOWER

SCALE	NONE	DWN.	LKG	CKD.	DATE	12-2-15
FILE					DWG. NO.	Q15828F

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	
Leg Grade	SR 1 3/4	SR 2 3/4	SR 3 1/4	SR 3 1/2	SR 3 3/4	SR 4	SR 4 1/4	SR 4 1/2	SR 4 3/4	SR 5	SR 5 1/4	SR 5 1/4	
Diagonals	SR 1 1/8	L1 3/4x1 3/4x2/16	L2x2x1/4	L3x3x1/4	L3x3x1/4	L3x3x1/4	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4	L4x4x1/4	L4x4x1/4	L4x4x1/4	L4x4x1/4	
Diagonal Grade													
Top Girts		L1 3/4x1 3/4x1/8											
Bottom Girts	SR 1												
Horizontals	SR 1												
Sec. Horizontals	SR 1												
Face Width (ft)	4	5.5	7	8.5	10	11.5	13	14.5	16	18	20		
# Panels @ (ft)	6 @ 3.20833					44 @ 5							
Weight (K)	1.1	1.7	2.5	2.9	3.4	3.9	4.5	5.1	5.8	6.7	8.2		



DESIGNED APPURTENANCE LOADING

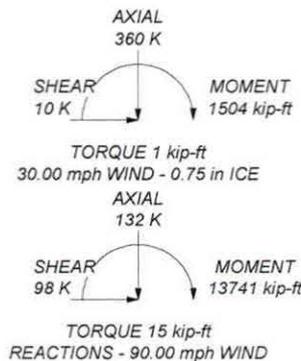
TYPE	ELEVATION	TYPE	ELEVATION
Air21 Panel w/ mt pipe	240	(3) LNX-8514DS w/ mt pipe	210
Air21 Panel w/ mt pipe	240	(3) LNX-8514DS w/ mt pipe	210
Air21 Panel w/ mt pipe	240	(3) LNX-8514DS w/ mt pipe	210
(3) LNX-8514DS w/ mt pipe	240	WD13X53 Antenna Mounting Frame (w/ .75)*	210
(3) LNX-8514DS w/ mt pipe	240	WD13X53 Antenna Mounting Frame (w/ .75)*	210
(3) LNX-8514DS w/ mt pipe	240	WD13X53 Antenna Mounting Frame (w/ .75)*	210
WD13X53 Antenna Mounting Frame (w/ .75)*	240	Air21 Panel w/ mt pipe	200
WD13X53 Antenna Mounting Frame (w/ .75)*	240	Air21 Panel w/ mt pipe	200
WD13X53 Antenna Mounting Frame (w/ .75)*	240	Air21 Panel w/ mt pipe	200
Air21 Panel w/ mt pipe	230	(3) LNX-8514DS w/ mt pipe	200
Air21 Panel w/ mt pipe	230	(3) LNX-8514DS w/ mt pipe	200
Air21 Panel w/ mt pipe	230	(3) LNX-8514DS w/ mt pipe	200
(3) LNX-8514DS w/ mt pipe	230	WD13X53 Antenna Mounting Frame (w/ .75)*	200
(3) LNX-8514DS w/ mt pipe	230	WD13X53 Antenna Mounting Frame (w/ .75)*	200
(3) LNX-8514DS w/ mt pipe	230	WD13X53 Antenna Mounting Frame (w/ .75)*	200
WD13X53 Antenna Mounting Frame (w/ .75)*	230	Air21 Panel w/ mt pipe	190
WD13X53 Antenna Mounting Frame (w/ .75)*	230	Air21 Panel w/ mt pipe	190
WD13X53 Antenna Mounting Frame (w/ .75)*	230	Air21 Panel w/ mt pipe	190
Air21 Panel w/ mt pipe	220	(3) LNX-8514DS w/ mt pipe	190
Air21 Panel w/ mt pipe	220	(3) LNX-8514DS w/ mt pipe	190
Air21 Panel w/ mt pipe	220	(3) LNX-8514DS w/ mt pipe	190
(3) LNX-8514DS w/ mt pipe	220	WD13X53 Antenna Mounting Frame (w/ .75)*	190
(3) LNX-8514DS w/ mt pipe	220	WD13X53 Antenna Mounting Frame (w/ .75)*	190
WD13X53 Antenna Mounting Frame (w/ .75)*	220	WD13X53 Antenna Mounting Frame (w/ .75)*	190
WD13X53 Antenna Mounting Frame (w/ .75)*	220	6 FT DISH	150
WD13X53 Antenna Mounting Frame (w/ .75)*	220	6 FT DISH	140
Air21 Panel w/ mt pipe	210	6 FT DISH	130
Air21 Panel w/ mt pipe	210	6 FT DISH	120
Air21 Panel w/ mt pipe	210	6 FT DISH	110
Air21 Panel w/ mt pipe	210	6 FT DISH	100

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-G Standard.
 2. Tower designed for a 90.00 mph basic wind in accordance with the TIA-222-G Standard.
 3. Tower is also designed for a 30.00 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
 4. Deflections are based upon a 60.00 mph wind.
 5. Tower Structure Class III.
 6. Topographic Category 1 with Crest Height of 0.00 ft
 7. fall radius less than half tower height per custome spec
 8. TOWER RATING: 97.7%
- UPLIFT: -66.2 K
 SHEAR: 56 K



12-3-2015

World Tower Company		Job: 240' WSSST - Jobs Q15-828 & 829	
1213 Compressor Drive		Project: KY STD	
Mayfield, KY 42066		Client: Bluegrass Cellular	Drawn by: kirk
Phone: (270) 247-3642		App'd:	
FAX: www.worldtower.com		Code: TIA-222-G	Date: 11/23/15
		Scale: NTS	
		Path: C:\Tower\PE Run\2015\Q15-828 Bluegrass\Q15-828&829.en	Dwg No: E-1

inxTower World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com	Job	240' WSST - Jobs Q15-828 & 829	Page	2 of 13
	Project	KY STD	Date	11:09:57 11/23/15
	Client	Bluegrass Cellular	Designed by	kirk

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	240.00-220.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T2	220.00-200.00	5.00	X Brace	No	No	0.00	0.00
T3	200.00-180.00	5.00	X Brace	No	No	0.00	0.00
T4	180.00-160.00	5.00	X Brace	No	No	0.00	0.00
T5	160.00-140.00	5.00	Double K	No	Yes	0.00	0.00
T6	140.00-120.00	5.00	Double K	No	Yes	0.00	0.00
T7	120.00-100.00	5.00	Double K	No	Yes	0.00	0.00
T8	100.00-80.00	5.00	Double K	No	Yes	0.00	0.00
T9	80.00-60.00	5.00	Double K	No	Yes	0.00	0.00
T10	60.00-40.00	5.00	Double K	No	Yes	0.00	0.00
T11	40.00-20.00	5.00	Double K	No	Yes	0.00	0.00
T12	20.00-0.00	5.00	Double K	No	Yes	0.00	0.00

Tower Section Geometry (cont'd)

Tower Elevation	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
ft						
T1 240.00-220.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	1 1/8	A36 (36 ksi)
T2 220.00-200.00	Solid Round	2 3/4	A572-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T3 200.00-180.00	Solid Round	3 1/4	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T4 180.00-160.00	Solid Round	3 1/2	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T5 160.00-140.00	Solid Round	3 3/4	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A36 (36 ksi)
T6 140.00-120.00	Solid Round	4	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A36 (36 ksi)
T7 120.00-100.00	Solid Round	4 1/4	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T8 100.00-80.00	Solid Round	4 1/2	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T9 80.00-60.00	Solid Round	4 3/4	A572-50 (50 ksi)	Equal Angle	L4x4x1/4	A36 (36 ksi)
T10 60.00-40.00	Solid Round	5	A572-50 (50 ksi)	Equal Angle	L4x4x1/4	A36 (36 ksi)
T11 40.00-20.00	Solid Round	5	A572-50 (50 ksi)	Equal Angle	L4x4x1/4	A36 (36 ksi)
T12 20.00-0.00	Solid Round	5 1/4	A572-50 (50 ksi)	Equal Angle	L4x4x5/16	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
ft						
T1 240.00-220.00	Solid Round	1	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T2 220.00-200.00	Equal Angle	L1 3/4x1 3/4x1/8	A36 (36 ksi)	Equal Angle		A36 (36 ksi)

inxTower World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com	Job 240' WSST - Jobs Q15-828 & 829	Page 3 of 13
	Project KY STD	Date 11:09:57 11/23/15
	Client Bluegrass Cellular	Designed by kirk

Tower Section Geometry (cont'd)

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 240.00-220.00	None	Single Angle		A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T5 160.00-140.00	None	Single Angle		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T6 140.00-120.00	None	Single Angle		A36 (36 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T7 120.00-100.00	None	Single Angle		A36 (36 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T8 100.00-80.00	None	Single Angle		A36 (36 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)
T9 80.00-60.00	None	Single Angle		A36 (36 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)
T10 60.00-40.00	None	Double Angle		A36 (36 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T11 40.00-20.00	None	Double Angle		A36 (36 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T12 20.00-0.00	None	Double Angle		A36 (36 ksi)	Equal Angle	L4x4x1/4	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T1 240.00-220.00	Solid Round	1	A36 (36 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _f	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
T1 240.00-220.00	0.00	0.00	A36 (36 ksi)	1	1	1.05	0.00	0.00
T2 220.00-200.00	0.50	0.38	A36 (36 ksi)	1	1	1.06	0.00	0.00
T3 200.00-180.00	0.50	0.38	A36 (36 ksi)	1	1	1.06	0.00	0.00
T4 180.00-160.00	0.50	0.38	A36 (36 ksi)	1	1	1.06	0.00	0.00

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com	Job 240' WSST - Jobs Q15-828 & 829	Page 4 of 13
	Project KY STD	Date 11:09:57 11/23/15
	Client Bluegrass Cellular	Designed by kirk

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals
ft	ft ²	in					in	in
T5 160.00-140.00	0.50	0.38	A36 (36 ksi)	1	1	1.07	0.00	0.00
T6 140.00-120.00	0.50	0.38	A36 (36 ksi)	1	1	1.07	0.00	0.00
T7 120.00-100.00	0.50	0.38	A36 (36 ksi)	1	1	1.07	0.00	0.00
T8 100.00-80.00	0.50	0.38	A36 (36 ksi)	1	1	1.07	0.00	0.00
T9 80.00-60.00	0.50	0.38	A36 (36 ksi)	1	1	1.08	0.00	0.00
T10 60.00-40.00	0.50	0.38	A36 (36 ksi)	1	1	1.08	0.00	0.00
T11 40.00-20.00	0.50	0.38	A36 (36 ksi)	1	1	1.08	0.00	0.00
T12 20.00-0.00	0.50	0.38	A36 (36 ksi)	1	1	1.08	0.00	0.00

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.										
T1 240.00-220.00	Flange	0.75 A325N	4	0.00 A325X	0	0.00 A325X	0	0.00 A325N	0	0.63 A325N	0	0.00 A325X	0	0.00 A325N	0
T2 220.00-200.00	Flange	1.00 A325N	4	0.50 A325X	1	0.63 A325X	1	0.00 A325N	0	0.63 A325N	0	0.00 A325X	0	0.00 A325N	0
T3 200.00-180.00	Flange	1.00 A325N	4	0.63 A325X	1	0.00 A325X	0	0.00 A325N	0	0.63 A325N	0	0.00 A325X	0	0.00 A325N	0
T4 180.00-160.00	Flange	1.00 A325N	6	0.63 A325X	1	0.00 A325X	0	0.00 A325N	0	0.63 A325N	0	0.00 A325X	0	0.00 A325N	0
T5 160.00-140.00	Flange	1.25 A325N	6	0.63 A325X	1	0.00 A325X	0	0.00 A325N	0	0.63 A325N	0	0.63 A325X	1	0.00 A325N	0
T6 140.00-120.00	Flange	1.25 A325N	6	0.63 A325X	1	0.00 A325X	0	0.00 A325N	0	0.63 A325N	0	0.63 A325X	1	0.00 A325N	0
T7 120.00-100.00	Flange	1.25 A325N	6	0.75 A325X	1	0.00 A325X	0	0.00 A325N	0	0.63 A325N	0	0.75 A325X	1	0.00 A325N	0
T8 100.00-80.00	Flange	1.50 A325N	6	0.75 A325X	1	0.00 A325X	0	0.00 A325N	0	0.63 A325N	0	0.75 A325X	1	0.00 A325N	0
T9 80.00-60.00	Flange	1.50 A325N	6	0.75 A325X	1	0.00 A325X	0	0.00 A325N	0	0.63 A325N	0	0.75 A325X	1	0.00 A325N	0
T10 60.00-40.00	Flange	1.50 A325N	6	0.75 A325X	1	0.00 A325X	0	0.00 A325N	0	0.63 A325N	0	0.75 A325X	1	0.00 A325N	0
T11 40.00-20.00	Flange	1.50 A325N	6	0.75 A325X	1	0.00 A325X	0	0.00 A325N	0	0.63 A325N	0	0.75 A325X	1	0.00 A325N	0
T12 20.00-0.00	Flange	1.75 A354-BC	6	0.75 A325X	1	0.00 A325X	0	0.00 A325N	0	0.63 A325N	0	0.75 A325X	1	0.00 A325N	0

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face Allow or Shield Leg	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Perimeter Diameter in	Weight plf
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tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY 42066 Phone: (270) 247-3642 FAX: www.worldtower.com	Job	240' WSST - Jobs Q15-828 & 829	Page	5 of 13
	Project	KY STD	Date	11:09:57 11/23/15
	Client	Bluegrass Cellular	Designed by	kirk

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
Safety Line 3/8	C	No	Ar (CaAa)	240.00 - 5.00	1	1	0.38	0.38		0.22
1 5/8	A	No	Ar (CaAa)	210.00 - 240.00	18	6	0.52	1.98		1.04
1 5/8	B	No	Ar (CaAa)	200.00 - 230.00	18	6	0.52	1.98		1.04
1 5/8	C	No	Ar (CaAa)	190.00 - 220.00	18	6	0.52	1.98		1.04
1 5/8	A	No	Ar (CaAa)	5.00 - 210.00	36	12	0.52	1.98		1.04
1 5/8	B	No	Ar (CaAa)	5.00 - 200.00	36	12	0.52	1.98		1.04
1 5/8	C	No	Ar (CaAa)	5.00 - 190.00	36	12	0.52	1.98		1.04
W/G LADDER RAIL*	A	No	Af (CaAa)	5.00 - 240.00	2	2	48.00	0.25		3.00
W/G LADDER RAIL*	B	No	Af (CaAa)	5.00 - 230.00	2	2	48.00	0.25		3.00
W/G LADDER RAIL*	C	No	Af (CaAa)	5.00 - 220.00	2	2	48.00	0.25		3.00
Fiber Bundle	A	No	Ar (CaAa)	5.00 - 240.00	1	1	0.00	0.75		1.00
Fiber Bundle	B	No	Ar (CaAa)	5.00 - 230.00	1	1	0.00	0.75		1.00
Fiber Bundle	C	No	Ar (CaAa)	5.00 - 220.00	1	1	0.00	0.75		1.00
Fiber Bundle	A	No	Ar (CaAa)	5.00 - 210.00	1	1	0.00	0.75		1.00
Fiber Bundle	B	No	Ar (CaAa)	5.00 - 200.00	1	1	0.00	0.75		1.00
Fiber Bundle	C	No	Ar (CaAa)	5.00 - 190.00	1	1	0.00	0.75		1.00
EW52	C	No	Ar (CaAa)	5.00 - 150.00	1	1	0.00	1.74		0.59
EW52	C	No	Ar (CaAa)	5.00 - 140.00	1	1	0.00	1.74		0.59
EW52	C	No	Ar (CaAa)	5.00 - 130.00	1	1	0.00	1.74		0.59
EW52	C	No	Ar (CaAa)	5.00 - 120.00	1	1	0.00	1.74		0.59
EW52	C	No	Ar (CaAa)	5.00 - 110.00	1	1	0.00	1.74		0.59
EW52	C	No	Ar (CaAa)	5.00 - 100.00	1	1	0.00	1.74		0.59

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	CAAA Front ft ²	CAAA Side ft ²	Weight K
Air21 Panel w/ mt pipe	A	From Leg	3.00	0.000	240.00	No Ice 6.61	5.54	0.10
			0			1/2" Ice 7.08	6.27	0.16
			0			1" Ice 7.55	7.01	0.22
Air21 Panel w/ mt pipe	B	From Leg	3.00	0.000	240.00	No Ice 6.61	5.54	0.10
			0			1/2" Ice 7.08	6.27	0.16
			0			1" Ice 7.55	7.01	0.22
Air21 Panel w/ mt pipe	C	From Leg	3.00	0.000	240.00	No Ice 6.61	5.54	0.10
			0			1/2" Ice 7.08	6.27	0.16
			0			1" Ice 7.55	7.01	0.22
(3) LNX-8514DS w/ mt pipe	A	From Leg	3.00	0.000	240.00	No Ice 11.45	9.36	0.08
			0			1/2" Ice 12.06	10.68	0.16
			0			1" Ice 12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	B	From Leg	3.00	0.000	240.00	No Ice 11.45	9.36	0.08
			0			1/2" Ice 12.06	10.68	0.16
			0			1" Ice 12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	C	From Leg	3.00	0.000	240.00	No Ice 11.45	9.36	0.08
			0			1/2" Ice 12.06	10.68	0.16
			0			1" Ice 12.69	11.71	0.25
WD13X53 Antenna Mounting Frame (w/ .75)*	C	From Leg	1.50	0.000	240.00	No Ice 7.20	3.88	1.18
			0			1/2" Ice 10.42	5.70	1.60
			0			1" Ice 13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	B	From Leg	1.50	0.000	240.00	No Ice 7.20	3.88	1.18
			0			1/2" Ice 10.42	5.70	1.60
			0			1" Ice 13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	A	From Leg	1.50	0.000	240.00	No Ice 7.20	3.88	1.18
			0			1/2" Ice 10.42	5.70	1.60
			0			1" Ice 13.56	7.51	2.11

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	Client		Bluegrass Cellular		Designed by		kirk	

Description	Face or Leg	Offset Type	Offsets:			Azimuth Adjustment	Placement	C _{AA}		Weight
			Horz	Vert	Lateral			Front	Side	
			ft	ft	ft	°	ft	ft ²	ft ²	K
Air21 Panel w/ mt pipe	A	From Leg	3.00	0	0	0.000	230.00	No Ice 6.61	5.54	0.10
			0	0	0			1/2" Ice 7.08	6.27	0.16
			0	0	0			1" Ice 7.55	7.01	0.22
Air21 Panel w/ mt pipe	B	From Leg	3.00	0	0	0.000	230.00	No Ice 6.61	5.54	0.10
			0	0	0			1/2" Ice 7.08	6.27	0.16
			0	0	0			1" Ice 7.55	7.01	0.22
Air21 Panel w/ mt pipe	C	From Leg	3.00	0	0	0.000	230.00	No Ice 6.61	5.54	0.10
			0	0	0			1/2" Ice 7.08	6.27	0.16
			0	0	0			1" Ice 7.55	7.01	0.22
(3) LNX-8514DS w/ mt pipe	A	From Leg	3.00	0	0	0.000	230.00	No Ice 11.45	9.36	0.08
			0	0	0			1/2" Ice 12.06	10.68	0.16
			0	0	0			1" Ice 12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	B	From Leg	3.00	0	0	0.000	230.00	No Ice 11.45	9.36	0.08
			0	0	0			1/2" Ice 12.06	10.68	0.16
			0	0	0			1" Ice 12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	C	From Leg	3.00	0	0	0.000	230.00	No Ice 11.45	9.36	0.08
			0	0	0			1/2" Ice 12.06	10.68	0.16
			0	0	0			1" Ice 12.69	11.71	0.25
WD13X53 Antenna Mounting Frame (w/ .75)*	C	From Leg	1.50	0	0	0.000	230.00	No Ice 7.20	3.88	1.18
			0	0	0			1/2" Ice 10.42	5.70	1.60
			0	0	0			1" Ice 13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	B	From Leg	1.50	0	0	0.000	230.00	No Ice 7.20	3.88	1.18
			0	0	0			1/2" Ice 10.42	5.70	1.60
			0	0	0			1" Ice 13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	A	From Leg	1.50	0	0	0.000	230.00	No Ice 7.20	3.88	1.18
			0	0	0			1/2" Ice 10.42	5.70	1.60
			0	0	0			1" Ice 13.56	7.51	2.11
Air21 Panel w/ mt pipe	A	From Leg	3.00	0	0	0.000	220.00	No Ice 6.61	5.54	0.10
			0	0	0			1/2" Ice 7.08	6.27	0.16
			0	0	0			1" Ice 7.55	7.01	0.22
Air21 Panel w/ mt pipe	B	From Leg	3.00	0	0	0.000	220.00	No Ice 6.61	5.54	0.10
			0	0	0			1/2" Ice 7.08	6.27	0.16
			0	0	0			1" Ice 7.55	7.01	0.22
Air21 Panel w/ mt pipe	C	From Leg	3.00	0	0	0.000	220.00	No Ice 6.61	5.54	0.10
			0	0	0			1/2" Ice 7.08	6.27	0.16
			0	0	0			1" Ice 7.55	7.01	0.22
(3) LNX-8514DS w/ mt pipe	A	From Leg	3.00	0	0	0.000	220.00	No Ice 11.45	9.36	0.08
			0	0	0			1/2" Ice 12.06	10.68	0.16
			0	0	0			1" Ice 12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	B	From Leg	3.00	0	0	0.000	220.00	No Ice 11.45	9.36	0.08
			0	0	0			1/2" Ice 12.06	10.68	0.16
			0	0	0			1" Ice 12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	C	From Leg	3.00	0	0	0.000	220.00	No Ice 11.45	9.36	0.08
			0	0	0			1/2" Ice 12.06	10.68	0.16
			0	0	0			1" Ice 12.69	11.71	0.25
WD13X53 Antenna Mounting Frame (w/ .75)*	C	From Leg	1.50	0	0	0.000	220.00	No Ice 7.20	3.88	1.18
			0	0	0			1/2" Ice 10.42	5.70	1.60
			0	0	0			1" Ice 13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	B	From Leg	1.50	0	0	0.000	220.00	No Ice 7.20	3.88	1.18
			0	0	0			1/2" Ice 10.42	5.70	1.60
			0	0	0			1" Ice 13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	A	From Leg	1.50	0	0	0.000	220.00	No Ice 7.20	3.88	1.18
			0	0	0			1/2" Ice 10.42	5.70	1.60
			0	0	0			1" Ice 13.56	7.51	2.11
Air21 Panel w/ mt pipe	A	From Leg	3.00	0	0	0.000	210.00	No Ice 6.61	5.54	0.10
			0	0	0			1/2" Ice 7.08	6.27	0.16
			0	0	0			1" Ice 7.55	7.01	0.22

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	Client	Bluegrass Cellular	Designed by	kirk

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
Air21 Panel w/ mt pipe	B	From Leg	3.00	0.000	210.00	No Ice 6.61	5.54	0.10
			0			1/2" Ice 7.08	6.27	0.16
			0			1" Ice 7.55	7.01	0.22
Air21 Panel w/ mt pipe	C	From Leg	3.00	0.000	210.00	No Ice 6.61	5.54	0.10
			0			1/2" Ice 7.08	6.27	0.16
			0			1" Ice 7.55	7.01	0.22
(3) LNX-8514DS w/ mt pipe	A	From Leg	3.00	0.000	210.00	No Ice 11.45	9.36	0.08
			0			1/2" Ice 12.06	10.68	0.16
			0			1" Ice 12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	B	From Leg	3.00	0.000	210.00	No Ice 11.45	9.36	0.08
			0			1/2" Ice 12.06	10.68	0.16
			0			1" Ice 12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	C	From Leg	3.00	0.000	210.00	No Ice 11.45	9.36	0.08
			0			1/2" Ice 12.06	10.68	0.16
			0			1" Ice 12.69	11.71	0.25
WD13X53 Antenna Mounting Frame (w/ .75)*	C	From Leg	1.50	0.000	210.00	No Ice 7.20	3.88	1.18
			0			1/2" Ice 10.42	5.70	1.60
			0			1" Ice 13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	B	From Leg	1.50	0.000	210.00	No Ice 7.20	3.88	1.18
			0			1/2" Ice 10.42	5.70	1.60
			0			1" Ice 13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	A	From Leg	1.50	0.000	210.00	No Ice 7.20	3.88	1.18
			0			1/2" Ice 10.42	5.70	1.60
			0			1" Ice 13.56	7.51	2.11
Air21 Panel w/ mt pipe	A	From Leg	3.00	0.000	200.00	No Ice 6.61	5.54	0.10
			0			1/2" Ice 7.08	6.27	0.16
			0			1" Ice 7.55	7.01	0.22
Air21 Panel w/ mt pipe	B	From Leg	3.00	0.000	200.00	No Ice 6.61	5.54	0.10
			0			1/2" Ice 7.08	6.27	0.16
			0			1" Ice 7.55	7.01	0.22
Air21 Panel w/ mt pipe	C	From Leg	3.00	0.000	200.00	No Ice 6.61	5.54	0.10
			0			1/2" Ice 7.08	6.27	0.16
			0			1" Ice 7.55	7.01	0.22
(3) LNX-8514DS w/ mt pipe	A	From Leg	3.00	0.000	200.00	No Ice 11.45	9.36	0.08
			0			1/2" Ice 12.06	10.68	0.16
			0			1" Ice 12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	B	From Leg	3.00	0.000	200.00	No Ice 11.45	9.36	0.08
			0			1/2" Ice 12.06	10.68	0.16
			0			1" Ice 12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	C	From Leg	3.00	0.000	200.00	No Ice 11.45	9.36	0.08
			0			1/2" Ice 12.06	10.68	0.16
			0			1" Ice 12.69	11.71	0.25
WD13X53 Antenna Mounting Frame (w/ .75)*	C	From Leg	1.50	0.000	200.00	No Ice 7.20	3.88	1.18
			0			1/2" Ice 10.42	5.70	1.60
			0			1" Ice 13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	B	From Leg	1.50	0.000	200.00	No Ice 7.20	3.88	1.18
			0			1/2" Ice 10.42	5.70	1.60
			0			1" Ice 13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	A	From Leg	1.50	0.000	200.00	No Ice 7.20	3.88	1.18
			0			1/2" Ice 10.42	5.70	1.60
			0			1" Ice 13.56	7.51	2.11
Air21 Panel w/ mt pipe	A	From Leg	3.00	0.000	190.00	No Ice 6.61	5.54	0.10
			0			1/2" Ice 7.08	6.27	0.16
			0			1" Ice 7.55	7.01	0.22
Air21 Panel w/ mt pipe	B	From Leg	3.00	0.000	190.00	No Ice 6.61	5.54	0.10
			0			1/2" Ice 7.08	6.27	0.16
			0			1" Ice 7.55	7.01	0.22

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz	Lateral					
			Vert		°	ft	ft ²	ft ²	K
			ft	ft					
Air21 Panel w/ mt pipe	C	From Leg	3.00	0.000	190.00	No Ice	6.61	5.54	0.10
			0			1/2" Ice	7.08	6.27	0.16
			0			1" Ice	7.55	7.01	0.22
(3) LNX-8514DS w/ mt pipe	A	From Leg	3.00	0.000	190.00	No Ice	11.45	9.36	0.08
			0			1/2" Ice	12.06	10.68	0.16
			0			1" Ice	12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	B	From Leg	3.00	0.000	190.00	No Ice	11.45	9.36	0.08
			0			1/2" Ice	12.06	10.68	0.16
			0			1" Ice	12.69	11.71	0.25
(3) LNX-8514DS w/ mt pipe	C	From Leg	3.00	0.000	190.00	No Ice	11.45	9.36	0.08
			0			1/2" Ice	12.06	10.68	0.16
			0			1" Ice	12.69	11.71	0.25
WD13X53 Antenna Mounting Frame (w/ .75)*	C	From Leg	1.50	0.000	190.00	No Ice	7.20	3.88	1.18
			0			1/2" Ice	10.42	5.70	1.60
			0			1" Ice	13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	B	From Leg	1.50	0.000	190.00	No Ice	7.20	3.88	1.18
			0			1/2" Ice	10.42	5.70	1.60
			0			1" Ice	13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	A	From Leg	1.50	0.000	190.00	No Ice	7.20	3.88	1.18
			0			1/2" Ice	10.42	5.70	1.60
			0			1" Ice	13.56	7.51	2.11

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets:		Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight
				Horz	Lateral						
			Vert		°	°	ft	ft	ft ²	K	
			ft	ft							
6 FT DISH	B	Paraboloid w/Radome	From Leg	1.00	0.000	150.00	6.00	No Ice	28.27	0.14	
				0				1/2" Ice	29.05	0.29	
				0				1" Ice	29.83	0.44	
6 FT DISH	C	Paraboloid w/Radome	From Leg	1.00	0.000	140.00	6.00	No Ice	28.27	0.14	
				0				1/2" Ice	29.05	0.29	
				0				1" Ice	29.83	0.44	
6 FT DISH	B	Paraboloid w/Radome	From Leg	1.00	0.000	130.00	6.00	No Ice	28.27	0.14	
				0				1/2" Ice	29.05	0.29	
				0				1" Ice	29.83	0.44	
6 FT DISH	C	Paraboloid w/Radome	From Leg	1.00	0.000	120.00	6.00	No Ice	28.27	0.14	
				0				1/2" Ice	29.05	0.29	
				0				1" Ice	29.83	0.44	
6 FT DISH	B	Paraboloid w/Radome	From Leg	1.00	0.000	110.00	6.00	No Ice	28.27	0.14	
				0				1/2" Ice	29.05	0.29	
				0				1" Ice	29.83	0.44	
6 FT DISH	C	Paraboloid w/Radome	From Leg	1.00	0.000	100.00	6.00	No Ice	28.27	0.14	
				0				1/2" Ice	29.05	0.29	
				0				1" Ice	29.83	0.44	

Bolt Design Data

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Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load Allowable	Allowable Ratio	Criteria
T1	240	Leg	A325N	0.75	4	10.39	29.82	0.349 ✓	1	Bolt Tension
T2	220	Leg	A325N	1.00	4	25.31	53.01	0.477 ✓	1	Bolt Tension
		Diagonal	A325X	0.50	1	8.01	8.81	0.909 ✓	1	Member Bearing
		Top Girt	A325X	0.63	1	1.79	7.39	0.242 ✓	1	Member Bearing
T3	200	Leg	A325N	1.00	4	45.22	53.01	0.853 ✓	1	Bolt Tension
		Diagonal	A325X	0.63	1	10.57	14.79	0.715 ✓	1	Member Bearing
T4	180	Leg	A325N	1.00	6	42.71	53.01	0.806 ✓	1	Bolt Tension
		Diagonal	A325X	0.63	1	10.17	14.79	0.687 ✓	1	Member Bearing
T5	160	Leg	A325N	1.25	6	52.11	82.83	0.629 ✓	1	Bolt Tension
		Diagonal	A325X	0.63	1	13.42	14.79	0.908 ✓	1	Member Bearing
		Horizontal	A325X	0.63	1	6.38	11.09	0.575 ✓	1	Member Bearing
T6	140	Leg	A325N	1.25	6	62.33	82.83	0.752 ✓	1	Bolt Tension
		Diagonal	A325X	0.63	1	14.60	15.19	0.961 ✓	1	Bolt Shear
		Horizontal	A325X	0.63	1	7.29	14.79	0.493 ✓	1	Member Bearing
T7	120	Leg	A325N	1.25	6	72.18	82.83	0.871 ✓	1	Bolt Tension
		Diagonal	A325X	0.75	1	15.16	17.84	0.850 ✓	1	Member Bearing
		Horizontal	A325X	0.75	1	8.44	13.38	0.631 ✓	1	Member Bearing
T8	100	Leg	A325N	1.50	6	81.81	119.28	0.686 ✓	1	Bolt Tension
		Diagonal	A325X	0.75	1	15.77	17.84	0.884 ✓	1	Member Bearing
		Horizontal	A325X	0.75	1	9.59	13.38	0.717 ✓	1	Member Bearing
T9	80	Leg	A325N	1.50	6	91.00	119.28	0.763 ✓	1	Bolt Tension
		Diagonal	A325X	0.75	1	16.18	17.84	0.907 ✓	1	Member Bearing
		Horizontal	A325X	0.75	1	10.70	13.38	0.800 ✓	1	Member Bearing
T10	60	Leg	A325N	1.50	6	97.84	119.28	0.820 ✓	1	Bolt Tension
		Diagonal	A325X	0.75	1	12.01	17.84	0.674 ✓	1	Member Bearing
		Horizontal	A325X	0.75	1	11.59	17.84	0.650 ✓	1	Member Bearing
T11	40	Leg	A325N	1.50	6	103.57	119.28	0.868 ✓	1	Bolt Tension
		Diagonal	A325X	0.75	1	12.49	17.84	0.701 ✓	1	Member Bearing
		Horizontal	A325X	0.75	1	12.35	17.84	0.693 ✓	1	Member Bearing
T12	20	Leg	A354-BC	1.75	6	109.07	169.12	0.645 ✓	1	Bolt Tension
		Diagonal	A325X	0.75	1	12.76	18.92	0.674 ✓	1	Gusset Bearing
		Horizontal	A325X	0.75	1	13.10	17.84	0.735 ✓	1	Member Bearing

Compression Checks Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _n ft	Kl/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
T1	240 - 220	1 3/4	20.00	3.21	88.0	2.41	-49.43	61.44	0.804 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T2	220 - 200	2 3/4	20.02	5.00	K=1.00 87.4	5.94	-118.19	152.99	0.773 ¹
T3	200 - 180	3 1/4	20.02	5.00	K=1.00 73.9	8.30	-208.91	250.37	0.834 ¹
T4	180 - 160	3 1/2	20.02	5.00	K=1.00 68.6	9.62	-289.81	306.80	0.945 ¹
T5	160 - 140	3 3/4	20.02	5.00	K=1.00 64.1	11.04	-352.06	368.18	0.956 ¹
T6	140 - 120	4	20.02	5.00	K=1.00 60.1	12.57	-420.29	434.40	0.968 ¹
T7	120 - 100	4 1/4	20.02	5.00	K=1.00 56.5	14.19	-487.18	505.39	0.964 ¹
T8	100 - 80	4 1/2	20.02	5.00	K=1.00 53.4	15.90	-553.21	581.08	0.952 ¹
T9	80 - 60	4 3/4	20.02	5.00	K=1.00 50.6	17.72	-617.38	661.41	0.933 ¹
T10	60 - 40	5	20.03	5.01	K=1.00 48.1	19.64	-668.48	746.17	0.896 ¹
T11	40 - 20	5	20.03	5.01	K=1.00 48.1	19.64	-712.40	746.17	0.955 ¹
T12	20 - 0	5 1/4	20.03	5.01	K=1.00 45.8	21.65	-755.49	835.68	0.904 ¹

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1 1/8	5.13	4.94	147.6 K=0.70	0.99	-9.96	10.31	0.966 ¹
T2	220 - 200	L1 3/4x1 3/4x3/16	7.30	3.49	122.1 K=1.00	0.62	-7.88	9.18	0.858 ¹
T3	200 - 180	L2x2x1/4	8.45	4.03	123.6 K=1.00	0.94	-10.64	13.59	0.783 ¹
T4	180 - 160	L2x2x1/4	9.70	4.64	142.5 K=1.00	0.94	-10.12	10.43	0.970 ¹
T5	160 - 140	L3x3x1/4	7.07	6.56	133.0 K=1.00	1.44	-13.70	18.40	0.745 ¹
T6	140 - 120	L3x3x1/4	7.62	7.11	144.1 K=1.00	1.44	-14.60	15.67	0.932 ¹
T7	120 - 100	L3 1/2x3 1/2x1/4	8.20	7.64	132.2 K=1.00	1.69	-15.72	21.83	0.720 ¹
T8	100 - 80	L3 1/2x3 1/2x1/4	8.81	8.25	142.6 K=1.00	1.69	-16.49	18.78	0.878 ¹
T9	80 - 60	L4x4x1/4	9.43	8.87	133.9 K=1.00	1.94	-17.09	24.41	0.700 ¹
T10	60 - 40	L4x4x1/4	10.30	9.72	146.8 K=1.00	1.94	-12.50	20.34	0.614 ¹
T11	40 - 20	L4x4x1/4	11.18	10.61	160.2	1.94	-13.19	17.07	0.773 ¹

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	Client Bluegrass Cellular	Designed by kirk

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T12	20 - 0	L4x4x5/16	12.08	11.51	K=1.00 174.6 K=1.00	2.40	-13.67	17.78	0.769 ¹ ✓ ✓

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1	4.00	3.85	129.5 K=0.70	0.79	-1.85	10.52	0.176 ¹ ✓
T5	160 - 140	L2x2x3/16	9.63	4.51	137.4 K=1.00	0.71	-6.38	8.56	0.745 ¹ ✓
T6	140 - 120	L2x2x1/4	11.13	5.25	161.1 K=1.00	0.94	-7.29	8.16	0.893 ¹ ✓
T7	120 - 100	L2 1/2x2 1/2x3/16	12.63	5.97	144.7 K=1.00	0.90	-8.44	9.73	0.868 ¹ ✓
T8	100 - 80	L3x3x3/16	14.13	6.71	135.1 K=1.00	1.09	-9.59	13.49	0.711 ¹ ✓
T9	80 - 60	L3x3x3/16	15.63	7.45	150.0 K=1.00	1.09	-10.70	10.95	0.977 ¹ ✓
T10	60 - 40	L3 1/2x3 1/2x1/4	17.50	8.38	144.8 K=1.00	1.69	-11.59	18.21	0.637 ¹ ✓
T11	40 - 20	L3 1/2x3 1/2x1/4	19.50	9.38	162.1 K=1.00	1.69	-12.35	14.53	0.850 ¹ ✓
T12	20 - 0	L4x4x1/4	21.50	10.36	156.4 K=1.00	1.94	-13.10	17.91	0.732 ¹ ✓

Tension Checks Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1 3/4	20.00	3.21	88.0	2.41	41.57	108.24	0.384 ¹ ✓
T2	220 - 200	2 3/4	20.02	5.00	87.4	5.94	101.23	267.28	0.379 ¹ ✓
T3	200 - 180	3 1/4	20.02	5.00	73.9	8.30	180.89	373.31	0.485 ¹ ✓
T4	180 - 160	3 1/2	20.02	5.00	68.6	9.62	256.23	432.95	0.592 ¹ ✓
T5	160 - 140	3 3/4	20.02	5.00	64.1	11.04	312.95	497.01	0.630 ¹ ✓
T6	140 - 120	4	20.02	5.00	60.1	12.57	374.29	565.49	0.662 ¹ ✓

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _u K	Ratio P _u φP _u
T7	120 - 100	4 1/4	20.02	5.00	56.5	14.19	433.42	638.38	0.679 ¹
T8	100 - 80	4 1/2	20.02	5.00	53.4	15.90	491.24	715.69	0.686 ¹
T9	80 - 60	4 3/4	20.02	5.00	50.6	17.72	546.43	797.42	0.685 ¹
T10	60 - 40	5	20.03	5.01	48.1	19.64	587.56	883.57	0.665 ¹
T11	40 - 20	5	20.03	5.01	48.1	19.64	621.93	883.57	0.704 ¹
T12	20 - 0	5 1/4	20.03	5.01	45.8	21.65	654.93	974.14	0.672 ¹

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	φP _{allow} K	% Capacity	Pass Fail
T1	240 - 220	Leg	1 3/4	2	-49.43	61.44	80.4	Pass
T2	220 - 200	Leg	2 3/4	50	-118.19	152.99	77.3	Pass
T3	200 - 180	Leg	3 1/4	80	-208.91	250.37	83.4	Pass
T4	180 - 160	Leg	3 1/2	107	-289.81	306.80	94.5	Pass
T5	160 - 140	Leg	3 3/4	134	-352.06	368.18	95.6	Pass
T6	140 - 120	Leg	4	167	-420.29	434.40	96.8	Pass
T7	120 - 100	Leg	4 1/4	200	-487.18	505.39	96.4	Pass
T8	100 - 80	Leg	4 1/2	233	-553.21	581.08	95.2	Pass
T9	80 - 60	Leg	4 3/4	266	-617.38	661.41	93.3	Pass
T10	60 - 40	Leg	5	299	-668.48	746.17	89.6	Pass
T11	40 - 20	Leg	5	332	-712.40	746.17	95.5	Pass
T12	20 - 0	Leg	5 1/4	365	-755.49	835.68	90.4	Pass
T1	240 - 220	Diagonal	1 1/8	10	-9.96	10.31	96.6	Pass
T2	220 - 200	Diagonal	L1 3/4x1 3/4x3/16	55	-7.88	9.18	85.8	Pass
T3	200 - 180	Diagonal	L2x2x1/4	82	-10.64	13.59	78.3	Pass
T4	180 - 160	Diagonal	L2x2x1/4	112	-10.12	10.43	97.0	Pass
T5	160 - 140	Diagonal	L3x3x1/4	141	-13.70	18.40	74.5	Pass
T6	140 - 120	Diagonal	L3x3x1/4	170	-14.60	15.67	93.2	Pass
T7	120 - 100	Diagonal	L3 1/2x3 1/2x1/4	203	-15.72	21.83	72.0	Pass
T8	100 - 80	Diagonal	L3 1/2x3 1/2x1/4	237	-16.49	18.78	87.8	Pass
T9	80 - 60	Diagonal	L4x4x1/4	270	-17.09	24.41	70.0	Pass
T10	60 - 40	Diagonal	L4x4x1/4	303	-12.50	20.34	61.4	Pass
T11	40 - 20	Diagonal	L4x4x1/4	336	-13.19	17.07	77.3	Pass
T12	20 - 0	Diagonal	L4x4x5/16	369	-13.67	17.78	76.9	Pass
T1	240 - 220	Horizontal	1	28	-1.85	10.52	17.6	Pass
T5	160 - 140	Horizontal	L2x2x3/16	136	-6.38	8.56	74.5	Pass
T6	140 - 120	Horizontal	L2x2x1/4	169	-7.29	8.16	89.3	Pass
T7	120 - 100	Horizontal	L2 1/2x2 1/2x3/16	202	-8.44	9.73	86.8	Pass
T8	100 - 80	Horizontal	L3x3x3/16	235	-9.59	13.49	71.1	Pass
T9	80 - 60	Horizontal	L3x3x3/16	268	-10.70	10.95	97.7	Pass
T10	60 - 40	Horizontal	L3 1/2x3 1/2x1/4	304	-11.59	18.21	63.7	Pass
T11	40 - 20	Horizontal	L3 1/2x3 1/2x1/4	334	-12.35	14.53	85.0	Pass
T12	20 - 0	Horizontal	L4x4x1/4	367	-13.10	17.91	73.2	Pass
T1	240 - 220	Secondary Horizontal	1	20	-0.00	17.58	0.1	Pass
T1	240 - 220	Top Girt	1	4	-2.12	10.52	20.1	Pass
T2	220 - 200	Top Girt	L1 3/4x1 3/4x1/8	52	-2.04	6.14	33.2	Pass
T1	240 - 220	Bottom Girt	1	9	-3.18	10.52	30.2	Pass

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Section No.	Elevation ft	Component Type	Size	Critical Element	P K	σP_{allow} K	% Capacity	Pass Fail
Summary								
						Leg (T6)	96.8	Pass
						Diagonal (T4)	97.0	Pass
						Horizontal (T9)	97.7	Pass
						Secondary Horizontal (T1)	0.1	Pass
						Top Girt (T2)	33.2	Pass
						Bottom Girt (T1)	30.2	Pass
						Bolt Checks	96.1	Pass
						RATING =	97.7	Pass

Geotechnical Engineering Report

Proposed 255' Self-Supporting Tower

Site Name: Adair East

Russell Springs, Adair County, Kentucky

September 13, 2015

Project No. 5715061

Prepared for:

Cumberland Cellular Partnership

Elizabethtown, Kentucky

Prepared by:

Terracon Consultants, Inc.

Louisville, Kentucky

Offices Nationwide
Employee-Owned

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Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

September 13, 2015



Cumberland Cellular Partnership
2902 Ring Road
Elizabethtown, Kentucky 42701

Attention: Mr. Tim Ash
P: 270.765.6361

Regarding: Geotechnical Engineering Report
Proposed 255' Self Supporting Tower
Site Name: Adair East
Russell Springs, Adair County, Kentucky
Terracon Project No.: 57155061

Dear Mr. Ash:

Terracon Consultants, Inc. (Terracon) has completed the geotechnical subsurface investigation, laboratory testing and engineering analysis for the above-referenced project. It is our understanding that a 255 ft. self supporting tower is planned for this site. The purpose of this report is to provide strength values for the subsurface materials. This study was performed in general accordance with Terracon's Master Service Agreement dated March 7, 2001 and Cumberland Cellular Partnership Purchase Order PO-2852 dated May 5, 2015.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.


M. Todd England, P.G.
Project Geologist
Kentucky PG# 2575


Robert N. Kennedy, P.E.
Office Manager
Kentucky PE# 23117

Reviewed by: Barney C. Hale – Senior Engineer

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APPENDIX

- Site Location Plan
- Boring Location Plan
- Boring Logs
- Field Exploration and Laboratory Testing
- General Notes
- Unified Soil Classification
- General Notes - Sedimentary Rock Classification

GEOTECHNICAL ENGINEERING REPORT
PROPOSED 255' SELF-SUPPORTING TOWER
SITE NAME: ADAIR EAST
RUSSELL SPRINGS, ADAIR COUNTY, KENTUCKY
Terracon Project No. 57155061
September 13, 2015

1.0 PROJECT INFORMATION

1.1 Project Description

ITEM	DESCRIPTION
Site layout	See the Boring Location Plan (Exhibit A-2) in the Appendix
Site Dimensions	Approximately 10,000 sf lease area
Tower	Self-Supporting, 255 feet
Maximum loads	Vertical: 620 kips (assumed) Shear: 82 kips (assumed) Uplift: 540 kip-ft (assumed)
Maximum allowable settlement	1-inch (assumed)
Equipment Building: Maximum Loads	Column: 25 kips (assumed) Wall: 1.5 kips/ft (assumed)
Equipment Building: Maximum allowable settlement	Total Settlement: 1-inch (assumed) Differential Settlement: ¼ inch over 40 feet (assumed)
Grading	Grading information was not provided at the issuance of this report. However, minimal cut and fill (i.e., <3 ft.) is anticipated for this project.

1.2 Site Location and Description

ITEM	DESCRIPTION
Location	The proposed tower location is at 348 R. Grider Road in Russell Springs, Adair County, Kentucky. The following lat/long were provided by Bluegrass Cellular: Lat./Long.: 37° 04' 30.2" N/ 85° 10' 08.6" W
Existing improvements	Vacant pasture land
Current ground cover	Grass
Existing topography	Detailed topographic information was not provided prior to the issuance of this report. However, a review of Kentucky Geological Survey (KGS) topographic maps, the project site gently slopes to the southwest.

2.0 SUBSURFACE CONDITIONS

2.1 Geology

FORMATION ¹	DESCRIPTION
Salem and Warsaw Formations	Limestone, light-olive-gray to medium- and dark-gray, medium- to coarse-grained, argillaceous and arenaceous, thick-bedded to thinly crossbedded.
	Siltstone and shale, light-olive-gray to medium- and dark-gray, calcareous, in part highly fossiliferous. Gradational with argillaceous limestone.

1. Based on the *Geologic Map of the Montpelier Quadrangle, Adair County, Kentucky*, published by Kentucky Geological Survey (GQ-337).

The Salem and Warsaw formations are listed as having a medium potential for dissolution and sinkhole formation. This results in voids and solution channels developing within the rock strata creating a highly irregular bedrock surface. The weathering of the bedrock and subsequent collapse or erosion of the overburden into these openings results in what is referred to as karst topography. Any construction in karst topography is accompanied by some degree of risk for future internal soil erosion and ground subsidence that could affect the stability of the proposed structure. Our review of the Karst Potential Map (<http://kgs.uky.edu>) did not indicate closed depressions within a 1-mile radius of the property. In addition, the boring advanced on-site did not disclose evidence of karst related activity at the tower location. The risks associated with karst geology are common for the project vicinity and are not unique to this site.

2.2 Typical Profile

One boring was drilled at the center of the tower as staked in the field by the owner's representative. Based on the results of our boring, the subsurface conditions on the project site can be generalized as follows:

Description	Approximate Depth to Bottom of Stratum (feet)	Material Encountered	Consistency/Density
Surface	0.5	Topsoil	N/A
Stratum 1	3.5	Lean Clay	Medium Stiff N-value: 4 bpf
Stratum 2	13.5	Lean Clay with Sand (CL), Sandy Silty Clay (CL-ML)	Very Stiff N-value: 16 to 26 bpf

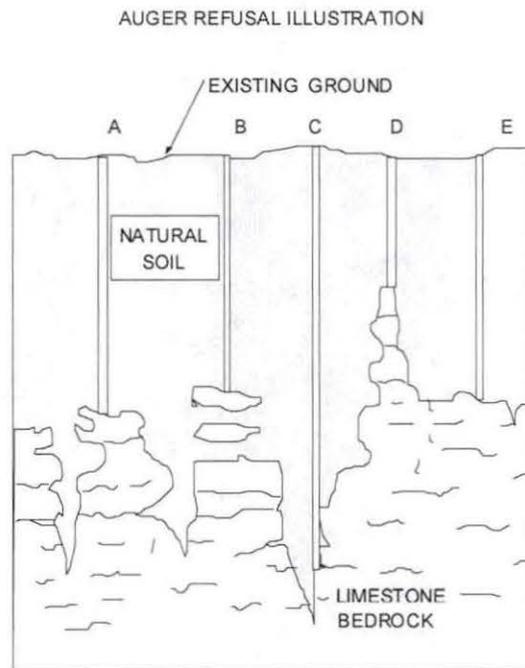
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Stratum 3	21	Weathered Sandstone, highly weathered	N/A
Stratum 4	26	Limestone, slightly weathered	Recovery: 96 RQD: 96

Auger refusal was encountered at a depth of approximately 21 feet below existing grade. Auger refusal is defined as the depth below the ground surface at which a test boring can no longer be advanced with the soil drilling technique being used. In an area of limestone bedrock, auger refusal can result on slabs of unweathered limestone suspended in the residual soil matrix ("floaters"), on rock "pinnacles" rising above the surrounding bedrock surface, in widened joints that may extend well below the surrounding bedrock surface, or on the upper surface of continuous bedrock. Several of these possible auger refusal conditions are illustrated in the adjacent figure.



THIS FIGURE IS FOR ILLUSTRATIVE PURPOSES ONLY AND DOES NOT NECESSARILY DEPICT THE SPECIFIC BEDROCK CONDITIONS AT THIS SITE

The Salem and Warsaw Limestone bedrock formations are listed as having a medium potential for producing several obstructions that can cause the augers to refuse above sound bedrock. These obstructions can range from floaters to rock pinnacles as illustrated in examples A, B, C, and D in the figure. Depth to competent bedrock in areas of karst geology can vary greatly over short distances. The possibility of varying depths to bedrock should be considered when developing the design and construction plans for this project.

Rock core operations were performed to better explore the refusal materials. The bedrock materials sampled consisted of a brownish to light gray to gray, fine to medium grained, hard, slightly weathered limestone. Sample recovery equaled 96 percent. The quality of the core obtained is considered to be excellent with the RQD value equal to 96 percent.

Specific conditions encountered at the boring location are indicated on the attached boring log. Stratification boundaries on the boring log represent the approximate location of changes in soil types; in-situ, the transition between materials may be gradual. Further details of the boring can be found on the boring log in the Appendix of this report.

2.3 Groundwater

The borehole was observed while drilling and after completion of soil drilling activities for the presence and level of groundwater. Groundwater was not observed in the boring while drilling the soil overburden. Water was used to obtain the rock core sample from this site, negating any post boring groundwater measurement. Due to the low permeability of the soils encountered in the boring, a relatively long period of time may be necessary for a groundwater level to develop and stabilize in a borehole in these materials. Long term observations in piezometers or observation wells sealed from the influence of surface water are often required to define groundwater levels in materials of this type.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the boring was performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring log. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

3.0 RECOMMENDATIONS FOR DESIGN AND CONSTRUCTION

3.1 Geotechnical Considerations

Based on the encountered subsurface conditions, the proposed tower can be either founded on drilled piers or on a buried footing foundation. The equipment building may be supported on shallow spread footings. Design recommendations for the tower drilled piers and a mat foundation as well as shallow footings for the equipment building are presented in the following paragraphs.

3.2 Foundation Recommendations

3.2.1 Drilled Pier Foundation System

The proposed tower can be founded on a straight shaft drilled pier foundation system. Based on the results of field and laboratory testing, we have developed the following drilled pier design parameters.

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Approximate Depth (feet) ¹	Allowable Skin Friction (psf)	Allowable End Bearing Pressure (psf)	Allowable Passive Pressure (psf)	Cohesion (psf)	Internal Angle of Friction (Degrees)	Strain ϵ_{50}	Lateral Subgrade Modulus (pci)
0 – 3	Ignore	Ignore	Ignore	Ignore	Ignore	Ignore	Ignore
Lean Clay 3 – 13.5	425	--	1,500	1,500	--	0.007	125
Weathered Sandstone 13.5 – 21	750	10,000	2,500	5,000	--	0.001	750
Limestone 21 – 26	5,000 ²	40,000	10,000 ²	100,000 ²	--	0.00001	3,000

1. Pier observation is recommended to adjust pier length if variable soil conditions are encountered. A total unit weight of 120, 145 and 160 pcf can be assumed for the clay, sandstone and limestone bedrock, respectively.
2. The pier should be embedded a minimum of 3 feet into competent limestone to mobilize these higher rock strength parameters. Furthermore, it is assumed the rock socket will be extended using coring techniques rather than blasting/shooting.

The above indicated cohesion, friction angle, lateral subgrade modulus and strain values have no factors of safety, and the allowable skin friction and the passive resistances have a factor of safety of about 2. The cohesion, internal friction angle, lateral subgrade modulus and strain values given in the above table are based on our borings, published values and our past experience with similar soil types. These values should, therefore, be considered approximate. The allowable end bearing pressure provided in the table has an approximate factor of safety of at least 3. If the drilled pier is designed using the above parameters, settlements are not anticipated to exceed 1 inch. This settlement value does not include any subsidence or ground movement related to karst activity.

The upper 3 feet of soil should be ignored due to the potential effects of frost action, and construction disturbance. To avoid a reduction in lateral and uplift resistance caused by variable subsurface conditions, we recommend that drawings instruct the contractor to notify the engineer if subsurface conditions significantly different than encountered in our borings are disclosed during drilled pier installation. Under these circumstances, it may be necessary to adjust the overall length of the pier. To facilitate these adjustments and assure that the pier is embedded in suitable materials, it is recommended that a Terracon representative observe the drilled pier excavation.

A drilled pier foundation should be designed with a minimum shaft diameter of 30 inches to facilitate clean out and possible dewatering of the pier excavation. Temporary casing may be required during the pier excavation in order to control possible groundwater seepage and support the sides of the excavation in weak soil zones. Care should be taken so that the sides and bottom of the

excavations are not disturbed during construction. The bottom of the shaft should be free of loose soil or debris prior to reinforcing steel and concrete placement.

A concrete slump of at least 6 inches is recommended to facilitate temporary casing removal. It should be possible to remove the casing from a pier excavation during concrete placement provided that the concrete inside the casing is maintained at a sufficient level to resist any earth and hydrostatic pressures outside the casing during the entire casing removal procedure.

3.2.2 Shallow Buried Foundation

If desired, a shallow buried foundation can be used to support the proposed tower. The mat foundation can be designed using the following native soil/engineered fill parameters.

DESCRIPTION	VALUE
Foundation Subgrade ¹	Suitable natural soil
Net allowable bearing pressure ²	3,000 psf (below 3.5 ft.)
Allowable passive pressure ³	1,500 psf
Coefficient of sliding friction ³	0.35
Minimum embedment below finished grade for frost protection	24 inches
Approximate total settlement ⁴	1 inch

1. A geotechnical engineer should verify footing subgrade prior to concrete placement.
2. Assumes any soft or unsuitable soils, if encountered, will be undercut and replaced with approved engineered granular fill or lean clay. The recommended net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation.
3. The sides of the excavation for the spread footing foundation must be nearly vertical and the concrete should be placed neat against these vertical faces for the passive earth pressure values to be valid. If the loaded side is sloped or benched, and then backfilled, the allowable passive pressure will be significantly reduced. Passive resistance in the upper 3 feet of the soil profile should be neglected. Lateral resistance due to friction at the base of the footing should be ignored where uplift also occurs.
4. The foundation settlement will depend upon the variations within the subsurface soil profile, the structural loading conditions, the embedment depth of the footing, the thickness of compacted fill, and the quality of the earthwork operations. This settlement value does not account for any ground movement associated with karst activity.

Uplift forces can be resisted by the dead weight of the footing and the effective weight of any soil above the footing. A unit weight of soil not exceeding 115 pcf is appropriate for the on-site soils backfilled above the foundation, assuming that it is compacted to at least 98 percent of standard Proctor maximum dry density (ASTM D-698). A unit weight of 150 pcf could be used for reinforced footing concrete. The ground surface should be sloped away from the foundation to avoid ponding of water and saturation of the backfill materials.

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The base of all foundation excavations should be free of water and loose soil prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Should the soils at bearing level become excessively dry, disturbed or saturated, or frozen, the affected soil should be removed prior to placing concrete. Place a lean concrete mud-mat over the bearing soils if the excavations must remain open over night or for an extended period of time. It is recommended that the geotechnical engineer be retained to observe and test the soil foundation bearing materials.

3.2.3 Equipment Building/Cabinet Foundations

Medium stiff soils were encountered at the surface in boring B-1. Very stiff soils were encountered below a depth of 3.5 feet. A boring within the proposed equipment building footprint was beyond the scope of this exploration.

DESCRIPTION	VALUE
Foundation Subgrade ¹	Suitable natural soils
Net allowable bearing pressure ²	Above 3.5 ft.: 2,000 psf Below 3.5 ft.: 3,000 psf
Minimum footing sizes Isolated: Wall :	2 feet by 2 feet 16 inches wide
Coefficient of sliding friction	0.35
Minimum embedment below finished grade for frost protection ³	24 inches
Approximate total settlement ⁴	1 inch

1. A geotechnical engineer should verify footing subgrade prior to concrete placement.
2. Assumes any soft or unsuitable soils, if encountered, will be undercut and replaced with approved engineered fill. The recommended net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation.
3. For perimeter footing and footings beneath unheated areas.
4. The foundation settlement will depend upon the variations within the subsurface soil profile, the structural loading conditions, the embedment depth of the footings, the thickness of any compacted fill, and the quality of the earthwork operations. This settlement does not account for any ground movement associated with karst activity.

3.3 Earthwork

Site preparation should begin with removal of surface materials, topsoil, vegetation, organics and any soft or otherwise unsuitable materials from the entire construction area. We recommend the actual stripping depth along with any soft soils that will require undercutting be evaluated by the geotechnical engineer at the time of construction. Engineered fill should meet the following material property requirements:

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Fill Type ¹	USCS Classification	Acceptable Location for Placement ¹
Well graded granular material	GW ⁴ , SW, SM, and SC ²	All locations and elevations
Low Volume Change Material ³	CL or GW and (LL<50 & PI<22)	All locations and elevations
On-site soils	CL, CL-ML	All Locations and Elevations

1. Controlled, compacted fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the geotechnical engineer for evaluation. Any fill to be placed beneath the tower footing should consist of well graded granular material.
2. Similar to crushed limestone aggregate or limestone screenings or granular material such as sand, gravel or crushed stone (pug mix).
3. Low plasticity cohesive soil or granular soil having at least 18% low plasticity fines.
4. Similar to KDOT Section 302 for dense graded aggregate or crushed stone base limestone, limestone screenings, or granular material such as sand, gravel or crushed stone containing not more than 18% non-plastic fines.

3.3.1 Compaction Requirements

Fill Lift Thickness	9-inches or less in loose thickness
Compaction Requirements ¹	98% of the materials standard Proctor maximum dry density (ASTM D-698)
Moisture Content – Granular Material	Workable moisture levels ²
Moisture Content – Cohesive Soil	Within the range of optimum moisture content to 2% above or 1% below optimum moisture content as determined by the standard Proctor test at the time of placement

1. We recommend that engineered fill be tested for moisture content and compaction during placement. Should the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved.
2. Specifically, moisture levels should be maintained low enough to allow for satisfactory compaction to be achieved without the cohesionless fill material pumping when proofrolled.

3.3.2 Construction Considerations

Although the exposed subgrade is anticipated to be relatively stable upon initial exposure, unstable subgrade conditions could develop during general construction operations, particularly if the soils are wetted and/or subjected to repetitive construction traffic. The use of light construction equipment would aid in reducing subgrade disturbance. Should unstable subgrade conditions develop stabilization measures will need to be employed.

Geotechnical Engineering Report

Adair East Telecommunication Tower ■ Russell Springs, KY
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Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become frozen, desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and recompactd.

As a minimum, all temporary excavations should be sloped or braced as required by Occupational Health and Safety Administration (OSHA) regulations to provide stability and safe working conditions. Temporary excavations will may be required during grading operations. The grading contractor, by his contract, is usually responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required, to maintain stability of both the excavation sides and bottom. All excavations should comply with applicable local, state and federal safety regulations, including the current OSHA Excavation and Trench Safety Standards.

The geotechnical engineer should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation; proof-rolling; placement and compaction of controlled compacted fills; backfilling of excavations into the completed subgrade, and just prior to construction of foundations.

4.0 GENERAL COMMENTS

Terracon should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. Terracon also should be retained to provide observation and testing services during grading, excavation, foundation construction and other earth-related construction phases of the project.

The analysis and recommendations presented in this report are based upon the data obtained from the borings performed at the indicated location and from other information discussed in this report. This report does not reflect variations that may occur across the site, or due to the modifying effects of weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be immediately notified so that further evaluation and supplemental recommendations can be provided.

The scope of services for this project does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either express or implied, are intended or made. Site

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safety, excavation support, and dewatering requirements are the responsibility of others. In the event that changes in the nature, design, or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless Terracon reviews the changes and either verifies or modifies the conclusions of this report in writing.

APPENDIX



Project Manager:	MTE	Project No.	57155061
Drawn by:	RCO	Scale:	GRAPHIC
Checked by:	MTE	File Name:	GMAP
Approved by:	MTE	Date:	August 4, 2015


Terracon
 Consulting Engineers & Scientists

13050 Eastgate Park Way, Suite 101, Louisville, KY 40223
 P [502]456 1256 F [502]456 1278

SITE LOCATION PLAN ADAIR EAST CELL TOWER 348 GRIDER ROAD RUSSEL SPRINGS, KENTUCKY

Exhibit A-1



Project Manager:	MTE	Project No.	57155061
Drawn by:	RCO	Scale:	GRAPHIC
Checked by:	MTE	File Name:	GMAP
Approved by:	MTE	Date:	August 4, 2015

Terracon
Consulting Engineers & Scientists

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BORING LOCATION PLAN

ADAIR EAST CELL TOWER
348 GRIDER ROAD
RUSSELL SPRINGS, KENTUCKY

Exhibit
A-2

BORING LOG NO. B-1

PROJECT: Adair East

CLIENT: Cumberland Cellular Partner

SITE: 348 R Grider Road
Russell Springs, Kentucky

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 37.075056° Longitude: -85.169056°	DEPTH (FL)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (ft.)	FIELD TEST RESULTS	ROCK CORE RECOVERY AND RQD (%)	ROCK CORE COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	ATTERBERG LIMITS
	0.4 TOPSOIL									
	LEAN CLAY (CL) , with silt and gravel, light brown to tannish-brown, medium stiff				18	2-2-2 N=4			18	
	3.5 FAT CLAY WITH SAND (CH) , light brown to dark brown mottled gray with black oxidation nodules, very stiff	5			17	5-8-8 N=16			28	58-26-32
	6.0 SANDY SILTY CLAY (CL-ML) , light brown to reddish-brown, very stiff				18	9-10-15 N=25			14	
	- with clay				17	9-17-9 N=26			21	
	13.5 WEATHERED SANDSTONE , brown to grayish-brown, highly weathered, with silty clay seams	15			14	12-13-50/2"			18	
	21.0 LIMESTONE , light gray to gray, fine to medium-grained, medium bedding, slightly weathered, strong rock	20			17	7-8-11 N=19			31	
	26.0 Boring Terminated at 26 Feet	25					96/96	12070		

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3.25" Hollow Stem Auger

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS

Dry at completion of drilling.



Boring Started: 8/5/2015

Boring Completed: 8/5/2015

Drill Rig: Track

Driller: R Mathis

Project No.: 57155061

Exhibit: A-1

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_57155061 ADAIR EAST TOWER GINT.GPJ TERRACON2015.GDT 10/11/15

Field Exploration Description

The boring was drilled at the center of the tower as staked in the field by the owner's representative. The approximate boring location is shown on the enclosed boring location plan. The surface elevation was not provided to Terracon.

Drilling was performed using an ATV mounted rotary drill rig. Hollow stem augers were used to advance the borehole. Representative soil samples were obtained by the split-barrel sampling procedure. In the split-barrel sampling procedure, the number of blows required to advance a standard 2-inch O.D. split-barrel sampler the last 12 inches of the typical total 18-inch penetration by means of a 140-pound hammer with a free fall of 30 inches, is the standard penetration resistance value (N). This value is used to estimate the in-situ relative density of cohesionless soils and the consistency of cohesive soils. The sampling depths and penetration distance, plus the standard penetration resistance values, are shown on the boring log. The samples were sealed and returned to the laboratory for testing and classification.

Auger refusal was encountered at a depth of about 21 feet. Below this depth, the boring was advanced into the refusal materials using a diamond bit attached to the outer barrel of a double core barrel. The inner barrel collected the cored material as the outer barrel was rotated at high speeds to cut the rock. The barrel was retrieved to the surface upon completion of the drill run. Once the core samples were retrieved, they were placed in a box and logged. The rock was later classified by an engineer and the "percent recovery" and rock quality designation (RQD) were determined.

The "percent recovery" is the ratio of the sample length retrieved to the drilled length, expressed as a percent. An indication of the actual in-situ rock quality is provided by calculating the sample's Rock Quality Designation (RQD), which is the ratio of the cumulative length of 4-inch or longer cores (discounting mechanical breaks) to the drilled length. The percent recovery and RQD are related to rock soundness and quality as illustrated below:

Relation of RQD and In-situ Rock Quality	
RQD (%)	Rock Quality
90 - 100	Excellent
75 - 90	Good
50 - 75	Fair
25 - 50	Poor
0 - 25	Very Poor

Geotechnical Engineering Report

Adair East Telecommunication Tower ■ Russell Springs, KY
September 13, 2015 ■ Terracon Project Number 57155061



A field log of the boring was prepared by the drill crew. This log included visual classifications of the materials encountered during drilling as well as the driller's interpretation of the subsurface conditions between samples. The final boring log included with this report represents an interpretation of the field log and includes modifications based on laboratory observation and tests of the samples.

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

Classification and descriptions of rock core samples are in general accordance with the enclosed General Notes, and are based on visual and tactile observations. Petrographic analysis of thin sections may indicate other rock types. Percent recovery and rock quality designation (RQD) were calculated for these samples and are noted at their depths of occurrence on the boring log.

Laboratory Testing

The laboratory testing program consisted of performing water content tests and an Atterberg Limits test on representative soil samples. A calibrated hand penetrometer was used to estimate the approximate unconfined compressive strength of the soil samples. The calibrated hand penetrometer has been correlated with unconfined compression tests and provides a better estimate of soil consistency than visual examination alone. Information from these tests was used in conjunction with field penetration test data to evaluate soil strength in-situ, volume change potential, and soil classification. In addition an unconfined compressive strength test was conducted on a select sample of the rock core specimen. Results of these tests are provided on the boring log.

GENERAL NOTES

DRILLING & SAMPLING SYMBOLS:

SS: Split Spoon - 1- ³ / ₈ " I.D., 2" O.D., unless otherwise noted	HS: Hollow Stem Auger
ST: Thin-Walled Tube - 2" O.D., unless otherwise noted	PA: Power Auger
RS: Ring Sampler - 2.42" I.D., 3" O.D., unless otherwise noted	HA: Hand Auger
DB: Diamond Bit Coring - 4", N, B	RB: Rock Bit
BS: Bulk Sample or Auger Sample	WB: Wash Boring or Mud Rotary

The number of blows required to advance a standard 2-inch O.D. split- spoon sampler (SS) the last 12 inches of the total 18-inch penetration with a 140-pound hammer falling 30 inches is considered the "Standard Penetration" or "N-value".

WATER LEVEL MEASUREMENT SYMBOLS:

WL: Water Level	WS: While Sampling	N/E: Not Encountered
WCI: Wet Cave in	WD: While Drilling	
DCI: Dry Cave in	BCR: Before Casing Removal	
AB: After Boring	ACR: After Casing Removal	

Water levels indicated on the boring logs are the levels measured in the borings at the times indicated. Groundwater levels at other times and other locations across the site could vary. In pervious soils, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of groundwater levels may not be possible with only short-term observations.

DESCRIPTIVE SOIL CLASSIFICATION: Soil classification is based on the Unified Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

CONSISTENCY OF FINE-GRAINED SOILS

<u>Unconfined Compressive Strength, Qu, psf</u>	<u>Standard Penetration or N-value (SS) Blows/Ft.</u>	<u>Consistency</u>
< 500	<2	Very Soft
500 - 1,000	2-3	Soft
1,001 - 2,000	4-6	Medium Stiff
2,001 - 4,000	7-12	Stiff
4,001 - 8,000	13-26	Very Stiff
8,000+	26+	Hard

RELATIVE DENSITY OF COARSE-GRAINED SOILS

<u>Standard Penetration or N-value (SS) Blows/Ft.</u>	<u>Ring Sampler (RS) Blows/Ft.</u>	<u>Relative Density</u>
0 - 3	0-6	Very Loose
4 - 9	7-18	Loose
10 - 29	19-58	Medium Dense
30 - 49	59-98	Dense
50+	99+	Very Dense

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term(s) of other Constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

<u>Major Component of Sample</u>	<u>Particle Size</u>
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75 mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 Sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

<u>Descriptive Term(s) of other Constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 5
With	5 - 12
Modifiers	> 12

PLASTICITY DESCRIPTION

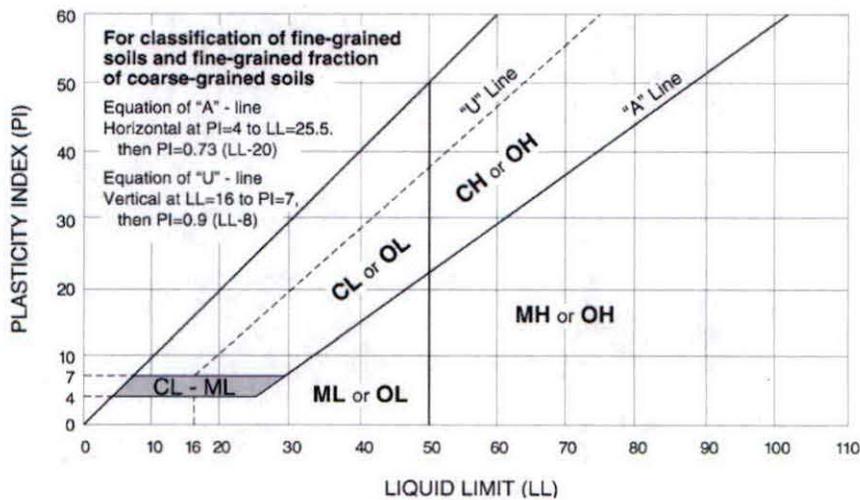
<u>Term</u>	<u>Plasticity Index</u>
Non-plastic	0
Low	1-10
Medium	11-30
High	30+

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification		
				Group Symbol	Group Name ^B	
Coarse Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F	
		Gravels with Fines: More than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F,G,H}	
			Fines classify as CL or CH	GC	Clayey gravel ^{F,G,H}	
		Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E	SW	Well-graded sand ^I
	Sands with Fines: More than 12% fines ^D		Fines classify as ML or MH	SM	Silty sand ^{G,H,I}	
			Fines Classify as CL or CH	SC	Clayey sand ^{G,H,I}	
	Fine-Grained Soils: 50% or more passes the No. 200 sieve		Silts and Clays: Liquid limit less than 50	Inorganic:	$PI > 7$ and plots on or above "A" line ^J	CL
		$PI < 4$ or plots below "A" line ^J			ML	Silt ^{K,L,M}
Organic:		Liquid limit - oven dried		< 0.75	OL	Organic clay ^{K,L,M,N}
		Liquid limit - not dried			OH	Organic silt ^{K,L,M,O}
Silts and Clays: Liquid limit 50 or more		Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K,L,M}	
			PI plots below "A" line	MH	Elastic Silt ^{K,L,M}	
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay ^{K,L,M,P}
			Liquid limit - not dried		OH	Organic silt ^{K,L,M,Q}
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat	

- ^A Based on the material passing the 3-in. (75-mm) sieve
- ^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
- ^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.
- ^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay
- ^E $Cu = D_{60}/D_{10}$ $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$
- ^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.
- ^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

- ^H If fines are organic, add "with organic fines" to group name.
- ^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.
- ^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.
- ^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.
- ^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.
- ^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.
- ^N $PI \geq 4$ and plots on or above "A" line.
- ^O $PI < 4$ or plots below "A" line.
- ^P PI plots on or above "A" line.
- ^Q PI plots below "A" line.



GENERAL NOTES

Description of Rock Properties

WEATHERING

Fresh	Rock fresh, crystals bright, few joints may show slight staining. Rock rings under hammer if crystalline.
Very slight	Rock generally fresh, joints stained, some joints may show thin clay coatings, crystals in broken face show bright. Rock rings under hammer if crystalline.
Slight	Rock generally fresh, joints stained, and discoloration extends into rock up to 1 in. Joints may contain clay. In granitoid rocks some occasional feldspar crystals are dull and discolored. Crystalline rocks ring under hammer.
Moderate	Significant portions of rock show discoloration and weathering effects. In granitoid rocks, most feldspars are dull and discolored; some show clayey. Rock has dull sound under hammer and shows significant loss of strength as compared with fresh rock.
Moderately severe	All rock except quartz discolored or stained. In granitoid rocks, all feldspars dull and discolored and majority show kaolinization. Rock shows severe loss of strength and can be excavated with geologist's pick.
Severe	All rock except quartz discolored or stained. Rock "fabric" clear and evident, but reduced in strength to strong soil. In granitoid rocks, all feldspars kaolinized to some extent. Some fragments of strong rock usually left.
Very severe	All rock except quartz discolored or stained. Rock "fabric" discernible, but mass effectively reduced to "soil" with only fragments of strong rock remaining.
Complete	Rock reduced to "soil". Rock "fabric" not discernible or discernible only in small, scattered locations. Quartz may be present as dikes or stringers.

HARDNESS (for engineering description of rock – not to be confused with Moh's scale for minerals)

Very hard	Cannot be scratched with knife or sharp pick. Breaking of hand specimens requires several hard blows of geologist's pick.
Hard	Can be scratched with knife or pick only with difficulty. Hard blow of hammer required to detach hand specimen.
Moderately hard	Can be scratched with knife or pick. Gouges or grooves to 1/4 in. deep can be excavated by hard blow of point of a geologist's pick. Hand specimens can be detached by moderate blow.
Medium	Can be grooved or gouged 1/16 in. deep by firm pressure on knife or pick point. Can be excavated in small chips to pieces about 1-in. maximum size by hard blows of the point of a geologist's pick.
Soft	Can be gouged or grooved readily with knife or pick point. Can be excavated in chips to pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.
Very soft	Can be carved with knife. Can be excavated readily with point of pick. Pieces 1-in. or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.

Joint, Bedding, and Foliation Spacing in Rock ^a

Spacing	Joints	Bedding/Foliation
Less than 2 in.	Very close	Very thin
2 in. – 1 ft.	Close	Thin
1 ft. – 3 ft.	Moderately close	Medium
3 ft. – 10 ft.	Wide	Thick
More than 10 ft.	Very wide	Very thick

a. Spacing refers to the distance normal to the planes, of the described feature, which are parallel to each other or nearly so.

Rock Quality Designator (RQD) ^a		Joint Openness Descriptors	
RQD, as a percentage	Diagnostic description	Openness	Descriptor
Exceeding 90	Excellent	No Visible Separation	Tight
90 – 75	Good	Less than 1/32 in.	Slightly Open
75 – 50	Fair	1/32 to 1/8 in.	Moderately Open
50 – 25	Poor	1/8 to 3/8 in.	Open
Less than 25	Very poor	3/8 in. to 0.1 ft.	Moderately Wide
		Greater than 0.1 ft.	Wide

a. RQD (given as a percentage) = length of core in pieces 4 in. and longer/length of run.

References: American Society of Civil Engineers. Manuals and Reports on Engineering Practice - No. 56. Subsurface Investigation for Design and Construction of Foundations of Buildings. New York: American Society of Civil Engineers, 1976.
 U.S. Department of the Interior, Bureau of Reclamation, Engineering Geology Field Manual.

Landmark Surveying Co., Inc.

Darren L. Helms, P.L.S., PRESIDENT
Dennis N. Helms, P.L.S., VICE PRESIDENT



15 N.E. 3rd Street
Washington, Indiana 47501
Phone: 812-257-0950
Fax: 812-257-0953
Email: landmark97@sbcglobal.net

Lease Boundary and Easement Descriptions

Landowner: Debra Raines and Steven Corbin

Date: September 14, 2015

Client: Bluegrass Cellular, Inc.

Project No.: 15-05-0125

Client's Address: 2902 Ring Road, Elizabethtown, Kentucky 42701

Site Name: Adair East

This is to certify that I have this day written a lease boundary description and easement description at the request of Mr. Tim Ash of Bluegrass Cellular. The descriptions should read as follows:

A tract of land that is located 1,100 feet southeast of the intersection of Kentucky Highway 80 (Russell Springs Road) with R Grider Road in Adair County, Kentucky; said tract being described as follows:

COMMENCING AT the south corner of the 13.5-acre tract described in deed to Glenwood and Nellie Corbin on March 30, 1967 in Deed Book 103, page 326 in the office of the County Clerk of Adair County, Kentucky; said corner being marked by a 5/8-inch rebar, 24 inches in length, set flush with a survey cap inscribed "D.L. Helms PLS 3386" (referred to as a rebar set in the remainder of this description) on the northeastern right of way of R Grider Road (15 feet from the centerline); thence, along the east boundary of said 13.5-acre tract, North 05 degrees 13 minutes 05 seconds East 529.40 feet; thence North 84 degrees 46 minutes 55 seconds West 17.00 feet to a rebar set flush at the **POINT OF BEGINNING** of this description: thence North 84 degrees 46 minutes 55 seconds West 100.00 feet to a rebar set flush; thence North 05 degrees 13 minutes 05 seconds East 100.00 feet to a rebar set flush; thence South 84 degrees 46 minutes 55 seconds East 100.00 feet to a rebar set flush; thence South 05 degrees 13 minutes 05 seconds West 100.00 feet to the point of beginning and containing 0.230 acres (10,000 square feet), more or less.

TOGETHER WITH an access and utility easement from the above-described 0.230-acre lease tract to R Grider Road; said easement being described as follows: **BEGINNING AT** a 5/8-inch rebar, 24 inches in length, set flush with a survey cap inscribed "D.L. Helms PLS 3386" at the southeast corner of the above-described 0.230-acre lease tract; thence South 05 degrees 13 minutes 05 seconds West 20.00 feet; thence North 84 degrees 46 minutes 55 seconds West 38.45 feet; thence South 24 degrees 46 minutes 55 seconds East 47.43 feet; thence Southerly 57.60 feet along the arc to the right and having a radius of 110.00 feet and subtended by a long chord having a bearing of South 09 degrees 46 minutes 55 seconds East and a length of 56.94 feet; thence South 05 degrees 13 minutes 05 seconds West 304.31 feet; thence Southwesterly 44.10 feet along the arc to the right and having a radius of 60.00 feet and subtended by a long chord having a bearing of South 26 degrees 16 minutes 35

seconds West and a length of 43.12 feet; thence South 47 degrees 20 minutes 04 seconds West 11.93 feet to the northeastern right of way of R Grider Road (15 feet from the centerline); thence, along said right of way, North 32 degrees 54 minutes 48 seconds West 20.29 feet; thence North 47 degrees 20 minutes 04 seconds East 8.49 feet; thence Northeasterly 29.40 feet along the arc to the left and having a radius of 40.00 feet and subtended by a long chord having a bearing of North 26 degrees 16 minutes 35 seconds East and a length of 28.75 feet; thence North 05 degrees 13 minutes 05 seconds East 304.31 feet; thence Northerly 47.12 feet along the arc to the left and having a radius of 90.00 feet and subtended by a long chord having a bearing of North 09 degrees 46 minutes 55 seconds West and a length of 46.59 feet; thence North 24 degrees 46 minutes 55 seconds West 58.98 feet; thence North 84 degrees 46 minutes 55 seconds West 38.45 feet; thence North 05 degrees 13 minutes 05 seconds East 20.00 feet to a 5/8-inch rebar, 24 inches in length, set flush with said Helms survey cap at the southwest corner of the above-described 0.230-acre lease tract; thence South 84 degrees 46 minutes 55 seconds East 100.00 feet to the point of beginning.

The bearing system of these descriptions is based upon the Kentucky State Plane Coordinate System, South Zone, NAD 83 (2011), as determined by G.P.S. observations made on August 28, 2015 using the National Geodetic Survey monument "TARTER 2 RM 4".

These descriptions are based upon a survey completed by Landmark Surveying Co., Inc. and certified by Darren L. Helms, P.L.S. 3386, on September 14, 2015.

SOURCE OF TITLE: Being a portion of and lying entirely within the 13.5-acre tract described in deed to Glenwood and Nellie Corbin on March 30, 1967 in Deed Book 103, page 326; said 13.5-acre tract being conveyed by will from Nellie Corbin to Debra Raines and Steven Corbin on January 25, 2010 in Will Book 30, page 688; both documents being recorded in the office of the County Clerk of Adair County, Kentucky.

Darren L. Helms
Darren L. Helms, P.L.S. 3386



SITE: ADAIR EAST

Lease Boundary and Topographic Survey

Adair County, Kentucky

Lease Tract
0.230 Acres or 10,000 Sq.Ft.
(NO ZONING IN ADAIR COUNTY)

Proposed Self-Support Tower
LAT. = 37°04'30.16" NORTH
LON. = 85°1'08.56" WEST
GROUND ELEV. = 983.4 FEET OR 299.74 METERS

P.O.B. of Lease Tract and Easement

Lease Boundary and Easement Descriptions

A TRACT OF LAND THAT IS LOCATED 1.100 FEET SOUTHEAST OF THE INTERSECTION OF KENTUCKY HIGHWAY 80 (RUSSELL SPRINGS ROAD) WITH R GRIDER ROAD IN ADAIR COUNTY, KENTUCKY; SAID TRACT BEING DESCRIBED AS FOLLOWS:

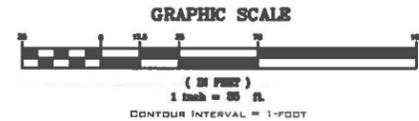
COMMENCING AT THE SOUTH CORNER OF THE 13.5-ACRE TRACT DESCRIBED IN DEED TO GLENWOOD AND NELLIE CORBIN ON MARCH 30, 1967 IN DEED BOOK 103, PAGE 326 IN THE OFFICE OF THE COUNTY CLERK OF ADAIR COUNTY, KENTUCKY; SAID CORNER BEING MARKED BY A 5/8-INCH REBAR, 24 INCHES IN LENGTH, SET FLUSH WITH A SURVEY CAP INSCRIBED "D.L. HELMS PLS 3386" (REFERRED TO AS A REBAR SET IN THE REMAINDER OF THIS DESCRIPTION) ON THE NORTHEASTERN RIGHT OF WAY OF R GRIDER ROAD 115 FEET FROM THE CENTERLINE); THENCE ALONG THE EAST BOUNDARY OF SAID 13.5-ACRE TRACT, NORTH 05 DEGREES 13 MINUTES 05 SECONDS EAST 529.40 FEET; THENCE NORTH 84 DEGREES 46 MINUTES 55 SECONDS WEST 17.00 FEET TO A REBAR SET FLUSH AT THE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE NORTH 84 DEGREES 46 MINUTES 55 SECONDS WEST 100.00 FEET TO A REBAR SET FLUSH; THENCE NORTH 05 DEGREES 13 MINUTES 05 SECONDS EAST 100.00 FEET TO A REBAR SET FLUSH; THENCE SOUTH 84 DEGREES 46 MINUTES 55 SECONDS EAST 100.00 FEET TO A REBAR SET FLUSH; THENCE SOUTH 05 DEGREES 13 MINUTES 05 SECONDS WEST 100.00 FEET TO THE POINT OF BEGINNING AND CONTAINING 0.230 ACRES (110,000 SQUARE FEET), MORE OR LESS.

TOGETHER WITH AN ACCESS AND UTILITY EASEMENT FROM THE ABOVE-DESCRIBED 0.230-ACRE LEASE TRACT TO R GRIDER ROAD; SAID EASEMENT BEING DESCRIBED AS FOLLOWS: BEGINNING AT A 5/8-INCH REBAR, 24 INCHES IN LENGTH, SET FLUSH WITH A SURVEY CAP INSCRIBED "D.L. HELMS PLS 3386" AT THE SOUTHEAST CORNER OF THE ABOVE-DESCRIBED 0.230-ACRE LEASE TRACT; THENCE SOUTH 05 DEGREES 13 MINUTES 05 SECONDS WEST 20.00 FEET; THENCE NORTH 84 DEGREES 46 MINUTES 55 SECONDS WEST 38.45 FEET; THENCE SOUTH 24 DEGREES 46 MINUTES 55 SECONDS EAST 47.43 FEET; THENCE SOUTHERLY 57.60 FEET ALONG THE ARC TO THE RIGHT AND HAVING A RADIUS OF 110.00 FEET AND SUBTENDED BY A LONG CHORD HAVING A BEARING OF SOUTH 09 DEGREES 46 MINUTES 55 SECONDS EAST AND A LENGTH OF 56.94 FEET; THENCE SOUTH 05 DEGREES 13 MINUTES 05 SECONDS WEST 304.31 FEET; THENCE SOUTHWESTERLY 44.10 FEET ALONG THE ARC TO THE RIGHT AND HAVING A RADIUS OF 60.00 FEET AND SUBTENDED BY A LONG CHORD HAVING A BEARING OF SOUTH 26 DEGREES 16 MINUTES 35 SECONDS WEST AND A LENGTH OF 43.12 FEET; THENCE SOUTH 47 DEGREES 20 MINUTES 04 SECONDS WEST 11.93 FEET TO THE NORTHEASTERN RIGHT OF WAY OF R GRIDER ROAD 115 FEET FROM THE CENTERLINE); THENCE ALONG SAID RIGHT OF WAY, NORTH 32 DEGREES 54 MINUTES 48 SECONDS WEST 20.29 FEET; THENCE NORTH 47 DEGREES 20 MINUTES 04 SECONDS EAST 8.49 FEET; THENCE NORTHEASTERLY 29.40 FEET AND SUBTENDED BY A LONG CHORD HAVING A BEARING OF NORTH 26 DEGREES 16 MINUTES 35 SECONDS EAST AND A LENGTH OF 28.75 FEET; THENCE NORTH 05 DEGREES 13 MINUTES 05 SECONDS EAST 304.31 FEET; THENCE NORTHERLY 47.12 FEET ALONG THE ARC TO THE LEFT AND HAVING A RADIUS OF 90.00 FEET AND SUBTENDED BY A LONG CHORD HAVING A BEARING OF NORTH 09 DEGREES 46 MINUTES 55 SECONDS WEST AND A LENGTH OF 46.59 FEET; THENCE NORTH 24 DEGREES 46 MINUTES 55 SECONDS WEST 58.98 FEET; THENCE NORTH 84 DEGREES 46 MINUTES 55 SECONDS WEST 38.45 FEET; THENCE NORTH 05 DEGREES 13 MINUTES 05 SECONDS EAST 20.00 FEET TO A 5/8-INCH REBAR, 24 INCHES IN LENGTH, SET FLUSH WITH SAID HELMS SURVEY CAP AT THE SOUTHWEST CORNER OF THE ABOVE-DESCRIBED 0.230-ACRE LEASE TRACT; THENCE SOUTH 84 DEGREES 46 MINUTES 55 SECONDS EAST 100.00 FEET TO THE POINT OF BEGINNING.

THE BEARING SYSTEM OF THESE DESCRIPTIONS IS BASED UPON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (2011), AS DETERMINED BY G.P.S. OBSERVATIONS MADE ON AUGUST 28, 2015 USING THE NATIONAL GEODETIC SURVEY MONUMENT "TARTER 2 RM 4".

THESE DESCRIPTIONS ARE BASED UPON A SURVEY COMPLETED BY LANDMARK SURVEYING CO., INC. AND CERTIFIED BY DARREN L. HELMS, P.L.S. 3386, ON SEPTEMBER 14, 2015.

SOURCE OF TITLE: BEING A PORTION OF AND LYING ENTIRELY WITHIN THE 13.5-ACRE TRACT DESCRIBED IN DEED TO GLENWOOD AND NELLIE CORBIN ON MARCH 30, 1967 IN DEED BOOK 103, PAGE 326; SAID 13.5-ACRE TRACT BEING CONVEYED BY WILL FROM NELLIE CORBIN TO DEBRA RAINEE AND STEVEN CORBIN ON JANUARY 25, 2010 IN WILL BOOK 30, PAGE 688; BOTH DOCUMENTS BEING RECORDED IN THE OFFICE OF THE COUNTY CLERK OF ADAIR COUNTY, KENTUCKY.



- Legend**
- 5/8" REBAR, 24" IN LENGTH, SET FLUSH WITH A SURVEY CAP INSCRIBED "D.L. HELMS PLS 3386"
 - 5/8" REBAR, 24" IN LENGTH, SET FLUSH - NO CAP
 - 8" DIAMETER WOOD CORNER POST FOUND EXPOSED 5"
 - 1/2" REBAR FOUND EXPOSED 3" WITH A SURVEY CAP INSCRIBED "H.B. WILSON PLS 2041"
 - ⊕ CALCULATED LOCATION
 - LEASE BOUNDARIES
 - EASEMENT BOUNDARIES
 - - - TIC COURSE
 - PROPERTY LINES
 - - - RIGHT OF WAY
 - UTILITY POLE
 - UTILITY AS NOTED
 - (M) MEASURED COURSE
 - (R) RECORD COURSE
 - (C) CALCULATED COURSE
 - (S) STAKED COURSE

Surveyor's Notes

- THIS SURVEY IS SUBJECT TO A STATEMENT OF FACTS WHICH MAY BE DISCLOSED BY AN ABSTRACT OF TITLE OR A TITLE COMMITMENT POLICY. THIS DOCUMENTATION WAS NOT PROVIDED BY THE CLIENT.
- NO SEARCH OF PUBLIC RECORDS HAS BEEN PERFORMED BY THIS FIRM TO DETERMINE ANY DEFECTS AND/OR AMBIGUITIES IN THE TITLE OF THE PARENT TRACT.
- THE UTILITIES SHOWN ON THIS PLAN MAY OR MAY NOT REPRESENT ALL OF THE UTILITIES LOCATED ON THE SUBJECT SITE. THE PRESENCE OF UTILITIES WAS DETERMINED BY A VISUAL INSPECTION OF THE PROPERTY SURFACE. NO UTILITY LOCATE WAS CALLED IN PRIOR TO THIS SURVEY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE UTILITIES PRIOR TO CONSTRUCTION.
- THE TOPOGRAPHIC INFORMATION CONTAINED ON THIS PLAN WAS AS REQUESTED BY THE CLIENT AND MAY OR MAY NOT REPRESENT ALL OF THE TOPOGRAPHIC FEATURES LOCATED ON THE SUBJECT PROPERTY.
- ACCORDING TO THE OFFICE OF MR. MICHAEL STEPHENS, ADAIR COUNTY JUDGE EXECUTIVE, NO LOCAL PLANNING UNIT EXISTS WHICH HAS GEOGRAPHICAL JURISDICTION OF THE SUBJECT TOWER SITE. THE COUNTY JUDGE EXECUTIVE'S OFFICE MAY BE CONTACTED AT 270-384-4703 FOR CONFIRMATION.
- THE PROPOSED LOCATION OF THE ADAIR EAST TOWER SITE WILL BE LOCATED OUTSIDE OF AN INCORPORATED CITY.
- THE COUNTY ROAD RIGHT OF WAY SHOWN HEREON WAS DETERMINED BY USE AND THE PLAT OF SURVEY RECORDED ON MARCH 25, 2011 IN PLAT CABINET 3, SLIDE 126 IN THE ADAIR COUNTY CLERK'S OFFICE.

Surveyor's Certification

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN COMPILED FROM A SURVEY ACTUALLY MADE UPON THE GROUND UNDER MY DIRECT SUPERVISION ON AUGUST 29, 2015 BY THE METHOD OF A BENCH SURVEY. THE UNADJUSTED PRECISION RATIO OF THE BASELINE WAS 1:44,500 AND IT WAS NOT ADJUSTED. THIS PLAN REPRESENTS A RURAL BOUNDARY SURVEY AND COMPLIED WITH THE REQUIREMENTS OF 201 KAR 18:150.

DARREN L. HELMS, P.L.S. 3386

DATE

Basis of Bearings

THE BEARING SYSTEM OF THIS SURVEY IS BASED UPON G.P.S. OBSERVATIONS MADE ON AUGUST 28, 2015 USING THE NATIONAL GEODETIC SURVEY MONUMENT "TARTER 2 RM 4" AND THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (2011).

Tower Location Information

DESIGNATION: ADAIR EAST
SITE ID#: NONE
HORIZONTAL DATUM: NAD 83 (2011)
LATITUDE: 37°04'30.16" NORTH
LONGITUDE: 85°1'08.56" WEST
VERTICAL DATUM: NAVD 88
GROUND ELEVATION: 983.4 FEET (299.74 M)
STATE PLANE COORDINATES
NORTHING: 1,910,984.13 FEET
(582,469.128 M)
EASTING: 1,809,899.38 FEET
(551,658.434 M)

Landowner Information

LANDOWNER: DEBRA RAINEE & STEVEN CORBIN
ADDRESS: 231 RAINEE ROAD
COLUMBIA, KY 42728
CONTACT PERSON: DEBRA RAINEE
PHONE: 270-507-6169
PVA MAP NO. 101-078

Project Bench Mark

NORTHING: 1,911,258 FEET (582,553 M)
EASTING: 1,809,729 FEET (551,506 M)
ELEVATION: 986.17 FEET (300.585 M)
DESCRIPTION: A MAG NAIL SET 12" ABOVE GRADE IN THE EAST SIDE OF A UTILITY POLE LOCATED APPROXIMATELY 323 FEET NORTHWEST OF THE CENTER OF THE TOWER.

Flood Plain Statement

ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR ADAIR COUNTY, MAP NO. 2100100275A, DATED DECEMBER 17, 2010, THE SUBJECT SITE LIES WITHIN "OTHER AREAS - ZONE X", WHICH IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.



Directions to Site

FROM ELIZABETHTOWN, KENTUCKY: TRAVEL SOUTHEAST ON KENTUCKY HIGHWAY 61 FOR ABOUT 60 MILES TO KENTUCKY HIGHWAY 80 ON THE WEST SIDE OF COLUMBIA; TURN LEFT ONTO KENTUCKY HIGHWAY 80 AND TRAVEL EASTERLY FOR 0.5 MILES TO THE COURTHOUSE SQUARE IN DOWNTOWN COLUMBIA; TRAVEL SOUTH AND CONTINUE ON KENTUCKY HIGHWAY 80 AND BUSINESS HIGHWAY 55 FOR 0.6 MILES TO THE INTERSECTION OF SAID HIGHWAYS AT FRANKLIN NISSAN; TURN LEFT AT THE INTERSECTION AND CONTINUE ON KENTUCKY HIGHWAY 80, TRAVELING IN AN EASTERLY DIRECTION, FOR 7.8 MILES TO R GRIDER ROAD; TURN RIGHT ONTO R GRIDER ROAD AND TRAVEL SOUTHERLY FOR 0.3 MILES TO THE TOWER ACCESS LANE; TURN LEFT ONTO THE LANE AND TRAVEL NORTH FOR ABOUT 500 FEET TO THE TOWER SITE IN A MAY FIELD

DEBRA RAINEE AND STEVEN CORBIN
WILL BOOK 30, PAGE 688
DEED BOOK 103, PAGE 326

APPROXIMATE LOCATION OF 20' WIDE WATER LINE EASEMENT IN FAVOR OF ADAIR COUNTY WATER DISTRICT PER DEED BOOK 295, PAGE 714. THE LOCATION OF THE LINE IS UNKNOWN.

JOE CONOVER
DEED BOOK 183, PAGE 112

HEATHER JO TAYLOR
DEED BOOK 325, PAGE 561

P.O.C. of Lease Tract

SOUTH CORNER OF THE 13.5-ACRE TRACT DESCRIBED IN DEED TO GLENWOOD AND NELLIE CORBIN ON MARCH 30, 1967 IN DEED BOOK 103, PAGE 326 IN THE OFFICE OF THE COUNTY CLERK OF ADAIR COUNTY, KENTUCKY.

LANDMARK SURVEYING CO., INC.
15 N.E. 3RD STREET
WASHINGTON, INDIANA 47501
(812) 257-0950
Email: landmark@lmsurvey.com
Project No. 15-05-0125 © 2015

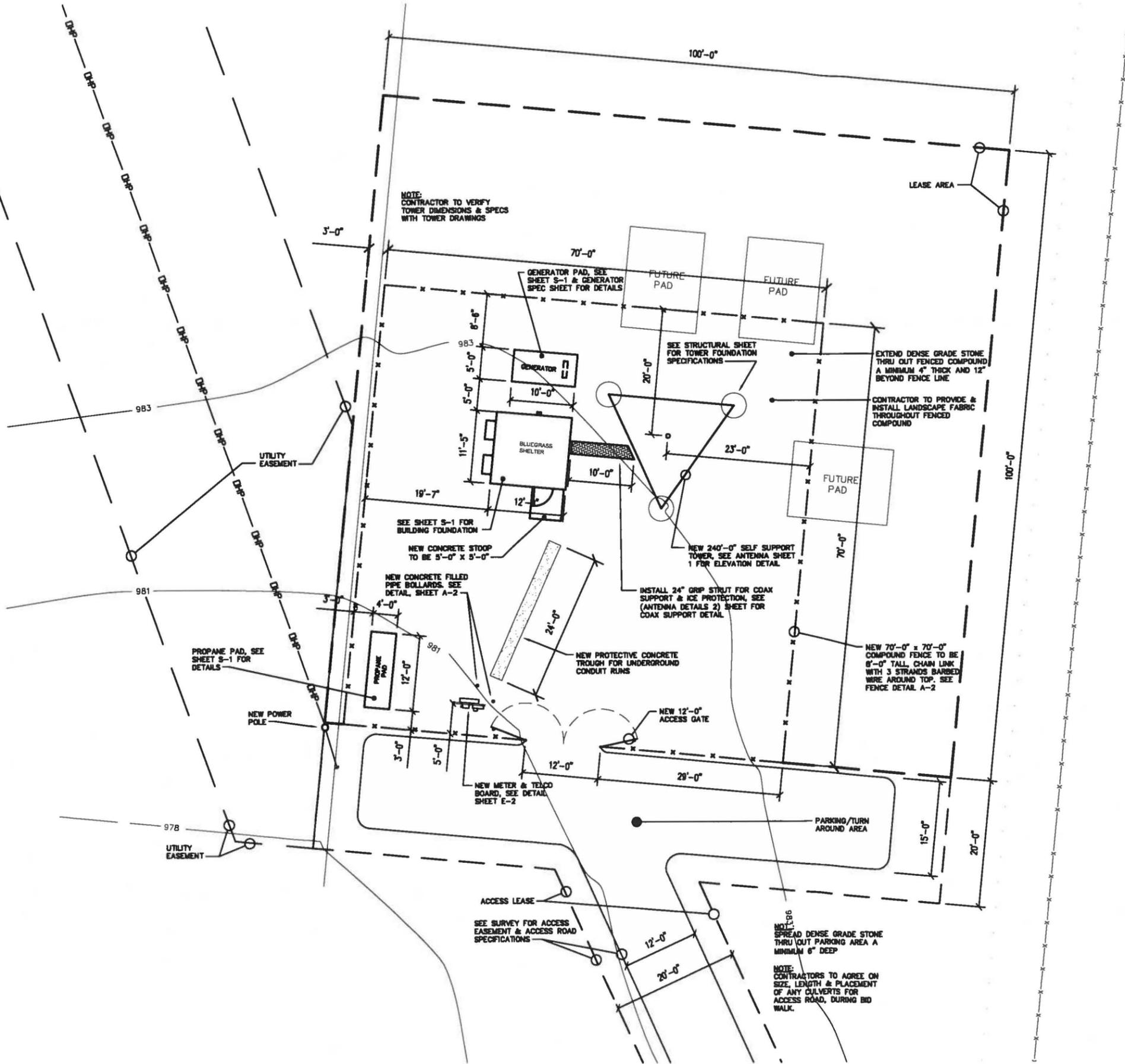
Lease Boundary Survey
348 R Grider Road
Russell Springs, Kentucky 42642

Bluegrass Cellular
2902 Ring Road
Elizabethtown, KY 42701

REVISIONS	DATE

DATE	DRAWN BY	CHECKED BY	
09-14-15	A. Whitaker	D. L. Helms	

SHEET No. 1
of 1 SHEETS
FILE NAME
adair.dwg



GENERAL NOTES:

- 1) EQUIPMENT PICK-UP AND DELIVERY TO SITE FROM BLUEGRASS CELLULAR STAGING FACILITY TO BE THE CONTRACTORS RESPONSIBILITY, INCLUDING CRANE SET, AND ALL COST INCURRED.
- 2) FOR, BUILDING AND ALL CONCRETE PAD DETAILS REFER TO STRUCTURALS AND SHEET S1.1
- 3) ANY DAMAGE DUE TO CONSTRUCTION, TO BE REPAIRED OR REPLACED TO ORIGINAL CONDITION. (SUBJECT TO BLUEGRASS CELLULAR'S APPROVAL).
- 4) ANY DAMAGE OF NATURAL SURROUNDINGS, INCLUDING BUT NOT LIMITED TO, GRASS, TREES, LANDSCAPING, ETC.. TO BE REPAIRED OR REPLACED TO ORIGINAL CONDITION AT BLUEGRASS CELLULAR'S APPROVAL.
- 5) ROADWAYS TO BE GRADED SMOOTH AND EVEN, REMOVING ALL POTHOLES. ROADS TO HAVE PROPER DRAINAGE AND RUNOFF PER BLUEGRASS CELLULAR'S APPROVAL.
- 6) ANY RELOCATION OF EXISTING UTILITIES TO BE DONE IN ACCORDANCE WITH LOCAL CODES AND RECOMMENDATIONS, CONSULTING ALL UTILITY COMPANIES INVOLVED FOR APPROVAL AND SPECIFICATIONS REQUIRED.
- 7) FOR GRADING DETAILS, SEE GENERAL NOTESHEET
- 8) CONTRACTOR TO FIELD VERIFY ALL TOWER DIMENSIONS WITH TOWER MANUFACTURER PRIOR TO JOB BIDDING OR START OF ANY CONSTRUCTION
- 9) CONTRACTOR RESPONSIBLE FOR APPLYING FOR SERVICE TO SITE AND PAYING ANY FEES REQUIRED FOR PERMITS, HOOKUP, ETC..

SITE PLAN
SCALE: 1/8" = 1'-0"

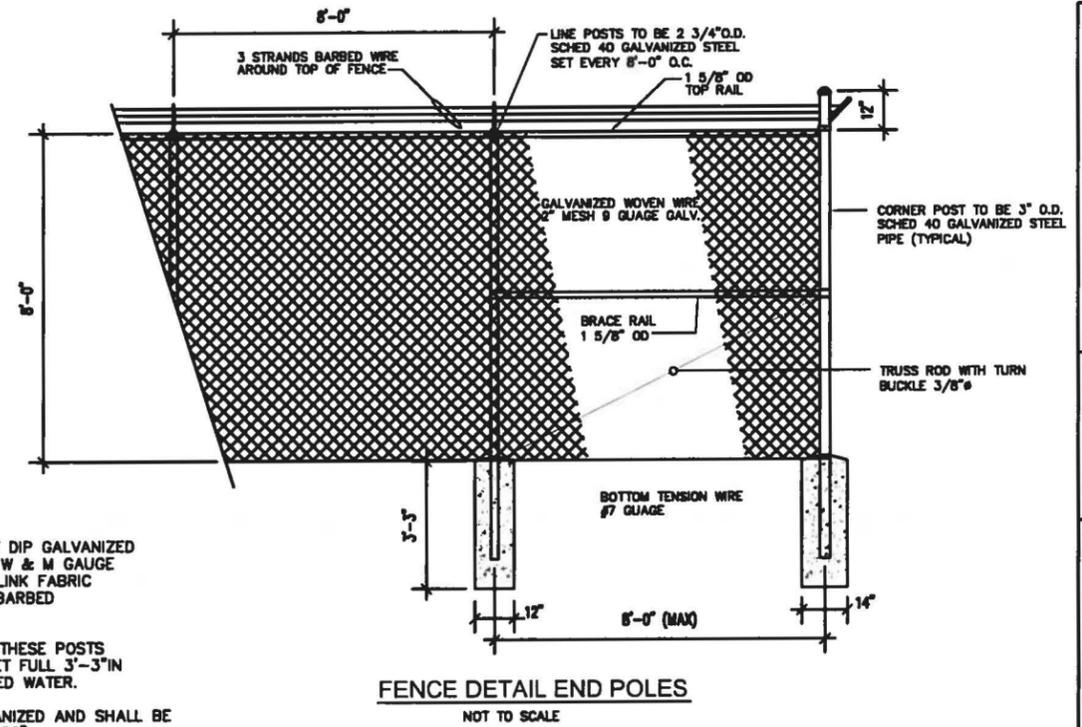
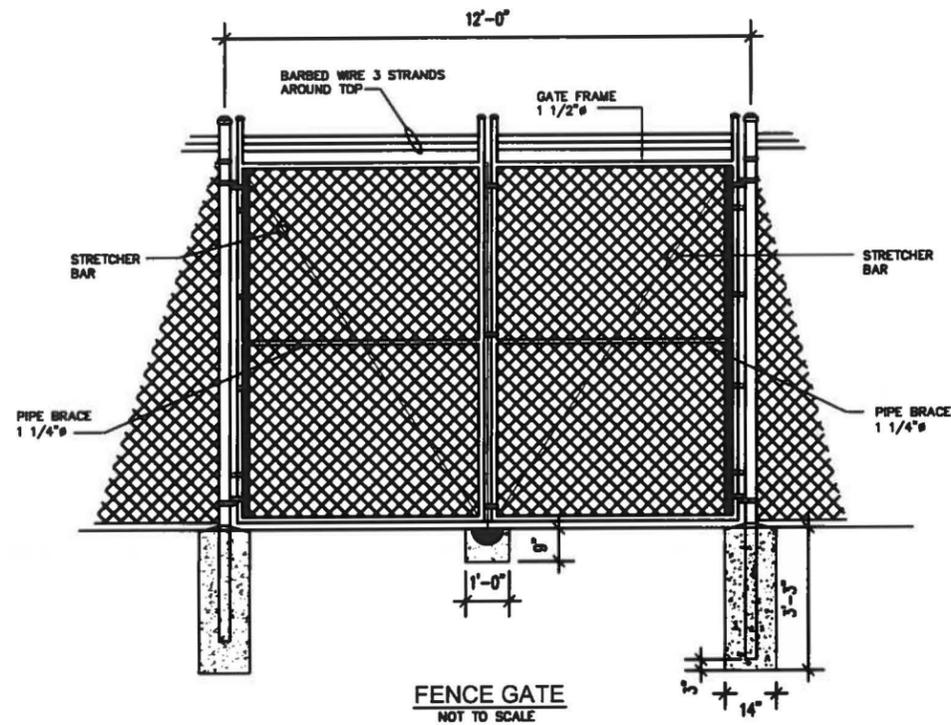


NO.	DATE	REVISION

BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
ADAIR EAST
348 R. GRIDER RD. RUSSELL SPRINGS, KY. 42642

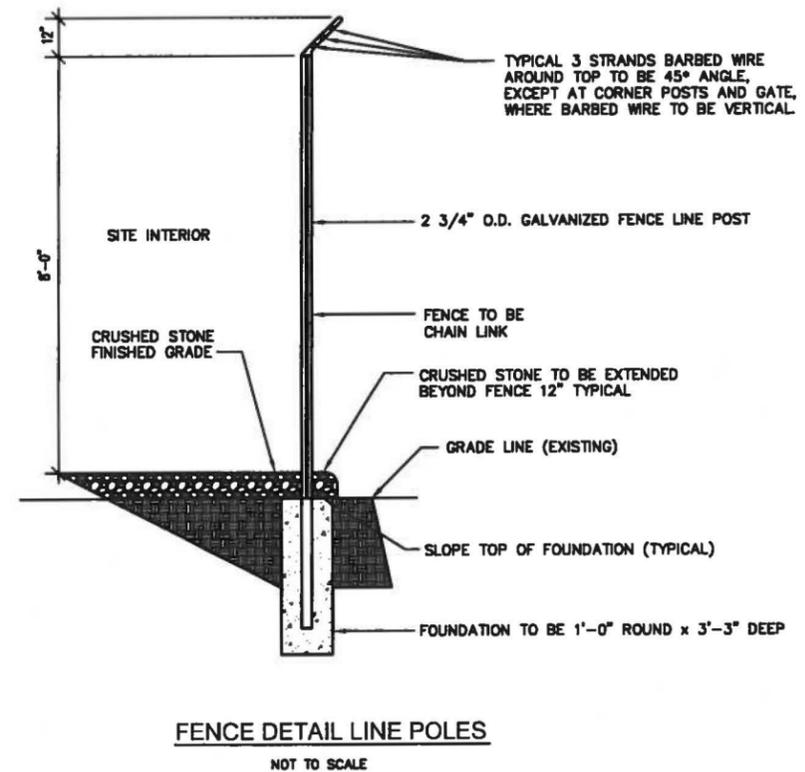
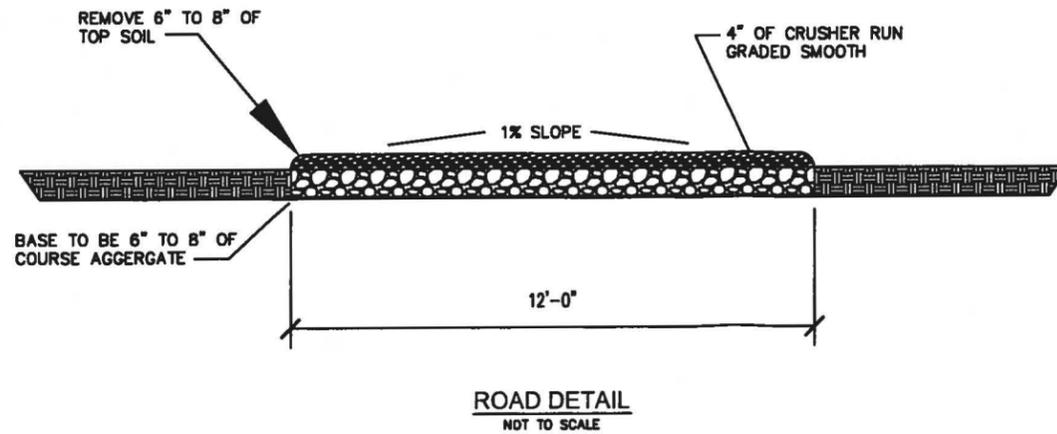
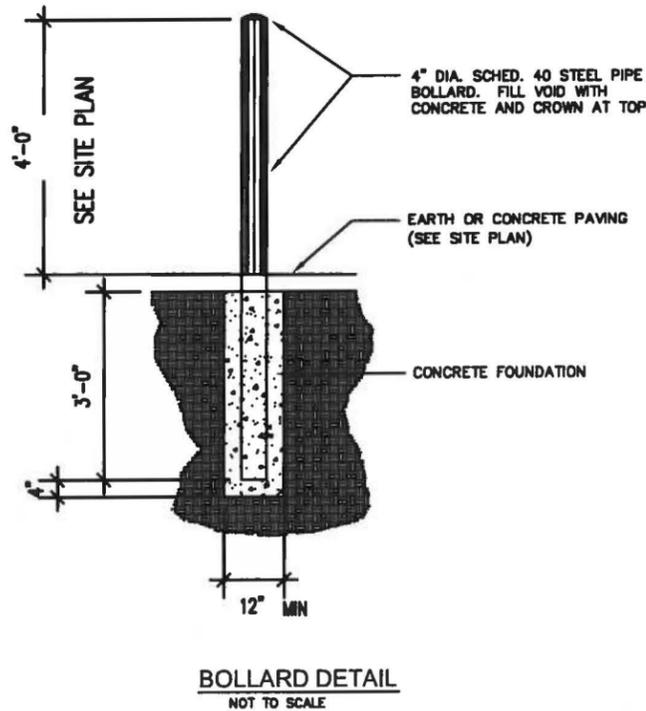
DRAWN BY: R. BECKER
ISSUE DATE: 9-10-15
SCALE: LISTED

SHEET NUMBER
A-1



CHAIN LINK FENCING NOTES:

- 1 **FABRIC:** THE FABRIC SHALL BE COMPOSED OF INDIVIDUAL HOT DIP GALVANIZED WIRE PICKETS HELICALLY WOUND AND INTERWOVEN FROM NO.9 W & M GAUGE COPPER BEARING STEEL WIRE TO FORM A CONTINUOUS CHAIN LINK FABRIC HAVING A 2" MESH. TOP EDGES SHALL HAVE A TWISTED AND BARBED
- 2 **POSTS:** SHALL BE 2 3/4" O.D. SS 40 PIPE HOT GALVANIZED. THESE POSTS SHALL BE SPACED APPROXIMATELY 8'-0" ON CENTERS AND SET FULL 3'-3" IN BELL - SHAPED CONCRETE FOOTING, CROWNED AT TOP TO SHED WATER.
- 3 **TOP RAIL:** SHALL BE 1 5/8" O.C. STANDARD PIPE HOT GALVANIZED AND SHALL BE FURNISHED IN RANDOM LENGTHS AVERAGING NOT LESS THAN 20'.
- 4 **FABRIC TIES:** FOR ATTACHING FABRIC TO LINE POST, TOP RAIL OR TOP WIRE, SHALL BE ALUMINUM STRIP OF WIRE OF APPROVED GAUGE AND DESIGN. USED ON TOP OF RAIL EVERY 24" AND ONE POST EVERY 12'.
- 5 **EXTENSION ARMS:** CAST STEEL GALVANIZED TO ACCOMMODATE 3 STRANDS OF BARB WIRE, SINGLE ARM SLOPED TO 45°, AND VERTICAL ON TOP OF SWING GATES.
- 6 **BARBED WIRE (STEEL):** ASTM A121 GALVANIZED STEEL, 12 GAUGE THICK WIRE, 3 STRANDS 4 POINTS AT 3" O.C.
- 7 **SWING GATE POSTS:** SHALL BE 3" O.C. STANDARD HOT GALVANIZED, WEIGHING 5.79 LBS. PER FOOT.
- 8 **GATES: (a) SWING GATES:** 2" O.C. STANDARD PIPE WITH INTERNAL BRACING OF 1 5/8" O.D. STANDARD PIPE; WELDED AT ALL JOINTS TO PROVIDE RIGID WATERTIGHT CONSTRUCTION. FABRIC SAME AS FENCE.
- 9 FENCE TO BE 100% ERECTED WITHIN TEN(10) DAYS OF COMPLETION OF CONSTRUCTION, IF TIME FRAME CANNOT BE MET, PLEASE NOTIFY PROJECT SUPERVISOR.
- 10 FENCE STOPS TO BE PLACED ON INSIDE OF COMPOUND PER ACCESS GATE SPECIFICATIONS.



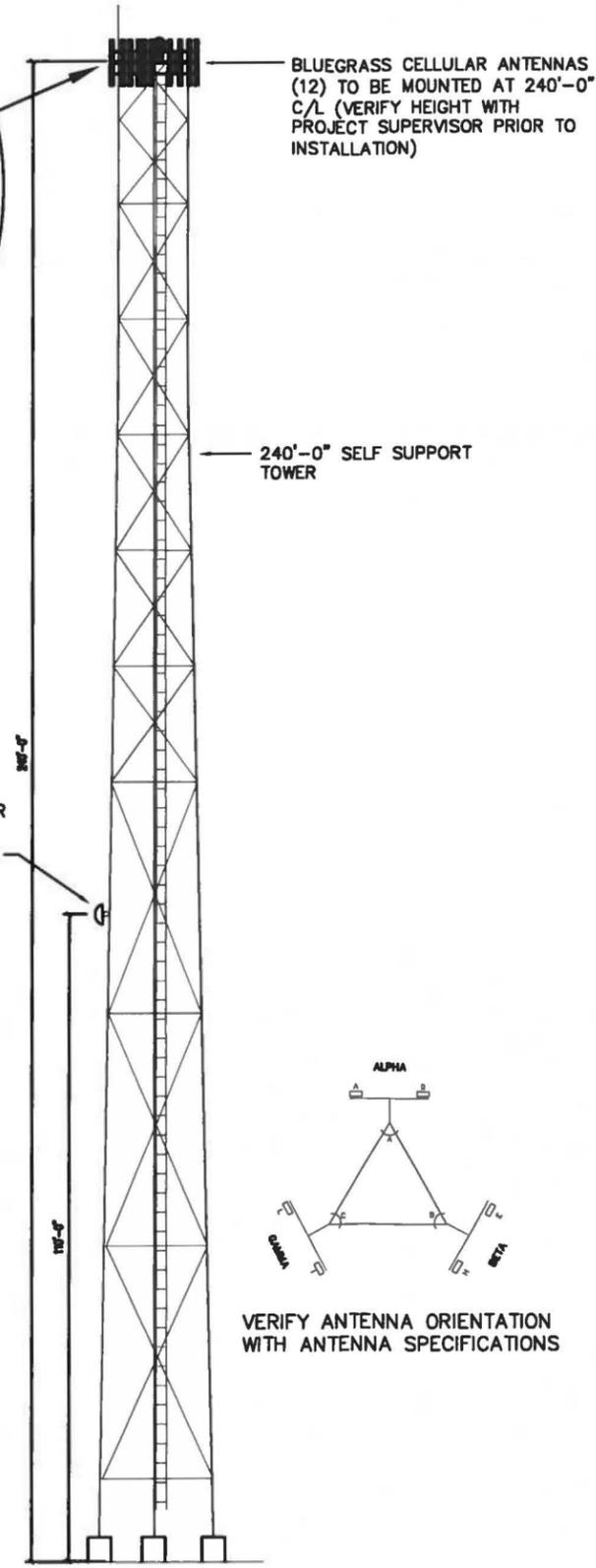
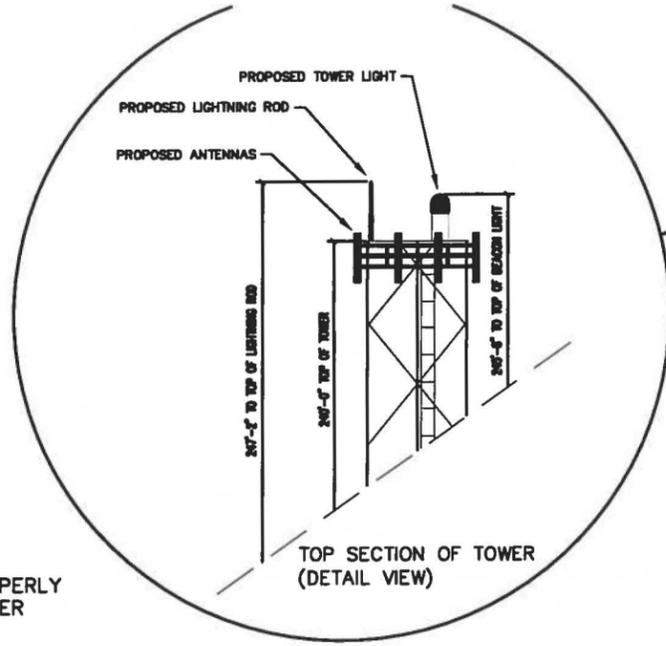
NO.	DATE	REVISION

BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
ADAIR EAST
 348 R. GRIDER RD. RUSSELL SPRINGS, KY. 42642

DRAWN BY: R. BECKER
 ISSUE DATE: 9-10-15
 SCALE: LISTED
 SHEET NUMBER

A-2

BLUEGRASS CELLULAR GENERAL NOTES & ANTENNA SPECS



SELF SUPPORT TOWER ELEVATION (TYPICAL)

ALL LINES AND ANTENNAS TO BE PROPERLY MOUNTED TO TOWER OR STRUCTURE PER BLUEGRASS CELLULAR SPECIFICATIONS.

ALL GROUND BARS TO BE INSTALLED AND CAD WELDED TO GROUND FIELD (WHERE REQUIRED)

ALL LINES TO BE GROUNDED AT THE TOP AND BASE OF STRUCTURE OR TOWER.

ALL LINES TO BE GROUNDED AT ENTRANCE OF SHELTER BEFORE WAVE GUIDE PORTS. (EXTERIOR OF BUILDING)

LINES ARE TO BE SECURED TO ICE BRIDGE

WAVE-GUIDE BOOTS ARE TO BE INSTALLED ON ALL LINES (BOTH INSIDE AND OUTSIDE)

ALL COAX CONNECTIONS ARE TO BE WEATHER PROOFED.

INVENTORY OF ALL MATERIAL IS TO BE DONE PRIOR TO INSTALLATION BY CONTRACTOR. (LIST WILL BE PROVIDED)

ALL TRASH AND REFUGE IS TO BE PROPERLY DISPOSED OF.

CONTRACTOR TO EXTEND HARDLINES INTO BUILDING 12" & INSTALL POLYPHASERS AND GROUNDING, PER INSTRUCTION OF PROJECT SUPERVISOR.

GENERAL CONTRACTOR TO MOUNT ANTENNA MOUNTS AT TOP OF STRUCTURE OR TOWER BY BLUEGRASS CELLULAR SPECIFICATIONS.

ICE BRIDGE TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR. (Additional Ice Bridge if needed)

TRAPEZE KIT TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.

CONTRACTOR TO INSTALL GPS BRACKET & ANTENNAS COMPLETE.

CONTRACTOR TO INSTALL LIGHTING SYSTEM PER FAA ADVISORY 70/7460-1K CHANGE 2, OBSTRUCTION MARKING AND LIGHTING, A MED-DUAL SYSTEM - CHAPTERS 4,8(M-DUAL), & 12

TOWER HEIGHT & TYPE

240'-0" SELF SUPPORT TOWER

ANTENNA SPECS

	TYPE	SIZE L x W x D	NUMBER	AZMUTH	MOUNTING HEIGHT
ANTENNA (CDMA)	LNK-8514DS_02DT		6	20°, 140°, 260°	240'-0" C/L <small>VERIFY WITH CONSTRUCTION SUPERVISOR</small>
ANTENNA (LTE)	LNK-8514DS_02DT		6	20°, 140°, 260°	240'-0" C/L <small>VERIFY WITH CONSTRUCTION SUPERVISOR</small>

ANTENNA MOUNTING HARDWARE SPECS

	TYPE	SIZE	NUMBER
MOUNT (PRIMARY)	TRI-SECTOR MOUNT		3
MOUNT (SECONDARY)			

ANTENNA TRANSMISSION LINES SPECS

	TYPE	SIZE	NUMBER
TRANSMISSION LINE (PRIMARY)	ANDREW	1-5/8"	12
TRANSMISSION LINE (SECONDARY)			

DISH SPECS

	MICROWAVE/DONOR	SIZE	NUMBER	AZMUTH	MOUNTING HEIGHT
DISH #1	RADIOWAVES HP2-11	4'-0" GRID	1		110' C/L
DISH #2					

DISH MOUNT SPECS

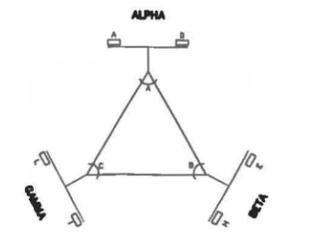
	TYPE	SIZE	NUMBER
MOUNT #1			
MOUNT #2			

DISH TRANSMISSION LINES

	TYPE	SIZE	NUMBER
TRANSMISSION LINE #1		1-5/8"	1
TRANSMISSION LINE #2			

ANTENNA SYNOPSIS

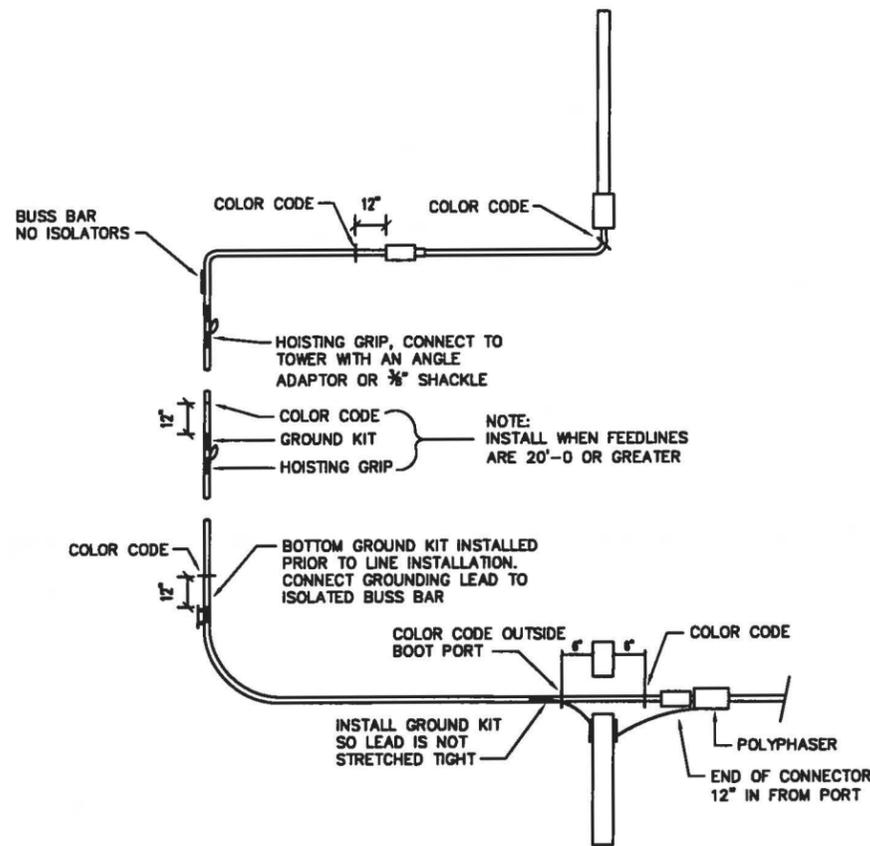
- * ANTENNAS TO HAVE A 2*E
- * ANTENNAS TO HAVE A 0* Mech.
- * ANTENNA FREQUENCY 880.00 - 890.00



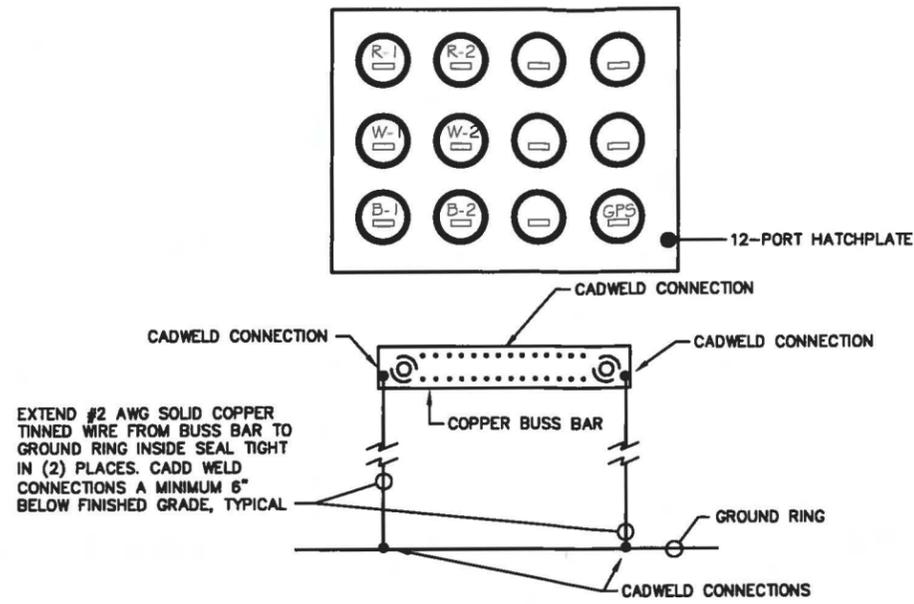
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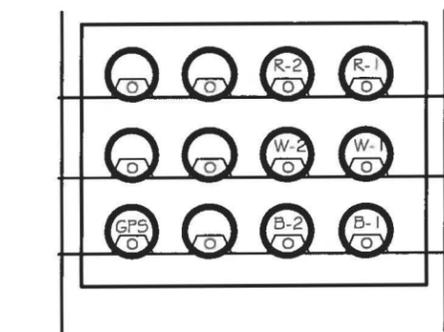
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ISSUE DATE: 9-10-15
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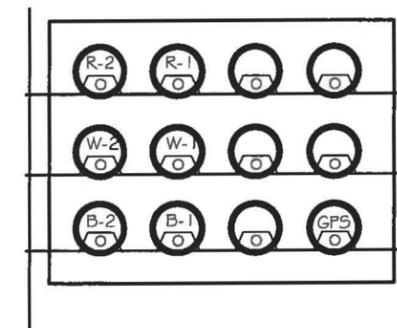
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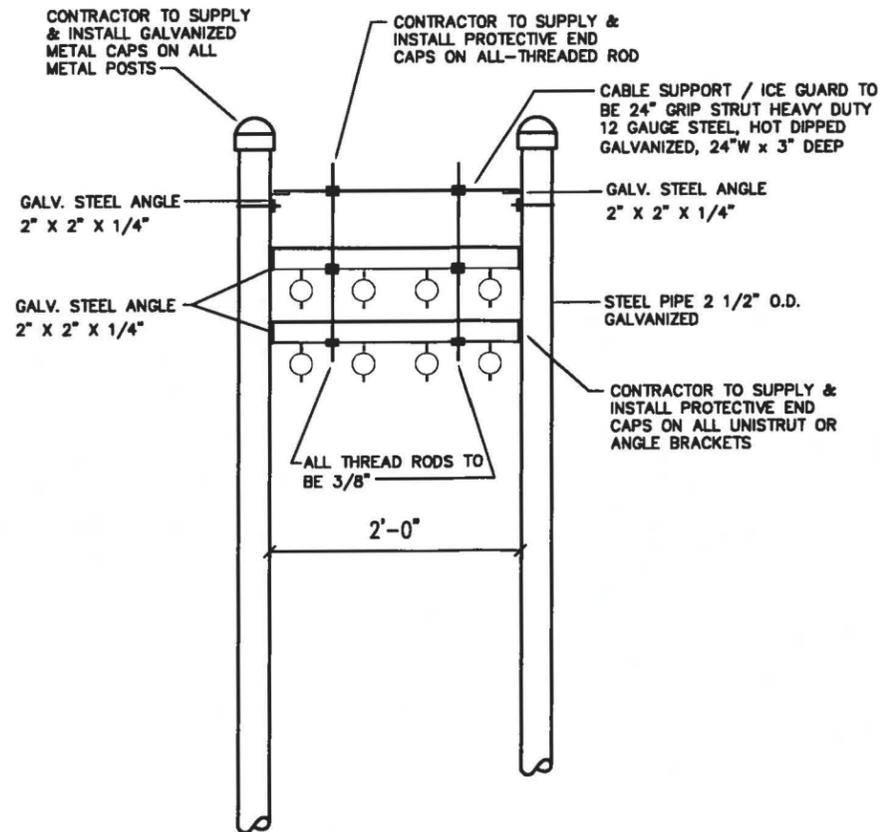
BOOT PORT GROUNDING DETAIL
NO SCALE



**COAX ENTRY DETAIL POWER SIDE
(VIEW FROM INSIDE SHELTER)**
NO SCALE



**COAX ENTRY DETAIL A/C SIDE
(VIEW FROM INSIDE SHELTER)**
NO SCALE



ICE BRIDGE / COAX SUPPORT DETAIL
NO SCALE

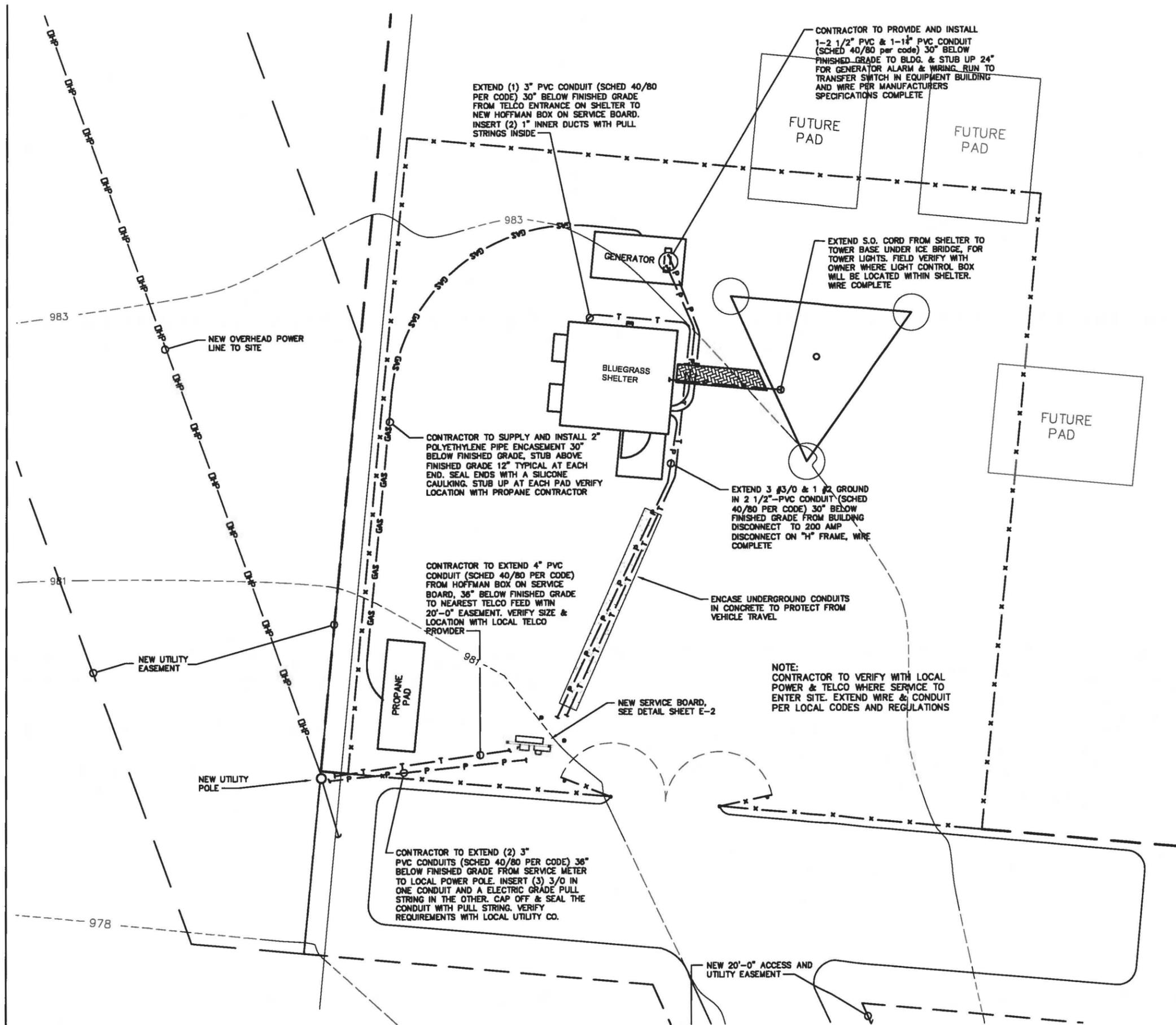


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DRAWN BY: R. BECKER
ISSUE DATE: 9-10-15
SCALE: LISTED

SHEET NUMBER
ANTENNA DETAILS
2



- GENERAL ELECTRICAL NOTES:**
- 1) CONTRACTOR RESPONSIBLE FOR MAKING ALL ARRANGEMENTS WITH THE LOCAL UTILITIES FOR SERVICE AND FEE PAYMENTS REQUIRED TO OBTAIN SERVICE.
 - 2) CONTRACTOR RESPONSIBLE FOR MAKING ALL ARRANGEMENTS WITH THE LOCAL TELEPHONE COMPANY FOR SERVICE AND FEE PAYMENTS REQUIRED TO OBTAIN SERVICE.
 - 3) GROUND RING TO BE CONTAINED WITH IN THE COMPOUNDS FENCED AREA.
 - 4) FENCE TO BE GROUNDED FROM GROUND RING TO ALL CORNER POST & GATES. SPACE FENCE GROUNDING APPROXIMATELY 20'-0" O/C. (CAD WELD ALL CONNECTIONS)
 - 5) ALL GROUND RING CONNECTIONS TO BE AS CLOSE AS POSSIBLE, SHARP BENDS WILL NOT BE PERMITTED AS WELL AS "T" CONNECTIONS. ALL CONNECTIONS TO HAVE A SWEEPING RADIUS OF 8" MINIMUM. GROUNDING CONFIGURATION TO BE IN PARALLEL.
 - 6) CONTACT POINTS FOR GROUNDING TO BE CLEANED OF ANY RUST, PAINT, DIRT, ETC. TO CREATE A GOOD BOND FOR CONDUCTOR. AREA THAT HAS BEEN CLEANED TO BE RESEALED TO PREVENT RUSTING.
 - 7) PROPERLY GROUND ANY EXPOSED METAL THAT MAY EXIST ON EXTERIOR OF EQUIPMENT SHELTER OR CABINET.
 - 8) WHERE GROUND CONDUCTORS REQUIRE MECHANICAL BONDING, STAINLESS STEEL CONNECTORS ARE REQUIRED AT EACH CONNECTING POINT USING LOCK WASHERS.
 - 9) CONTRACTOR RESPONSIBLE FOR SEEING THAT UTILITY PERSONNEL MAKE FINAL CONNECTIONS, MAKING SURE THE TOWER ALARM IS CONNECTED AND WORKING. A TELEPHONE NUMBER FOR THE ALARM MUST BE SUPPLIED.
 - 10) CONTRACTOR RESPONSIBLE FOR MEG TESTING THE SITE AND SUPPLYING OWNER WITH FINAL READINGS IN OWNERS SPECIFICATIONS.
 - 11) IF CONDUIT RUNS BURIED LESS THAN REQUIRED DEPTHS, CONTACT BLUEGRASS CELLULAR FOR FURTHER INSTRUCTIONS
- NOTE:**
CONTRACTOR TO PROVIDE WARNING TAPE IN TRENCHES FOR ALL POWER AND TELCO RUNS UNDER GROUND. TAPE TO BE INSTALLED 1'-0" ABOVE CONDUIT RUNS. (TAKE PICTURES)

SYMBOLS LEGEND

—P—	POWER
—G—	GAS
—T—	TELEPHONE
—X—	FENCE
⊞	SWITCH (DISCONNECT)
⊞	METER PACK

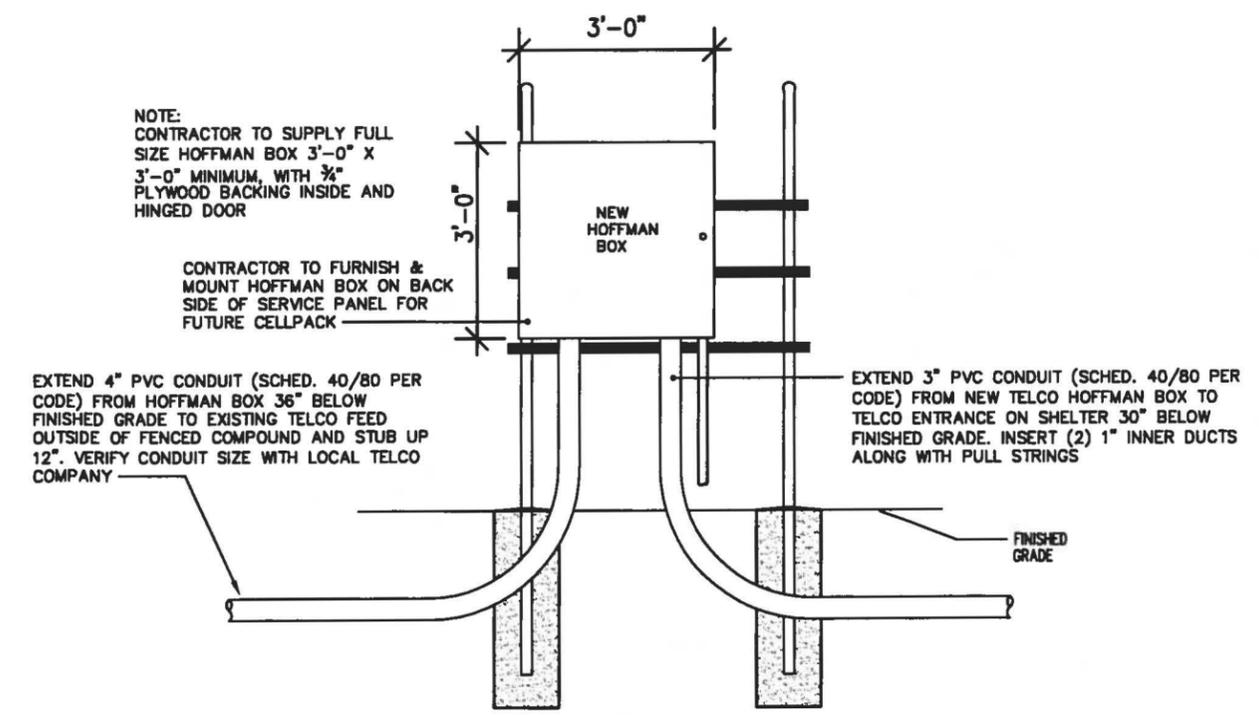
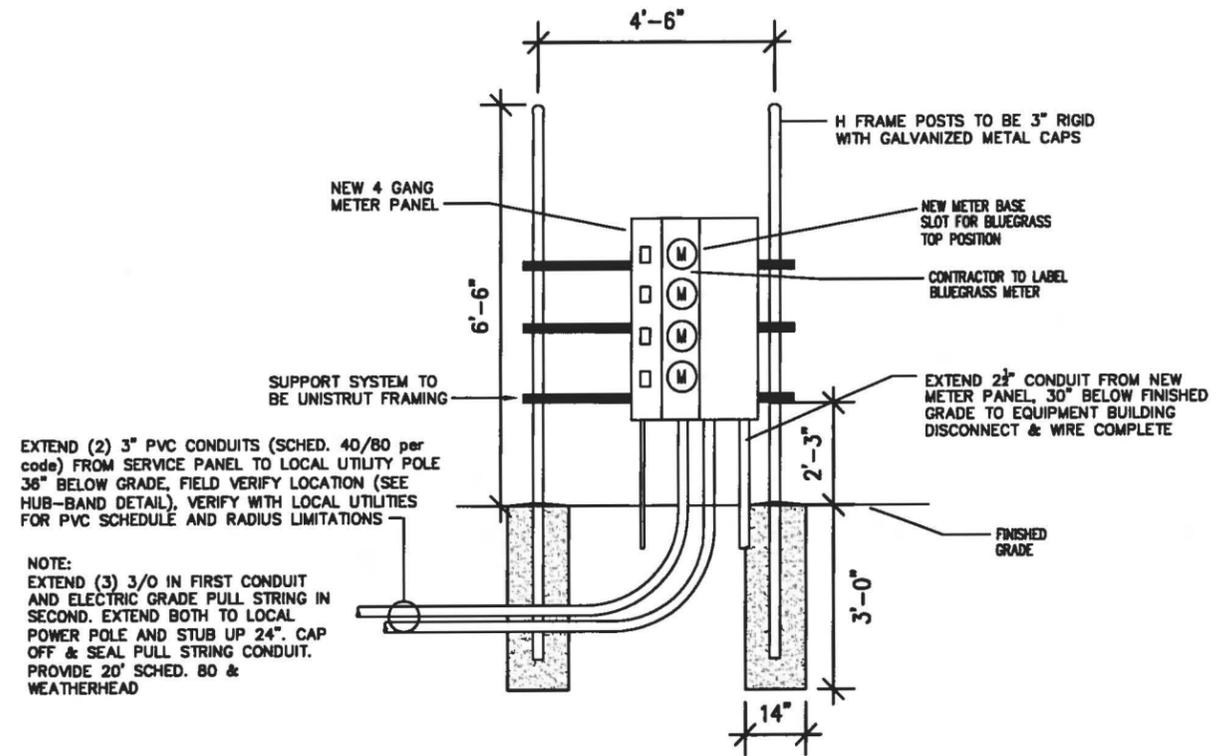
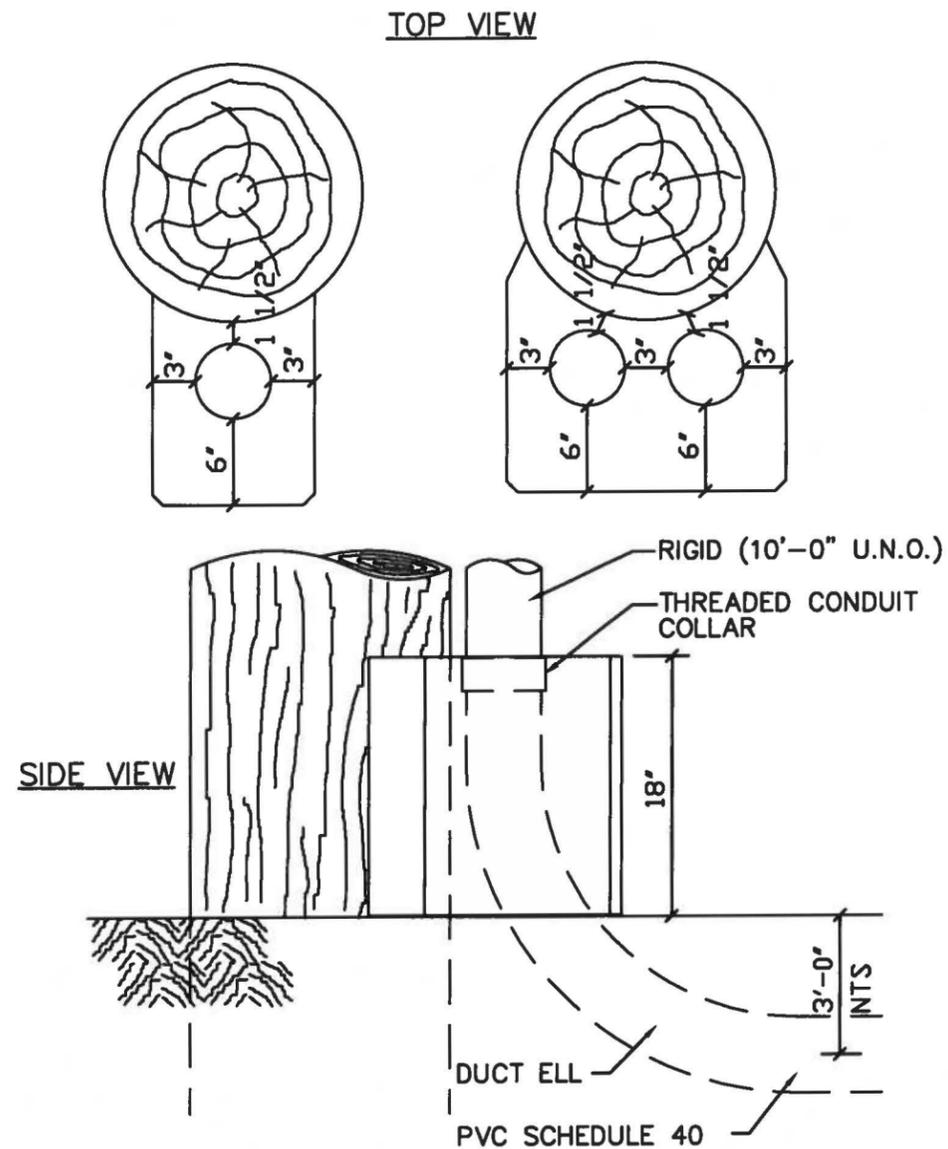
SITE PLAN- ELECTRICAL
SCALE: 3/32" = 1'-0"

RSB
 RESOLUTION
 6405 MECHANICAL DRIVE, LOUISVILLE, KY 40291
 (502) 262-9827 FAX (502) 261-3186

NO.	DATE	REVISION

BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
ADAIR EAST
 348 R. GRIDER RD. RUSSELL SPRINGS, KY. 42642
 LISTED

DRAWN BY: R. BECKER
 ISSUE DATE: 9-10-15
 SCALE: LISTED
 SHEET NUMBER: E-1



RSB

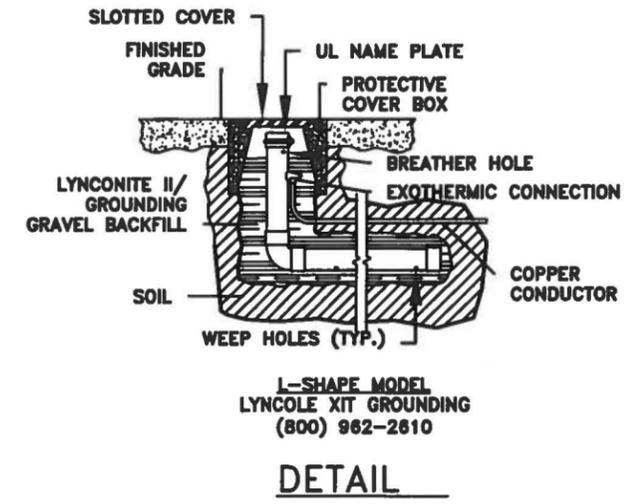
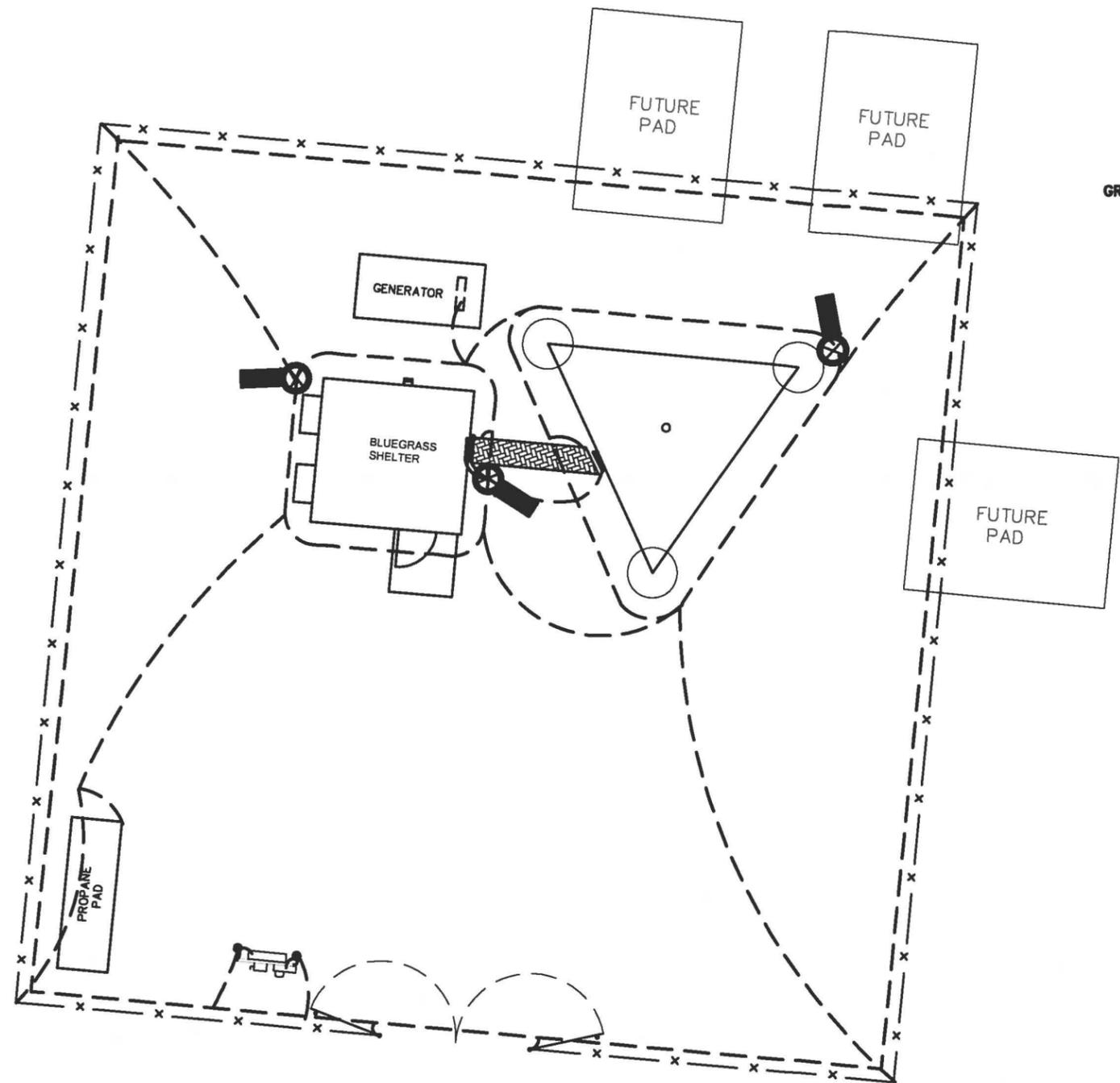
RUSSELL SPRING SERVICE BOARD
1000 N. MAIN ST. LOUISVILLE, KY 40203
FAX: (502) 881-3888

NO.	DATE	REVISION

BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
ADAIR EAST

348 R. GRIDER RD. RUSSELL SPRINGS, KY. 42642

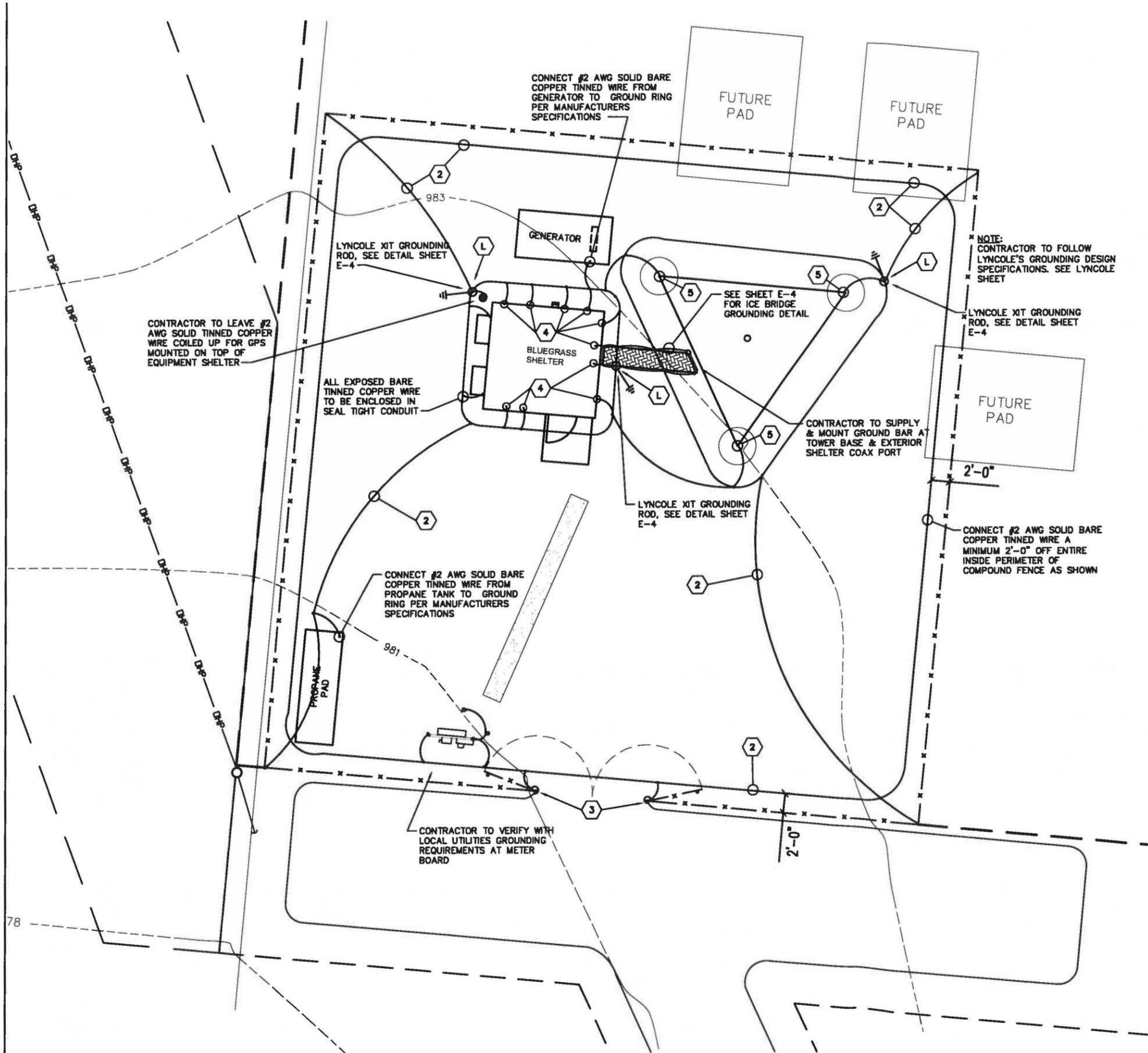
DRAWN BY: R. BECKER	ISSUE DATE: 9-10-15	SCALE: LISTED
SHEET NUMBER E-2		



NOTES:

- x — FENCE LINE
- - - - BARE #2 AWG SOLID TINNED COPPER CONDUCTOR BURIED 30 IN. BELOW GRADE OR 6 IN. BELOW FROST LINE
- 10-FT. X 3/4-IN. DRIVENGROUND ROD
- ⊗ K2L-10CS (SEE DETAIL)
- ALL BENDS IN GROUND CONDUCTORS TO BE MADE WITH 12 IN. RADIUS OR LARGER

		CLIENT / END USER	
		RSB DESIGN / BLUEGRASS CELLULAR	
DRAWING	PROJECT NAME		
2	ADAIR EAST		
TITLE			
GROUNDING OPTION			
LOCATION: CITY, STATE		CALCULATED RESISTANCE	
KENTUCKY		< 15 OHMS	
DRAWN BY	APPROVED BY	DATE	
RFW		11/09/2015	
SOIL DATA PROVIDED BY		REFERENCE NUMBER	LTS NUMBER
TERRACON		N/A	150138



GENERAL ELECTRICAL NOTES:

- 1) CONTRACTOR RESPONSIBLE FOR MAKING ALL ARRANGEMENTS WITH THE LOCAL UTILITIES FOR SERVICE AND FEE PAYMENTS REQUIRED TO OBTAIN SERVICE.
- 2) CONTRACTOR RESPONSIBLE FOR MAKING ALL ARRANGEMENTS WITH THE LOCAL TELEPHONE COMPANY FOR SERVICE AND FEE PAYMENTS REQUIRED TO OBTAIN SERVICE.
- 3) GROUND RING TO BE CONTAINED WITH IN THE COMPOUNDS FENCED AREA.
- 4) FENCE TO BE GROUNDED FROM GROUND RING TO ALL CORNER POST & GATES. SPACE FENCE GROUNDED APPROXIMATELY 20'-0" O/C. (CAD WELD ALL CONNECTIONS)
- 5) ALL GROUND RING CONNECTIONS TO BE AS CLOSE AS POSSIBLE, SHARP BENDS WILL NOT BE PERMITTED AS WELL AS "T" CONNECTIONS. ALL CONNECTIONS TO HAVE A SWEEPING RADIUS OF 8" MINIMUM. GROUNDED CONFIGURATION TO BE IN PARALLEL.
- 6) CONTACT POINTS FOR GROUNDED TO BE CLEANED OF ANY RUST, PAINT, DIRT, ETC. TO CREATE A GOOD BOND FOR CONDUCTOR. AREA THAT HAS BEEN CLEANED TO BE RESEALED TO PREVENT RUSTING.
- 7) PROPERLY GROUND ANY EXPOSED METAL THAT MAY EXIST ON EXTERIOR OF EQUIPMENT SHELTER OR CABINET.
- 8) WHERE GROUND CONDUCTORS REQUIRE MECHANICAL BONDING, STAINLESS STEEL CONNECTORS ARE REQUIRED AT EACH CONNECTING POINT USING LOCK WASHERS.
- 9) CONTRACTOR RESPONSIBLE FOR SEEING THAT UTILITY PERSONNEL MAKE FINAL CONNECTIONS, MAKING SURE THE TOWER ALARM IS CONNECTED AND WORKING. A TELEPHONE NUMBER FOR THE ALARM MUST BE SUPPLIED.
- 10) CONTRACTOR RESPONSIBLE FOR MEG TESTING THE SITE AND SUPPLYING OWNER WITH FINAL READINGS IN OWNERS SPECIFICATIONS.

NOTE:
CONTRACTOR TO PROVIDE WARNING TAPE IN ALL POWER & TELCO TRENCHES, 12" ABOVE CONDUIT RUNS, BUT BELOW FINISHED GRADE.

NOTE:
CONTRACTOR TO FOLLOW LYNCOLES GROUNDED SPECIFICATIONS WHEN USING THEIR XIT GROUNDED RODS. SEE DETAIL SHEET E-4.

KEYNOTES:

- ① LYNCOLE XIT GROUNDED ROD TO BE INSTALLED WHERE SHOWN AND TO MANUFACTURERS SPECIFICATIONS. (SEE LYNCOLE SPECIFICATIONS)
- ② GROUNDED RODS 10'-0" LONG x 3/4" COPPER BONDED GROUNDED RODS
- ③ INSTALL AND PROVIDE SOLID BARE TINNED COPPER WIRE #2 AWG, GROUNDED RING BELOW GRADE 30". USE #2 AWG SOLID BARE TINNED COPPER GROUNDED "TAP" CONNECTING CONDUCTORS. (CONNECTIONS FOR ALL TAP CONDUCTORS TO BE PARALLEL AND "CAD WELD" CONNECTIONS)
- ④ FLEXIBLE GROUNDED STRAP TO BE USED TO PROVIDE A COMMON BOND BETWEEN GATE AND CHAIN LINK FENCE, #2 AWG SOLID BARE TINNED COPPER CONDUCTOR FROM GROUNDED RING TO FENCE USING CAD WELD CONNECTIONS. GROUNDED TAP TO BE PROVIDED ON EACH 4 SIDES TO GROUNDED RING AS DESCRIBED ABOVE.
- ⑤ BONDED GROUNDED TO BE PROVIDED TO GROUNDED RING FOR EACH OF THE FOLLOWING: BUILDING STEEL, HATCH PLATE, EMERGENCY RECEPTACLE, WAVE GUIDE STRUCTURE, FRAME WORK, BUILDING DISCONNECT.
- ⑥ FOR TOWER FRAME GROUNDED, REMOVE GALVANIZED COATING COMPLETELY AT SPOT TO "CAD WELD" TO AND CLEAN. #2 AWG SOLID BARE TINNED COPPER CONDUCTOR TO BE CAD WELDED APPROXIMATELY 1'-0" ABOVE FOUNDATION OR AT FLANGE IF PROVIDED BY TOWER MANUFACTURER. EXTEND CONDUCTOR TO GROUNDED RING. RIGHT ANGLES NOT ACCEPTED ALL BENDS TO BE SWEEPING.

SITE PLAN-GROUNDED

SCALE: 3/32" = 1'-0"

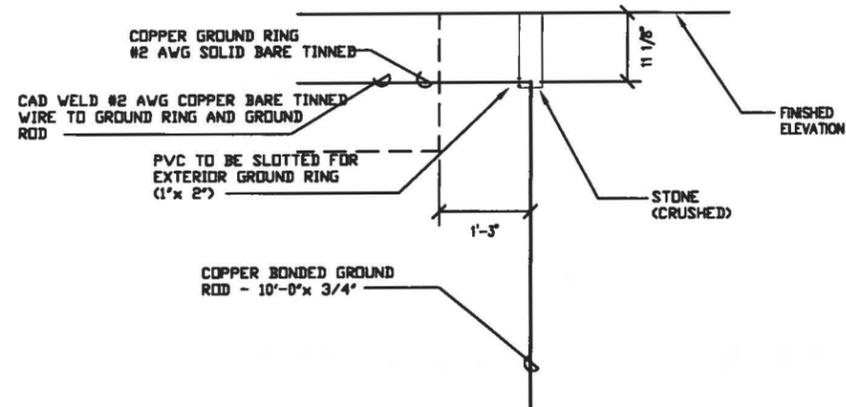


NO.	DATE	REVISION

BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
ADAIR EAST
348 R. GRIDER RD. RUSSELL SPRINGS, KY. 42642

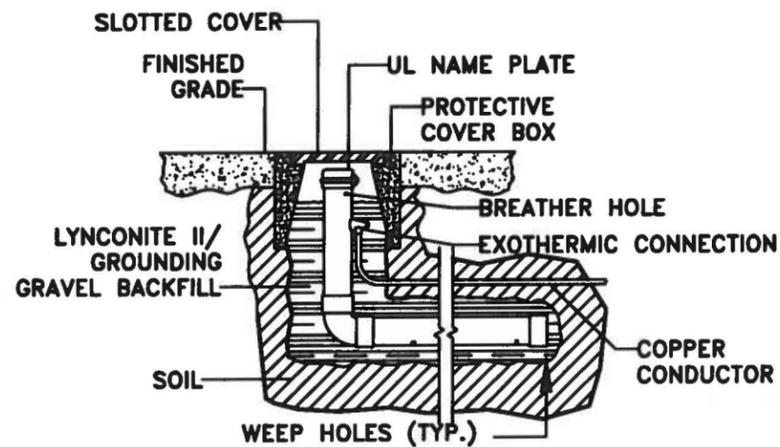
DRAWN BY: R. BECKER
ISSUE DATE: 9-10-15
SCALE: LISTED

SHEET NUMBER
E-3



GROUND ROD DETAIL

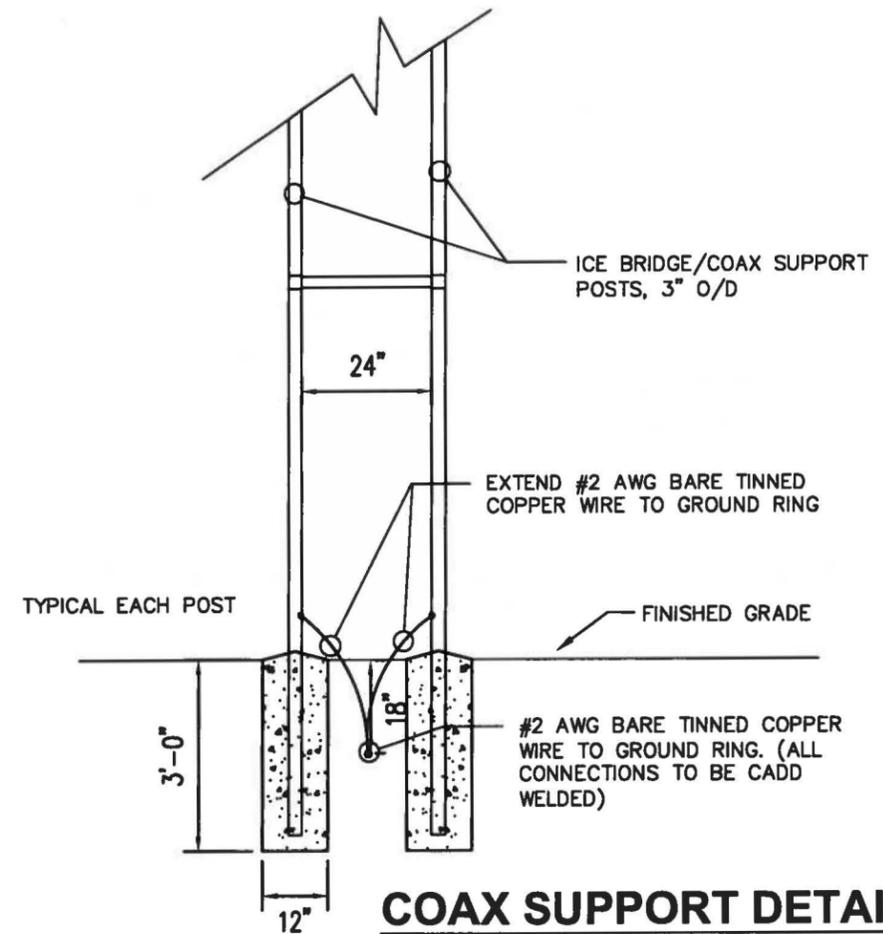
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L-SHAPE MODEL
LYNCOLE XIT GROUNDING
(800) 962-2610

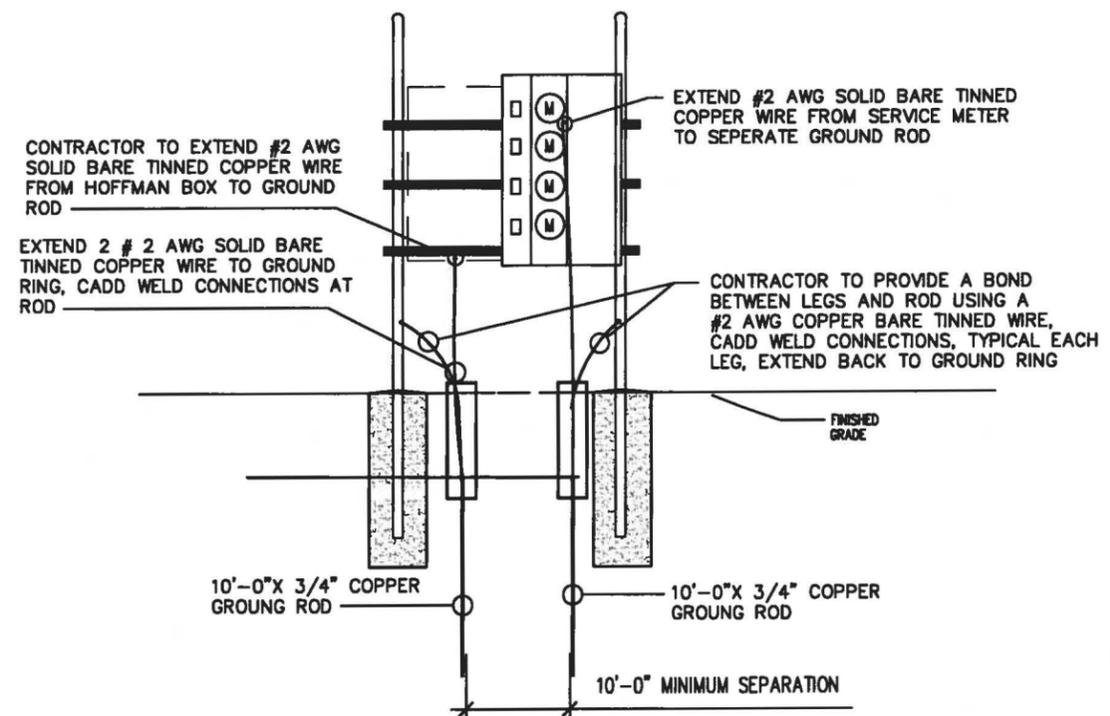
LYNCOLE XIT ROD DETAIL

NO SCALE



COAX SUPPORT DETAIL

NO SCALE



SERVICE BOARD DETAIL

NO SCALE



BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
ADAIR EAST

NO.	DATE	REVISION

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BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
ADAIR EAST
348 R. GRIDER RD. RUSSELL SPRINGS, KY. 42642

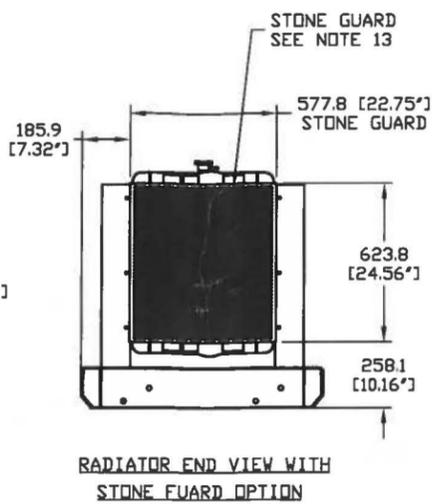
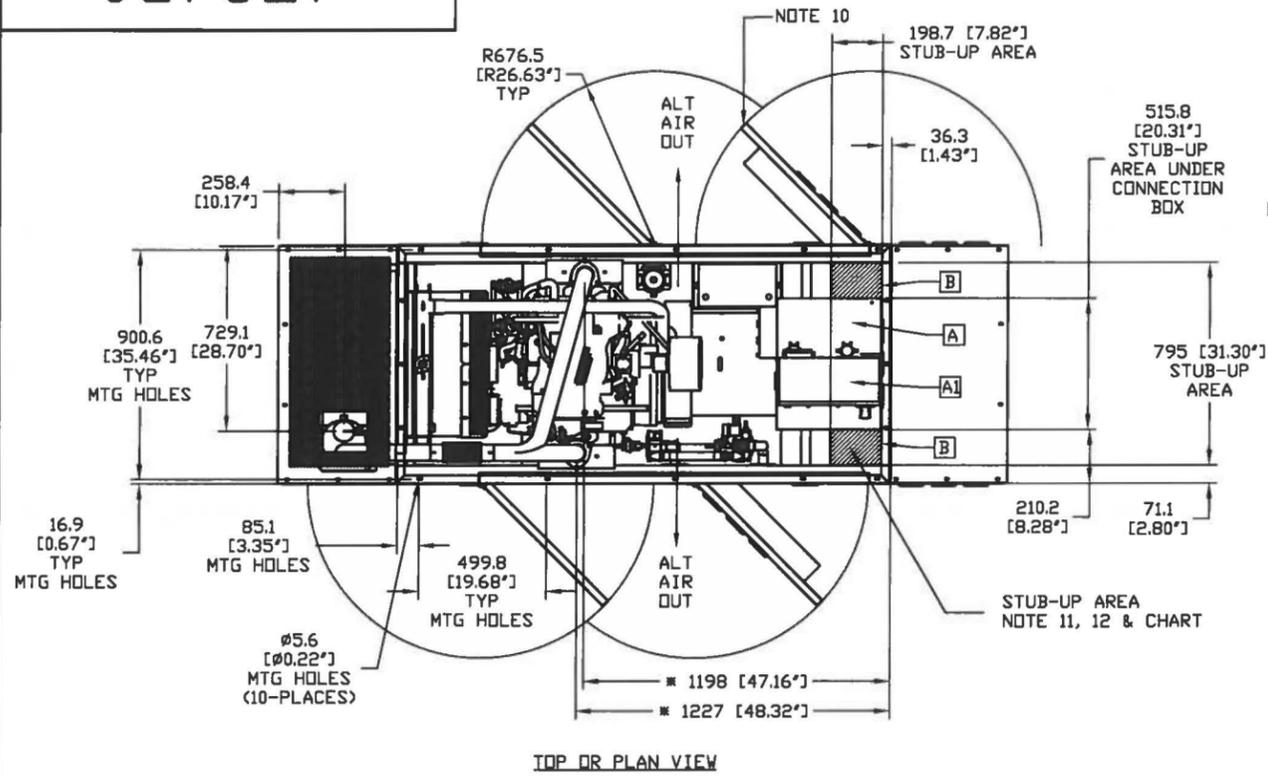
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SHEET NUMBER
E-4

OG7627

ENGINE SERVICE CONNECTIONS

INLET L/P GAS = 3/4" NPT COUPLING
 INLET NATURAL GAS = 3/4" NPT COUPLING
 OIL DRAIN = 1/2" NPT COUPLING
 EXHAUST OUTLET - EXHAUST MANIFOLDS AS SHOWN
 ON OPEN SET, 3" OD MUFFLER
 OUTLET WITH ENCLOSURE



RECOMMENDED FUEL/ELECTRICAL STUB-UPS (SEE TOP VIEW)

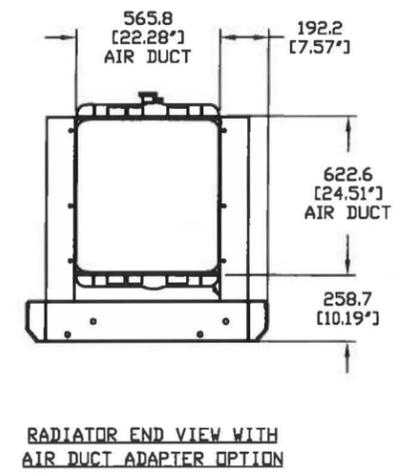
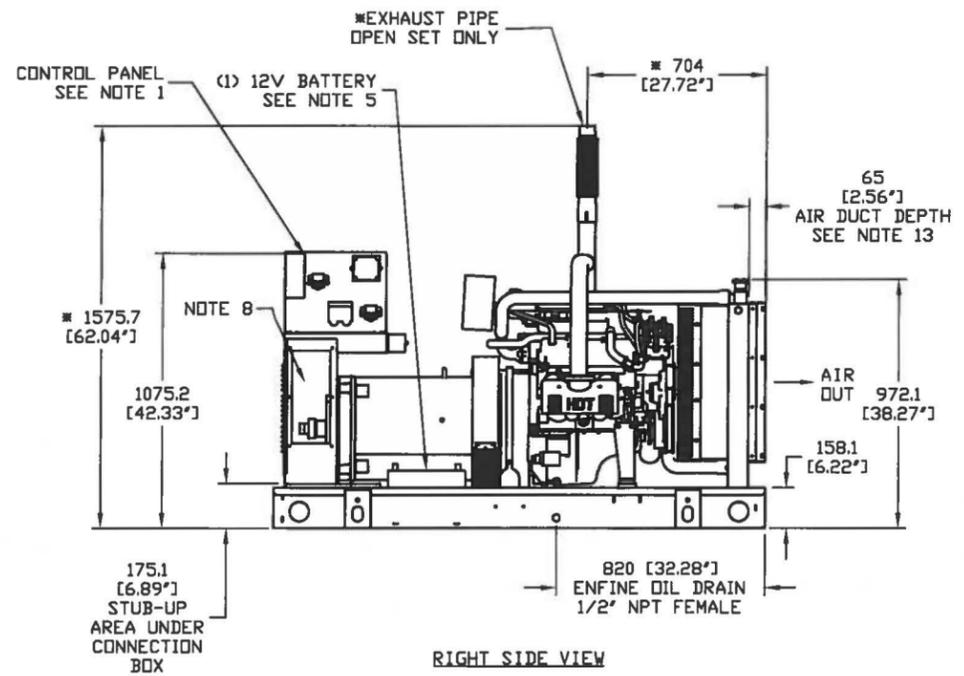
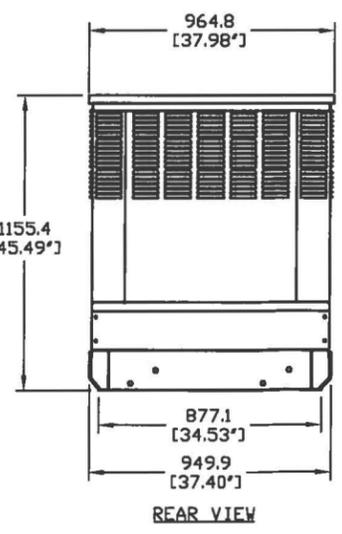
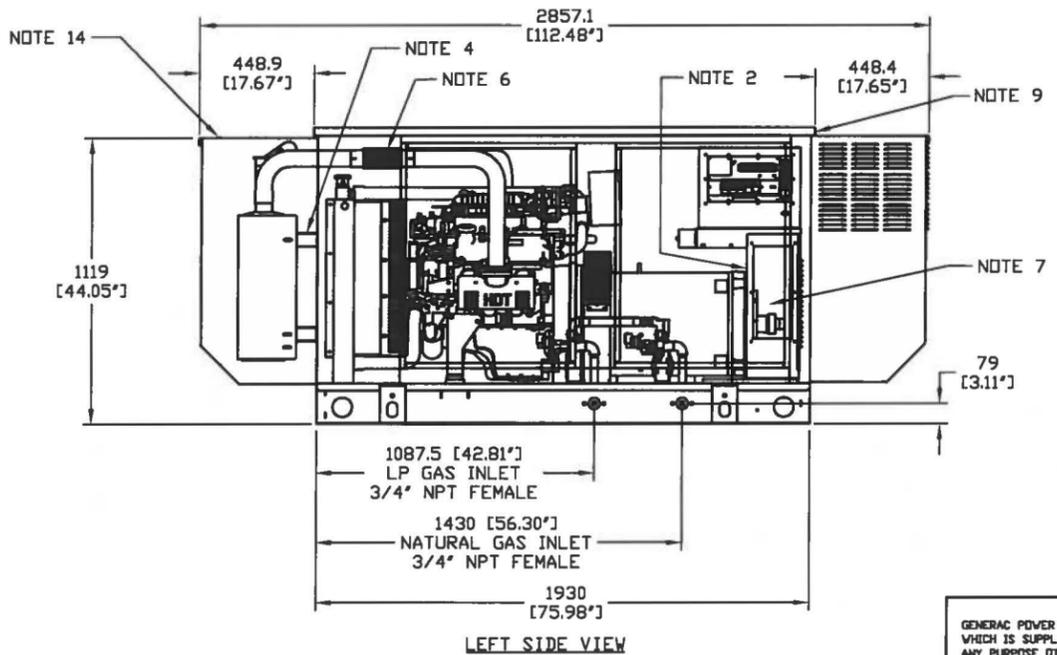
DESCRIPTION	INSIDE BASE
AC LOAD LEAD CONDUIT (RIGHT)	A
AC LOAD LEAD CONDUIT (LEFT)	A'
ADDITIONAL STUB UP AREA FOR 120VAC GFCI OUTLET, (STANDARD BLOCK HEATER, BATTERY CHARGER, AND OTHER 120 VAC OPTIONS).	B

NOTE:
 FUEL SYSTEM SET UP WITH OUTSIDE STUB-UPS (SEE RIGHT SIDE VIEW).

WEIGHT DATA
 UNIT: ??? kg [??? lbs.]
 STEEL ENCLOSURE: ??? kg [??? lbs.]
 UNITS: mm [INCHES]

NOTES:

- CONTROL PANEL MAY BE ROTATED 180° IN EITHER DIRECTION.
- STANDARD 20A GFCI DUPLEX OUTLET - 120VAC REQUIRED.
- CONNECTION POINTS FOR CONTROL WIRES PROVIDED IN AC CONNECTION PANEL.
- EXHAUST MUFFLER SUPPORT BRACKETS SUPPLIED WITH OPTIONAL ENCLOSURE.
- 12 VOLT NEGATIVE GROUND SYSTEM.
- 2.5" I. D. FLEX EXHAUST, STANDARD WITH ENCLOSURE UNITS, OPTIONAL WITHOUT.
- MAIN LINE CIRCUIT BREAKER (MLCB) AND AC LOAD LEAD CONNECTION.
- REMOVABLE BLANK PANEL FOR OPTIONAL 2nd MAIN LINE CIRCUIT BREAKER.
- OPTIONAL ENCLOSURE.
- DOORS MUST BE ABLE TO OPEN 90 DEG. TO BE REMOVED.
- STUB-UPS:
 STANDARD BASE TANK REQUIRES ALL STUB-UPS TO BE OUTSIDE OR IN THE REAR TANK STUB-UP AREA.
- A OR A' IS THE STUB UP AREA UNDER THE MLCB, DEPENDING ON CIRCUIT BREAKER LOCATION. AREA B IS STUB UP AVAILABLE FOR UNITS WITH A BASE TANK.
- STONE GUARD AND AIR DUCT ADAPTER STANDARD WITH OPEN SET ONLY.
- SEE DRAWING OC3850 FOR DUCT REMOVAL. REMOVAL OF FRONT DUCT WILL PROVIDE ACCESS TO MUFFLER FOR SERVICING.
- *NOTE: DIMENSIONS TO THE CENTER OF EXHAUST FLANGE SHOULD BE USED AS A REFERENCE WHEN EXHAUST SYSTEM IS NOT ORDERED. APPLIES TO OPEN SET ONLY.



APPLICABLE TO 4.5L G3 35, 40 & 45KW

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INSTALLATION DRAWING

SG 35, 40, 45 KW (UPSIZED 100 KW)
 4.2L DIRECT DRIVE
 ACOUSTIC ENCLOSURE
 ISSUE DATE: 11/13/07

GENERAC POWER SYSTEMS Waukesha P.O. BOX 8 WAUKESHA, WIS. 53187	
FILE NAME	OG7627-A.DWG
SCALE	NTS
DWG NO.	OG7627
SIZE	B
FIRST USE	4.2L G3
REV	A

GENERAL NOTES:

- 1) THE CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT PICK UP DELIVERY TO SITE, ERECTION OF TOWER, AND CRANE SET, ALL COSTS INCURRED.
- 2) THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE PRIOR TO BIDDING AND REVIEWING EXISTING STRUCTURES OR UTILITIES THAT MIGHT BE LOCATED ON OR AROUND THE COMPOUND THAT COULD INTERFERE.
- 3) THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING LOCAL AUTHORITIES NECESSARY FOR INSPECTIONS IF REQUIRED, PLEASE PROVIDE AMPLE NOTICE.
- 4) THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING PERSONS RESPONSIBLE FOR ANY MATERIALS TESTING, PLEASE PROVIDE AMPLE NOTICE.
- 5) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER WITH FINAL TEST RESULTS ON ALL MATERIALS TESTING. IF ANY PROBLEMS ARE FOUND PRIOR TO FINAL RESULTS PLEASE NOTIFY A&E OR OWNER IMMEDIATELY.
- 6) THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ADJOINING PROPERTY, AND REPAIRING OR REPLACING WHAT IS NECESSARY TO OWNERS APPROVAL.
- 7) THE CONTRACTOR IS TO VERIFY DIMENSIONS ON SITE PRIOR TO CONSTRUCTION STARTING, ANY PROBLEMS OR CHANGE FOUND CONTACT A&E OR OWNER TO VERIFY.
- 8) THE CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY LIGHTING ON THE TOWER AND CONTACTING PROPER AUTHORITIES IF ANY LIGHTING PROBLEMS OCCUR, ALL FINAL LIGHTING TO BE MOUNTED ON TOWER DURING CONSTRUCTION, NOTIFY OWNER WHEN TOWER HAS REACHED FINAL HEIGHT.
- 9) THE CONTRACTOR IS RESPONSIBLE FOR ALL ON SITE WORK MEANS AND METHODS.
- 10) CONTRACTOR, ANY CONTRACTOR EMPLOYEES OR REPRESENTATIVES, OR SUB-CONTRACTOR, ANY SUB-CONTRACTOR EMPLOYEES OR REPRESENTATIVES, WILL CONFORM TO ALL LAWS AND REGULATIONS APPLICABLE TO THE WORK BEING PERFORMED, INCLUDING BUT NOT LIMITED TO, ALL OCCUPATIONAL SAFETY AND HEALTH ACT ("OSHA") STATUTES AND REGULATIONS AS WELL AS ALL OTHER FEDERAL, STATE AND/OR LOCAL LAWS OR REGULATIONS APPLICABLE TO THE WORK BEING PERFORMED BY CONTRACTOR.
- 11) THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL SITE DRAINAGE, AND PROVIDING SILT AND EROSION CONTROL NECESSARY TO MAINTAIN ANY RUN OFF.
- 12) THE CONTRACTOR IS RESPONSIBLE FOR ALL SEED AND STRAW WORK NECESSARY TO REPAIR DAMAGED AREAS.
- 13) CONTRACTOR TO GRADE SMOOTH OR REPAIR ANY POT HOLES OR DITCHING ON PROPERTY OR ROAD THAT HAS OCCURRED DURING CONSTRUCTION AT CONTRACTORS EXPENSE.
- 14) CONTRACTOR'S RESPONSIBILITIES REGARDING BUILD OUT ON FIBREBOND EQUIPMENT SHELTERS TO INCLUDE:
 - * INSTALLING THE DOOR CANOPY & BOND TO DOOR FRAME
 - * INSTALLING EXTERIOR LIGHT ON WALL DETERMINED BY PROJECT SUPERVISOR AND PHOTOCCELL REQUIREMENTS
 - * INSTALLING INTRUDER ALARMS
 - * CHECK OPERATIONS OF DOOR AND DOOR HARDWARE
 - * ADJUST WEATHERSTRIPPING ON DOORS AS NEEDED
 - * INSPECT ROOF FOR DAMAGE AND POSSIBLE LEAKS
 - * INSPECT INTERIOR FINISH FOR IMPERFECTIONS AND REPAIR AS NEEDED
 - * CHECK OPERATION OF LIGHTS AND ELECTRICAL OUTLETS
 - * INSTALL GUTTER SYSTEM
 - * CHECK OPERATION OF ENVIRONMENTAL CONTROLS AND HVAC UNITS
 - * INSTALL AND PAINT SHELTER TIE-DOWNS TO MATCH
- 15) INSTALL CONCRETE PADS FOR BUILDING, PROPANE TANK, GENERATOR PAD.
- 16) INSTALL ELECTRIC AND GROUND FIELD FOR COMPOUND.

- 17) GC WILL BE RESPONSIBLE FOR ALL CRANE OPERATIONS IN ORDER TO SET FIBREBOND BUILDING. COORDINATE BUILDING DELIVERY DATE THROUGH BLUEGRASS CELLULAR.
- 18) GC WILL BE RESPONSIBLE FOR OFF LOADING AND STACKING OF TOWER WHEN APPLICABLE.
- 19) GC WILL BE RESPONSIBLE FOR MOUNTING ALL LINES AND ANTENNAS.
- 20) GC WILL BE RESPONSIBLE FOR SUPPLYING AND INSTALLING ICE BRIDGE.
- 21) GC WILL BE RESPONSIBLE FOR SCHEDULING PROPANE TANK DELIVERY AND HOOK-UP. PREFERRED SUPPLIERS ARE EMPIRE & AMERIGAS
- 22) GC WILL BE RESPONSIBLE FOR COORDINATING THE CLEANING OF THE INSIDE OF THE BUILDING WITH THE PROJECT SUPERVISOR AFTER THE SITE HAS BEEN TURNED OVER TO THE OPERATIONS DEPARTMENT AND ALL TURN-UP PROCEDURES HAVE BEEN COMPLETED. THIS WILL INCLUDE SUPPLYING A 30 GALLON TRASHCAN, 30 GALLON TRASH BAGS, BROOM, DUST PAN AND DOORMAT FOR BUILDING.
- 23) GC TO VERIFY ALL BLUEGRASS CELLULAR EQUIPMENT DIMENSIONS & SPECIFICATIONS WITH MANUFACTURER'S DRAWINGS, (FIBREBOND, GENERAC, EASTPOINTE ETC.) PRIOR TO CONSTRUCTION. ADDRESS ANY ISSUES WITH PROJECT SUPERVISOR BEFORE WORK BEGINS.
- 24) ALL WAREHOUSE MATERIAL (LINES, ANTENNAS, MOUNTING HARDWARE, GENERATOR, TOWER FOUNDATION KIT, ETC.) WILL NEED TO BE PICKED UP BY GC.
- 25) GC WILL BE RESPONSIBLE FOR SCHEDULING GENERATOR START-UP WITH CONTACT SCOTT ANDERSON (EVAPAR) 502-267-8315
- 26) GC TO LABEL BLUEGRASS CELLULAR METER WITH NAME PLATE ON METER BACKBOARD.
- 27) GC WILL BE RESPONSIBLE FOR INSTALLATION OF ALL FENCING.
- 28) ALL TRASH AND DEBRIS TO BE REMOVED BY GC
- 29) GC WILL BE RESPONSIBLE FOR APPLYING FOR ELECTRICAL SERVICE AND PAYING NECESSARY FEES REQUIRED.
- 30) GC WILL BE RESPONSIBLE FOR SUPPLYING & INSTALLING PROTECTIVE END CAPS ON ANY EXPOSED THREADED ROD OR UNISTRUT USED ON SITE. VERIFY TYPE WITH PROJECT SUPERVISOR PRIOR TO INSTALLATION.
- 31) GC WILL BE RESPONSIBLE FOR HAVING A CERTIFIED ELECTRICIAN HOOK UP THE BATTERIES (IMMEDIATELY) AFTER POWER HAS BEEN TURNED UP AT THE SITE, PREVENTING THE DELAY OF ANY WORK FOR OPERATIONS. THE GENERAL CONTRACTOR MUST NOTIFY THE PROJECT SUPERVISOR IMMEDIATELY AT THIS TIME SO HE CAN COORDINATE A CELL TECH TO BE ONSITE WHEN THIS OCCURS.
- 32) GC WILL BE RESPONSIBLE FOR RUNNING (CATS) FROM THE GENERATOR ALARM PANEL MOUNTED ON THE SIDE OF THE TRANSFER SWITCH (BY THE CONTRACTOR), THROUGH THE TRANSFER SWITCH AND UP TO THE EXISTING CONDUIT BESIDE THE A/C POWER FAIL RELAY. THE (CATS) WILL BE PULLED THROUGH EXISTING CONDUIT AROUND THE SHELTER AND EXTENDED TO THE ALARM BLOCK. THERE SHOULD BE A MINIMUM 3'-0" OF (CATS) LEFT HANGING ON EACH END FOR THE CELL TECH TO HOOK UP THE GENERATOR ALARMS.
- 33) GC MUST SUBMIT A COPY OF THE BUILDING PERMIT AND CONSTRUCTION SCHEDULE TO THE PROJECT SUPERVISOR PRIOR TO RECEIVING (NTP) TO BEGIN CONSTRUCTION (NO EXCEPTIONS).
- 34) GC MUST DISPLAY FCC TOWER REGISTRATION NUMBER AND EMERGENCY PHONE NUMBERS ON 3'-0 X 4'-0" MINIMUM WOODEN BACKBOARD SOMEWHERE ON SITE LOCATION PRIOR TO BREAKING GROUND.

GRADING & EXCAVATING NOTES:

- 1) ANY DAMAGE TO EXISTING UTILITIES, STRUCTURES, ROADS AND PARKING AREAS TO BE REPAIRED OR REPLACED TO OWNERS SATISFACTION.
- 2) PREPARATION FOR FILL: REMOVAL OF ALL DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, TOPSOIL, VEGETATION, AND HARMFUL MATERIALS FROM SURFACE OF GROUND PRIOR TO PLOWING, STRIPPING, PLACING FILLS OR BREAKING UP OF SLOPED SURFACES GREATER THAN 1 VERTICAL TO 4 HORIZONTAL SO MATERIAL FOR FILL WILL BOND TO EXISTING SURFACE. WHEN AREA TO RECEIVE FILL HAS A DENSITY LESS THAN REQUIRED, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, AERATE, MOISTURE - CONDITION, OR PULVERIZE SOIL AND RECOMPACT TO REQUIRED DENSITY.
- 3) BACK FILLING:
 - EXCAVATED AREA SHALL BE CLEARED FROM STONES OR CLODS OVER 2 1/2" MAXIMUM DIAMETER
 - SHALL BE PLACED IN LAYERS OF 6" AND COMPACTED TO A 95% STANDARD PROCTOR, USE A 90% PROCTOR IN GRASSED / LANDSCAPED AREAS WHERE REQUIRED.
 - SHALL BE APPROVED MATERIALS CONSISTING OF SANDY CLAY, GRAVEL AND SAND, SOFT SHALE, EARTH OR LOAM. CONSULT WITH OWNER PRIOR TO FILL BEING ADDED.
- 4) ALL MATERIAL FOR FILL TO BE APPROVED BY OWNER AND ALL COMPACTING TEST TO BE COMPLETED TO SPEC'S ALL COMPACTING RESULTS TO BE TURNED OVER TO OWNER.
- 5) AFTER COMPLETION OF BELOW GRADE EXCAVATING, AREA TO BE CLEANED AND CLEARED OF ANY UNSUITABLE MATERIALS, SUCH AS TRASH, DEBRIS, VEGETATION AND SO FORTH.
- 6) ANY EXCAVATING IN WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE OF ANY LOOSE MATERIAL AND EXCESS GROUND WATER.
- 7) IF SOUND SOIL IS NOT REACHED AT DESIGNATED EXCAVATION DEPTH, THE POOR SOIL IS TO BE EXCAVATED TO ITS FULL DEPTH AND EITHER REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION TO BE FILLED WITH THE SAME QUALITY CONCRETE SPECIFIED FOR THE FOUNDATION. PLEASE NOTIFY THE PROJECT SUPERVISOR AND THEY WILL HAVE A 3RD PARTY ENGINEERING FIRM CONTACT YOU WITH RECOMMENDATIONS.
- 8) MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATIONS TO BE USED IF EXCAVATION EXCEEDED THE OVERALL REQUIRED DEPTH. FOR STABILIZATION OF THE BOTTOM OF THE EXCAVATION, CRUSHED STONE MAY BE USED. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS. PLEASE NOTIFY THE PROJECT SUPERVISOR AND THEY WILL HAVE A 3RD PARTY ENGINEERING FIRM CONTACT YOU WITH RECOMMENDATIONS.
- 9) EXCAVATION TO COMPOUND TO INCLUDE WEED CONTROL MAT.
- 10) SITE TO HAVE PROPER DRAINAGE & EROSION CONTROL (CROWNED FORMATION)
- 11) GC WILL BE RESPONSIBLE FOR REPAIR OF ALL AREAS DISTURBED DURING CONSTRUCTION. (EXCAVATING ISSUES)

"CALL BEFORE YOU DIG"

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE UTILITY PROTECTION CENTER, PHONE 811 IN KENTUCKY, WHICH WAS ESTABLISHED TO PROVIDE ACCURATE LOCATIONS OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE UTILITY PROTECTION CENTER 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ON THIS PROJECT. ALL NEW SERVICE AND GROUNDING TRENCHES PROVIDE A WARNING TAPE @ 12 INCHES BELOW GRADE.

SYMBOLS LEGEND

- | | |
|--|-------------------------|
| | KEYNOTE |
| | INSP. SLEEVE / GRND ROD |
| | INSPECTION SLEEVE |
| | CAD WELD CONNECTION |
| | TRANSFORMER |
| | LIGHTNING SUPPRESSOR |
| | SWITCH (DISCONNECT) |
| | METER PACK |
| | POWER |
| | GAS LINE |
| | WATER LINE |
| | SANITARY SEWER |
| | TELEPHONE |
| | STORM SEWER DRAIN |
| | FENCE |

RS&B ENGINEERING, INC.
 8403 MERCURY DRIVE, LOUISVILLE, KY 40263
 (502) 881-3888

BLUEGRASS CELLULAR, INC.
 STANDARD CELLULAR SITE
ADAIR EAST
 348 R. GRIDER RD. RUSSELL SPRINGS, KY. 42642

NO.	DATE	REVISION

DRAWN BY: R. BECKER
 ISSUE DATE: 9-10-15
 SCALE: LISTED

SHEET NUMBER
General Notes

Landmark Surveying Co., Inc.

Darren L. Helms, P.L.S., PRESIDENT
Dennis N. Helms, P.L.S., VICE PRESIDENT



15 N.E. 3rd Street
Washington, Indiana 47501
Phone: 812-257-0950
Fax: 812-257-0953
Email: landmark97@sbcglobal.net

Directions to the Site

From the County Seat of Adair County, Kentucky

Adair East Site

From the courthouse square in downtown Columbia, Kentucky: travel south on Kentucky Highway 80 and Business Highway 55 for 0.6 miles to the intersection of said highways at Franklin Nissan; turn left at the intersection and continue on Kentucky Highway 80, traveling in an easterly direction, for 7.8 miles to R Grider Road; turn right onto R Grider Road and travel southerly for 0.3 miles to the tower access lane; turn left onto the lane and travel north for about 500 feet to the tower site in a hay field. The address of the site is 348 R Grider Road, Russell Springs, Kentucky 42642.

Darren L. Helms

Darren L. Helms, Kentucky Professional Land Surveyor No. 3386

SEPT. 14, 2015

Date



OPTION TO LEASE AND LEASE AGREEMENT

I.

OPTION TO LEASE REAL PROPERTY

THIS OPTION TO LEASE REAL PROPERTY (the "Option Agreement") is made and entered into this 30 day of June, 2015, by and between Debra Raines and Steven Corbin, whose address is 231 Raines Rd., Columbia, KY 42728 (the "Optionor (s)" and Cumberland Cellular Partnership (a Kentucky general Partnership) with principal office and place of business at 2902 Ring Road, Elizabethtown, KY 42701 (the "Optionee").

WITNESSETH:

WHEREAS, the Optionor(s) is the owner of certain real property located in Adair County, **Kentucky** as more particularly described on Exhibit A attached hereto and incorporated herein by reference (the "Property"); and

WHEREAS, the Optionor(s) wishes to grant to the Optionee, and the Optionee wishes to obtain from the Optionor(s), an option to lease the Property upon the terms and conditions set forth herein;

NOW, THEREFORE, in consideration of the foregoing premises and for other good and valuable consideration, the mutuality, receipt and sufficiency of which are hereby acknowledged, the parties hereto do agree as follows.

Site Name: Adair East

1. In consideration of **One Thousand Eight Hundred Dollars and Zero Cents (\$1,800.00)** paid by the Optionee to the Optionor(s) (the "Option Consideration"), the receipt of which is hereby acknowledged by the Optionor(s), the Optionor(s) hereby grants to the Optionee an exclusive and irrevocable option to lease the Property (the "Option"), upon the terms and conditions hereinafter set forth, upon the exercise of the Option at any time before 4:00 p.m. prevailing time on 29 Dec 2016, (the "Option Period") as set forth in Paragraph 5 thereof.
2. The parties hereto anticipate that the Property comprises approximately a **One Hundred Foot by One Hundred Foot** area, and that a right of way will be given by the Optionor(s) for the purposes of ingress and egress throughout the term of the lease. The Optionee shall obtain an accurate survey of the Property by a registered land surveyor licensed in the Commonwealth of Kentucky at the sole expense of the Optionee. A copy of the survey shall be provided to the Optionor(s). The description of the Property shall include the number of acres determined by the surveyor. The Optionee shall obtain said survey within a reasonable time following the date of the Option Agreement.
3. During the term of the Option, the Optionee may enter onto the Property at its own risk to obtain soil samples and to bore soil for the purposes of determining the suitability of the Property for a communications tower.
4. Upon the Optionee's proper exercise of the Option in accordance with Paragraph 5 hereof, the Optionor(s) shall be deemed to have immediately executed, acknowledged and delivered to the Optionee the Lease Agreement contained in Section II hereof. The description of the Property shall be that determined by the registered land surveyor in accordance with Paragraph 2 hereof.

Site Name: Adair East

5. If the Optionee elects to exercise the Option in accordance with the terms hereof, notice of such election shall be deemed sufficient if personally delivered or sent by registered or certified mail, return receipt requested, to the address of the Optionor(s) set forth in Paragraph 14 hereof.
6. The Optionor(s) agrees not to sell, lease or offer for sale or lease the Property during the term of this Option or any renewal or extension of the Option.
7. In the event the Optionee fails to exercise the Option as set forth herein (unless such failure is due to the discovery of a defect in the Property or other matter unsatisfactory to the Optionee), the Optionor(s) shall have the right to retain the Option Consideration.
8. The Optionee may assign this Option with written consent of the Optionor(s), which consent shall not be unreasonably withheld, and upon any assignment such assignee shall have all the rights, remedies and obligations as if it were the original Optionee hereunder. From and after any such assignment, the term "Optionee" shall refer to such assignee.
9. Each party hereto shall bear any and all of its own expenses in connection with the negotiation, execution or settlement of this Option.
10. Risk of loss with respect to the Property during the term of this Option and during the term of the lease shall be upon the Optionor(s). If, during the term of the Option, any portion of the Property shall be acquired by public authority under the right or threat of eminent domain, the Optionee may, at its sole option, either (i) exercise the

Site Name: Adair East

Option, and in such event, all sums received from the public authority by the Optionor(s) by reason of the taking of a portion of the Property shall reduce the rent due under the lease, or (ii) terminate this Option and thereupon the Optionor(s) shall be obligated to return to the Optionee the full amount of the Option Consideration previously paid to the Optionor(s) in "good and collected funds."

11. The parties hereto represent to each other that neither has engaged any broker to represent their interests in connection with the transactions contemplated hereby, and each agrees to indemnify the other against any and all claims made by any brokers engaged or purported to be engaged by the other for brokerage commissions or fees in connection with the transactions contemplated hereby.
12. The Optionor(s) represents, warrants and covenants to the Optionee that the Optionor(s) has not caused or permitted, and shall not cause or permit, and to the best of Optionor(s)' knowledge no other person has caused or permitted any hazardous material (as defined by any applicable federal, state or local law, rule or regulation) to be brought upon, placed, held, located or disposed of at the Property. In the event any such contamination occurs for which the Optionee becomes legally liable, the Optionor(s) shall indemnify the Optionee against all claims, damages, judgments, penalties and costs and expenses, including reasonable attorneys' fees, which Optionee may incur.
13. This Option Agreement and the rights and obligations of the parties hereto shall be construed in accordance with the laws of the Commonwealth of Kentucky.

Site Name: Adair East

14. For the purposes of giving notice as permitted or required herein, the address of the Optionor(s) shall be: Debra Raines, 231 Raines Rd., Columbia, KY 42728; the Optionee's address shall be: P.O Box 5012, Elizabethtown, KY 42702-5012. Any inquiry by the Optionor to the Optionee regarding the terms and conditions of the Option Agreement or Lease Agreement, or otherwise related to the Option Agreement or Lease Agreement, shall be made in writing and submitted to the attention of the Optionee's Lease Administrator at the above address.
15. The Optionee shall have the right, in its sole discretion, to record this Option in the Office of the Clerk of the County Court of Adair County, **Kentucky**.

II.

LEASE AGREEMENT

16. In the event the Optionee elects to exercise the Option to lease the Property, the terms of the Lease Agreement ("Lease Agreement" or "Lease") shall become immediately effective upon such exercise and shall be as follows.
 1. The term of the Lease shall commence on the date that the Optionor(s) receives proper notice that the Optionee has exercised the Option, pursuant to Paragraph 5 therein. The initial term shall expire **five (5) year(s)** from the commencement date of the Lease Agreement and shall include **six (6) additional five (5)-year terms** per the Lease Agreement. Optionee may, by providing written notice at least sixty (60) days prior to the expiration of the original or any renewal Lease term, elect to unilaterally terminate this Lease at the end of any original or renewal Lease term. Such notice must be

Site Name: Adair East

personally delivered or sent via registered or certified mail, return receipt requested, to the address of the Optioner(s) set forth in Paragraph 14 hereof. The Lease amount shall be adjusted at the end of each term by an increase of 12%.

2. The Optionee shall pay to the Optionor(s) rent for the Property in the sum of Four Thousand Eight Hundred Dollars and Zero Cents (\$4,800.00) yearly, to be paid in advance. All rent payments shall be personally delivered or mailed to the Optionor(s) at the address set forth in Paragraph 14 hereof. Any check payment of the rent due under the Lease shall be payable to the order of Optionor(s).
3. The Optionee shall be entitled to use and occupy the Property for the purpose of erecting, maintaining and operating a communications tower and communications facilities thereon and for all such other uses as Optionee may, in its sole discretion, deem necessary in connection therewith.
4. The Optionor(s) shall be responsible for the payment of all real estate taxes which shall be assessed against the Property during the term of the lease. The Optionee shall pay all charges for heat, water, gas, electricity, sewer use charges and any other utility used or consumed on the Property. The Optionee shall, at its own cost and expense, maintain and keep in full force and effect during the term of the lease public liability insurance with coverage in the amount of at least one million dollars (\$1,000,000.00) per person for bodily injury, disease, or death and shall maintain property insurance on any property the Optionee located on the Property.

Site Name: Adair East

5. The Optionee may assign the lease. The Optionee may sublet all or part of the space on the tower or ground space.
6. The Optionor(s) covenants that upon the Optionee's payment of the rent agreed upon herein, as well as Optionee's observing and performing all of the covenants and conditions contained in the Lease, the Optionee may peacefully and quietly enjoy the Property subject to the terms and conditions set forth in the Lease.
7. The Optionee agrees to maintain an access road in a passable manner for the term of the lease.
8. Optionee's Payment of Taxes, Fees and Assessments. Optionee shall pay directly to the applicable federal, state or local governmental unit or agency ("Governmental Entity") or to Optionor if Optionor is invoiced by such Governmental Entity, all taxes, fees, assessments or other charges assessed by any Governmental Entity directly against Optionee's Equipment and/or Optionee's use of the Facility. Optionee shall also pay to Optionor Optionee's Pro Rata Share of all taxes, fees, assessments or charges including, but not limited to, personal property taxes attributable to Optionee's equipment and antenna(s), municipal franchise fees, use fees, municipal application fees, installation fees and increases thereof. "Pro Rata Share" shall mean the fraction of decimal equivalent of dividing one (1) by the total number of then existing users occupying a tower on the last day of the applicable calendar year.

Site Name: Adair East

17. This Option and Lease Agreement contains the entire agreement between the parties hereto and no modification or amendment shall be binding upon any party unless made in writing and signed by each of the parties hereto.
18. Upon the termination or other end of this Lease Agreement, Optionee shall have the right to remove any and all of its property (real or personal) from the Property regardless of whether or not such property may be considered a fixture thereto.
19. Upon abandonment of the property, Optionee shall have thirty (30) days to dismantle and remove the cellular antenna tower and any/all equipment located on Optionor's property.
20. Before Optionor(s)' interest in the Property or Lease, or any part thereof, whether separately or in connection with other property owned by the Optionor(s), is sold, assigned or transferred in any manner whatsoever (with or without consideration), the Optionee shall have a right of first refusal to acquire whatever interest in the Property or Lease that the Optionor(s) proposes to transfer (the "Proposed Transfer"), on the terms and conditions set forth in this Section 20 (the "Right of First Refusal").
 - (a) Optionor(s) shall deliver to the Optionee a written notice (the "Notice") stating (i) the name of the proposed purchaser or transferee and the material terms and conditions of the Proposed Transfer, together with a complete copy of any written offer made to the Optionor(s) to acquire any interest in the Property ("Offer").
 - (b) At any time within thirty (30) days after receipt of the Notice, the Optionee may, by giving written notice to the Optionor (s) ("Optionee's Notice"), elect to exercise its Right of First Refusal and

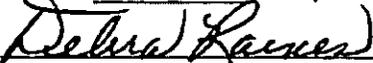
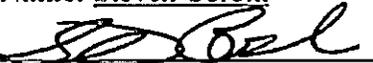
acquire the interest in the Property or Lease proposed to be transferred pursuant to the Proposed Transfer at the purchase price and on the same terms and conditions as are contained in the Offer. If the Offer includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Optionee in good faith. In the event, Optionee exercises its right to acquire the interest in the Property or Lease, the Optioner(s) shall convey, assign and/or transfer said interest to Optionee free and clear of all liens and encumbrances whatsoever (other than this Lease, which Lease shall remain in effect). All taxes, rents and other assessments applicable to the transferred interest, if any, shall be prorated to the date of closing. The Closing shall occur within thirty (30) days from the date of Optionee's Notice.

- (c) If the Optionee declines to exercise its Right of First Refusal to acquire the interest in the Property or Lease proposed to be transferred, the Optioner(s) may sell or transfer same in accordance with the terms of the Offer subject, however, to this Lease and the Optionee's rights thereunder.

[Remainder of Page Intentionally Left Blank]

EXECUTION OF AGREEMENT(S)

IN WITNESS WHEREOF, the parties hereto have set their hands and affixed their respective seals.

Print Name: Debra Raines
Sign: 
Date: 6/22/2015
Print Name: Steven Corbin
Sign: 
Date: 6-22-15

("Optionor(s)")
Property Owner(s)

Cumberland Cellular Partnership
Sign: 
Date: 6-20-15

("Optionee")
By: **Scott W. McCloud**
Authorized Representative

STATE OF Kentucky
 COUNTY OF Adair

The foregoing instrument was acknowledged before me this 22nd day of June, 2015, by Debra Raines to be his/her free act and deed.

Shannon Abyles
 NOTARY PUBLIC STATE AT LARGE
 My commission expires: 3/14/16

STATE OF Kentucky
 COUNTY OF Adair

The foregoing instrument was acknowledged before me this 22nd day of June, 2015, by Steven Corbin to be his/her free act and deed.

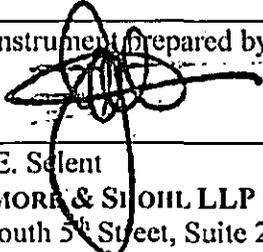
Shannon Abyles
 NOTARY PUBLIC STATE AT LARGE
 My commission expires: 3/14/16

STATE OF KENTUCKY
 COUNTY OF HARDIN

The foregoing instrument was acknowledged before me this 30 day of June, 2015, by Scott W. McCloud, as Authorized Representative on behalf of Cumberland Cellular Partnership, to be his free act and deed.

Scott W. McCloud
 NOTARY PUBLIC STATE AT LARGE
 My commission expires: 1-21-17

This instrument prepared by:



 John E. Selent
 DINSMORE & SMOHL LLP
 101 South 5th Street, Suite 2500
 Louisville, KY 40202
 (502) 540-2300

EXHIBIT A

SITE SKETCH

To COLUMBIA
7.7 MILES

ADAIR EAST

KENTUCKY HIGHWAY 80

G. CONOVER RD.

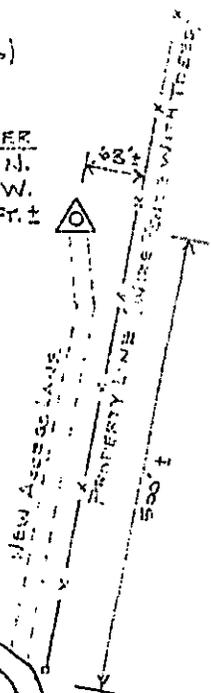
To RUSSELL SPRINGS
4.6 MILES

R. GRIDER RD.

(HAY FIELD)

Proposed Tower
Lat. $37^{\circ}04'50.2''$ N.
Lon. $85^{\circ}10'08.6''$ W.
GRD. ELEV. = 985 FT. ±

ABANDONED
HOUSE

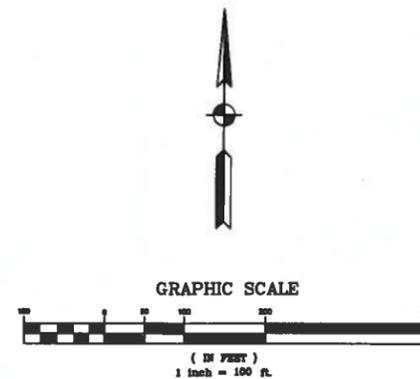
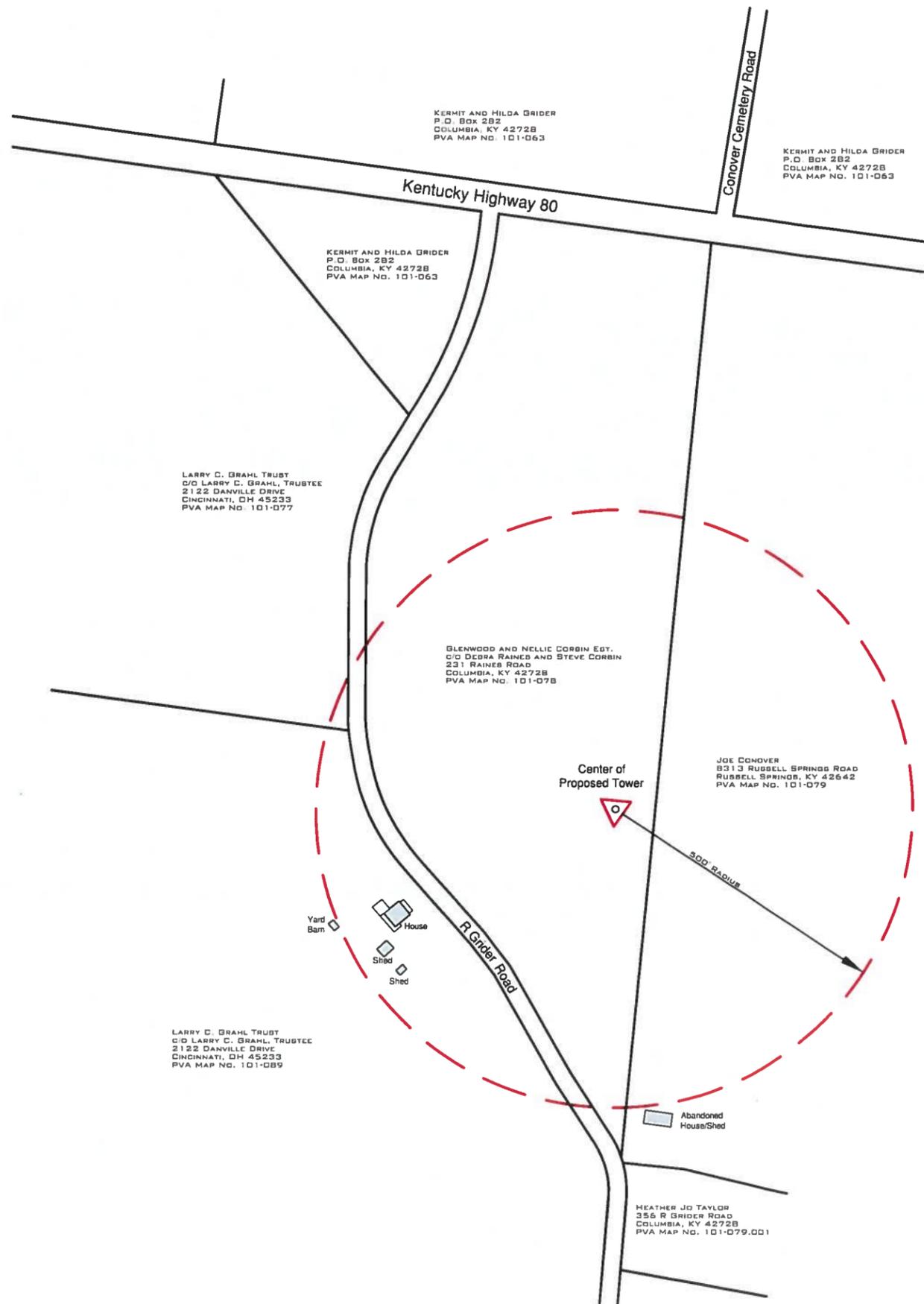


NOT TO SCALE
D.T. HELMS
06-06-15

LANDMARK SURVEYING CO., INC.
15 N.E. 3rd ST.
WASHINGTON, IN 47501
(812) 257-0950

ES/MS
06-06-15

SITE: ADAIR EAST
500-Foot Radius Map for Structures and Landowners
Adair County, Kentucky



Note
THE LOCATION OF THE BOUNDARIES SHOWN ARE APPROXIMATE,
AND THEY ARE BASED UPON INFORMATION ON FILE IN THE
OFFICE OF THE PROPERTY VALUATION ADMINISTRATOR OF
ADAIR COUNTY, KENTUCKY.

Surveyor's Certification
I HEREBY CERTIFY THAT THE INFORMATION SHOWN IS CORRECT
TO THE BEST OF MY KNOWLEDGE; AND IT IS IN ACCORDANCE
WITH THE RECORDS FOUND IN THE OFFICE OF THE PROPERTY
VALUATION ADMINISTRATOR OF ADAIR COUNTY, KENTUCKY ON
AUGUST 28, 2015.

Darren L. Helms
DARREN L. HELMS, P.L.S. 3386
DATE: SEPTEMBER 14, 2015



Reduced Copy

LANDMARK SURVEYING CO., INC.
15 N.E. 3RD STREET
WASHINGTON, INDIANA 47501
(812) 257-0950
Email: landmar97@loggibul.net
Project No. 15-05-0125
© 2015



500-Foot Radius Map
348 R Grider Road
Russell Springs, Kentucky 42642

Bluegrass Cellular
2902 Ring Road
Elizabethtown, KY 42701

REVISIONS	DATE

DATE 09-14-15	DRAWN BY A. Whisher	CHECKED BY D. L. Helms
SHEET No. 1		
of 1 SHEETS		
FILE NAME adair-radius.dwg		

Landmark Surveying Co., Inc.

Darren L. Helms, P.L.S., PRESIDENT
Dennis N. Helms, P.L.S., VICE PRESIDENT



15 N.E. 3rd Street
Washington, Indiana 47501
Phone: 812-257-0950
Fax: 812-257-0953
Email: landmark97@sbcglobal.net

Landowner and Adjacent Landowner List

Adair East Site

Larry C. Grahl Trust
c/o Larry C. Grahl, Trustee
2122 Danville Drive
Cincinnati, OH 45233

Kermit and Hilda Grider
P.O. Box 282
Columbia, KY 42728

Joe Conover
8313 Russell Springs Road
Russell Springs, KY 42642

Heather Jo Taylor
356 R Grider Road
Columbia, KY 42728

Glenwood and Nellie Corbin Est.
c/o Debra Raines and Steve Corbin
231 Raines Road
Columbia, KY 42728

Darren L. Helms
Darren L. Helms, Kentucky Professional Land Surveyor No. 3386

SEPT. 14, 2015
Date



September 22, 2015

Larry C. Grahl Trust
c/o Larry C. Grahl, Trustee
2122 Danville Drive
Cincinnati, Ohio 45233

Public Notice

Cumberland Cellular Partnership is a Kentucky general partnership that markets its services as Bluegrass Cellular. Bluegrass Cellular has been serving Central Kentucky with wireless communications services for over 20 years.

Cumberland Cellular Partnership is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new cellular facility to provide cellular telephone service. This facility will include a 240 foot self-supporting tower and an equipment shelter to be located at 348 R. Grider Road, Russell Springs, Adair County, Kentucky, 42642. A map showing the location is attached.

The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

**Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky, 40602.**

Please refer to Case Number 2015-00314 in your correspondence.

Bluegrass Cellular welcomes the opportunity to serve and provide wireless service in your community! (For more information, please check us out online at www.myblueworks.com)

English

Customer Service

USPS Mobile

Register / Sign In



USPS Tracking®



[Customer Service](#) ›

Have questions? We're here to help.



[Get Easy Tracking Updates](#) ›

Sign up for My USPS.

Tracking Number: 70151520000080709067

Product & Tracking Information

Postal Product:

Features:
Certified Mail™

DATE & TIME	STATUS OF ITEM	LOCATION
September 24, 2015 , 11:07 am	Delivered	CINCINNATI, OH 45233

Your item was delivered at 11 07 am on September 24, 2015 in CINCINNATI, OH 45233

September 23, 2015 , 9:00 pm	Departed USPS Facility	CINCINNATI, OH 45234
September 23, 2015 , 9:58 am	Arrived at USPS Facility	CINCINNATI, OH 45234
September 22, 2015 , 10:31 pm	Arrived at USPS Facility	LOUISVILLE, KY 40231

Available Actions

[Text Updates](#)

[Email Updates](#)

Track Another Package

Tracking (or receipt) number

[Track It](#)

Manage Incoming Packages

Track all your packages from a dashboard. No tracking numbers necessary.

[Sign up for My USPS](#) ›



U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$ _____	Postmark Here <i>Adair East</i>
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy) \$ _____	
<input type="checkbox"/> Return Receipt (electronic) \$ _____	
<input type="checkbox"/> Certified Mail Restricted Delivery \$ _____	
<input type="checkbox"/> Adult Signature Required \$ _____	
<input type="checkbox"/> Adult Signature Restricted Delivery \$ _____	
Postage \$ _____	
Total Postage and Fees \$ _____	
Sent To <i>Grahl</i>	
Street and Apt. No., or PO Box No.	
City, State, ZIP+4®	

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

- OTHER USPS SITES
- [Business Customer Gateway](#)
 - [Postal Inspectors](#)
 - [Inspector General](#)
 - [Postal Explorer](#)
 - [National Postal Museum](#)
 - [Resources for Developers](#)

- LEGAL INFORMATION
- [Privacy Policy](#)
 - [Terms of Use](#)
 - [FOIA](#)
 - [No FEAR Act EEO Data](#)

September 22, 2015

Kermit and Hilda Grider
P.O. Box 282
Columbia, Kentucky 42728

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The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

**Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky, 40602.**

Please refer to Case Number 2015-00314 in your correspondence.

Bluegrass Cellular welcomes the opportunity to serve and provide wireless service in your community! (For more information, please check us out online at www.mvblueworks.com)

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY																
<ul style="list-style-type: none">■ Complete items 1, 2, and 3.■ Print your name and address on the reverse so that we can return the card to you.■ Attach this card to the back of the mailpiece, or on the front if space permits.	<p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> <i>Kermit Grider</i> <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <input type="checkbox"/> C. Date of Delivery <i>Kermit Grider</i> <input type="checkbox"/></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input checked="" type="checkbox"/> No</p> <p style="text-align: center;">USPS</p>																
<p>1. Article Addressed to: <i>Kermit & Hilda Grider P.O. Box 282 Columbia, KY 42728</i></p> <p>9590 9403 0728 5196 1848 37</p>	<p>3. Service Type</p> <table border="0"><tr><td><input type="checkbox"/> Adult Signature</td><td><input type="checkbox"/> Priority Mail Express®</td></tr><tr><td><input type="checkbox"/> Adult Signature Restricted Delivery</td><td><input type="checkbox"/> Registered Mail™</td></tr><tr><td><input checked="" type="checkbox"/> Certified Mail®</td><td><input type="checkbox"/> Registered Mail Restricted Delivery</td></tr><tr><td><input type="checkbox"/> Certified Mail Restricted Delivery</td><td><input type="checkbox"/> Return Receipt for Merchandise</td></tr><tr><td><input type="checkbox"/> Collect on Delivery</td><td><input type="checkbox"/> Signature Confirmation™</td></tr><tr><td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td><td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td></tr><tr><td><input type="checkbox"/> Insured Mail</td><td></td></tr><tr><td><input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</td><td></td></tr></table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Insured Mail		<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	
<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®																
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<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery																
<input type="checkbox"/> Insured Mail																	
<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)																	
<p>2. Article Number (Transfer from service label) 7015 1520 0000 8070 9074</p>	<p>Domestic Return Receipt</p>																

September 22, 2015

Joe Conover
8313 Russell Springs Road
Russell Springs, Kentucky 42642

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SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY																
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> Joe Conover <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) C. Date of Delivery SEP 28 2015</p>																
<p>1. Article Addressed to:</p> <p>Joe Conover 8313 Russell Springs Rd. Russell Springs, KY 42642</p>  <p>9590 9403 0728 5196 1848 20</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below <input type="checkbox"/> No</p> <p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation™</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Insured Mail</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</td> <td></td> </tr> </table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Insured Mail		<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	
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<p>7015 1520 0000 8070 9081</p>																	
<p>PS Form 3811, April 2015 PSN 7530-02-000-9053</p>	<p>Domestic Return Receipt</p>																

October 8, 2015

Heather Jo. Taylor
356 R Grider Road
Columbia, Kentucky 42728

Public Notice

Cumberland Cellular Partnership is a Kentucky general partnership that markets its services as Bluegrass Cellular. Bluegrass Cellular has been serving Central Kentucky with wireless communications services for over 20 years.

Cumberland Cellular Partnership is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new cellular facility to provide cellular telephone service. This facility will include a 240 foot self-supporting tower and an equipment shelter to be located at 348 R. Grider Road, Russell Springs, Adair County, Kentucky, 42642. A map showing the location is attached.

The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

**Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky, 40602.**

Please refer to Case Number 2015-00314 in your correspondence.

Bluegrass Cellular welcomes the opportunity to serve and provide wireless service in your community! (For more information, please check us out online at www.myblueworks.com)

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Signature <input checked="" type="checkbox"/> <i>Heather Jo Taylor</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee	
1. Article Addressed to: <i>Heather Jo Taylor 356 R Grider Road Columbia, KY 42728</i>  9590 9403 0728 5196 1845 78	B. Received by (Printed Name) <i>Heather Jo Taylor</i>	C. Date of Delivery <i>10/16/15</i>
2. Article Number (Transfer from service label) 7015 1520 0000 8070 9128	D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No 3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail™ <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Insured Mail <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	
PS Form 3811, April 2015 PSN 7530-02-000-9053 Domestic Return Receipt		

September 22, 2015

Glenwood and Nellie Corbin Estate
c/o Debra Raines and Steve Corbin
231 Raines Road
Columbia, Kentucky 42728

Public Notice

Cumberland Cellular Partnership is a Kentucky general partnership that markets its services as Bluegrass Cellular. Bluegrass Cellular has been serving Central Kentucky with wireless communications services for over 20 years.

Cumberland Cellular Partnership is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new cellular facility to provide cellular telephone service. This facility will include a 240 foot self-supporting tower and an equipment shelter to be located at 348 R. Grider Road, Russell Springs, Adair County, Kentucky, 42642. A map showing the location is attached.

The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

**Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky, 40602.**

Please refer to Case Number 2015-00314 in your correspondence.

Bluegrass Cellular welcomes the opportunity to serve and provide wireless service in your community! (For more information, please check us out online at www.mvblueworks.com)

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY																
<ul style="list-style-type: none">■ Complete items 1, 2, and 3.■ Print your name and address on the reverse so that we can return the card to you.■ Attach this card to the back of the mailpiece, or on the front if space permits.	<p>A. Signature <input checked="" type="checkbox"/> <i>Debra Raines</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <i>Debra Raines</i> C. Date of Delivery <i>9-</i></p>																
<p>1. Article Addressed to: <i>Glenwood & Nellie Corbin Estate c/o Debra Raines & Steve Corbin 231 Raines Rd. Columbia, KY 42728</i></p>  <p>9590 9403 0728 5196 1848 06</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <table border="0"><tr><td><input type="checkbox"/> Adult Signature</td><td><input type="checkbox"/> Priority Mail Express®</td></tr><tr><td><input type="checkbox"/> Adult Signature Restricted Delivery</td><td><input type="checkbox"/> Registered Mail™</td></tr><tr><td><input checked="" type="checkbox"/> Certified Mail®</td><td><input type="checkbox"/> Registered Mail Restricted Delivery</td></tr><tr><td><input type="checkbox"/> Certified Mail Restricted Delivery</td><td><input type="checkbox"/> Return Receipt for Merchandise</td></tr><tr><td><input type="checkbox"/> Collect on Delivery</td><td><input type="checkbox"/> Signature Confirmation™</td></tr><tr><td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td><td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td></tr><tr><td><input type="checkbox"/> Insured Mail</td><td></td></tr><tr><td><input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</td><td></td></tr></table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Insured Mail		<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	
<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®																
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<input type="checkbox"/> Insured Mail																	
<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)																	
<p>2. Article Number (Transfer from service label) 7015 1520 0000 8070 9104</p>																	

COPY

Kerry W. Ingle
502-540-2354 (Direct Dial)
kerry.ingle@dinsmore.com

September 22, 2015

Via Certified Mail

Honorable Michael Lee Stephens
Adair County Judge Executive
424 Public Square, Suite 1
Columbia, KY 42728

Re: Application of Cumberland Cellular Partnership d/b/a Bluegrass Cellular for a Certificate of Public Convenience and Necessity to construct a new cellular facility to be located at 348 R. Grider Road, Russell Springs, Kentucky, 42642, before the Public Service Commission of the Commonwealth of Kentucky, Case No. 2015-00314

Judge Stephens:

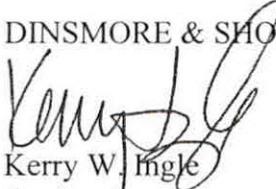
Cumberland Cellular Partnership is applying to the Public Service Commission of Kentucky (the Commission) for a Certificate of Public Convenience and Necessity to construct and operate a new cellular facility to provide cellular telephone service. This facility will include a 240 foot self-supporting tower and an equipment shelter to be located at 348 R. Grider Road, Russell Springs, Adair County, Kentucky, 42642. A map showing the location of the proposed new facility is enclosed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to Case No. 2015-00314 in your correspondence.

Very Truly Yours,

DINSMORE & SHOHL LLP


Kerry W. Ingle
Paralegal

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Hon. Michael Lee Stephens
Adair County Judge Executive
424 Public Square, Suite 1
Columbia, KY 42728



9590 9403 0728 5196 1847 90

2. Article Number (Transfer from service label)

7015 1520 0000 8070 9111

COMPLETE THIS SECTION ON DELIVERY

A. Signature

x Ashley Willis

- Agent
- Addressee

B. Received by (Printed Name)

C. Date of Delivery

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

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery



PUBLIC NOTICE

Cumberland Cellular Partnership
proposes to
construct a cellular
communications

TOWER

near this site. If you have any
questions please contact:

Cumberland Cellular
Partnership
P.O. Box 5012
2502 King Road
Hillsborough, NH 07121

Executive Director
The Public Service Commission
275 State Boulevard
P.O. Box 65
Franklin, NH 03002

Please refer to P.S.C.
Case #2015-00314
in your correspondence.



PUBLIC NOTICE
TOWER

PUBLIC NOTICE

Cumberland Cellular Partnership
proposes to
construct a cellular
communications

TOWER

on this site. If you have any
questions please contact:

Cumberland Cellular

Partnership

P.O. Box 1017

2282 Hwy 90E

Cumberland, KY 41701

Executive Director

The Public Service Commission

211 Tower Boulevard

P.O. Box 174

Frankfort, KY 40621

Please refer to P.S.C.
Case #2015-00314
in your correspondence.



PUBLIC NOTICE
[Small illegible text]
TOWER
[Small illegible text]
Please call 800-4-A-STATE
Case #2013-00014
[Small illegible text]

Notarized Proof Of Publication

State of Kentucky

County of Adair

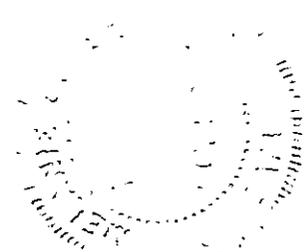
Before me, a notary public, in and for said county and state, this 25th day of November, 2015, came Amber Harrison Birdwell, known to me, who duly sworn, states as follows: She is the Bookkeeper of The Adair Progress, Inc. which publishes The Adair Progress Newspaper and that the said publication of November 25th, 2015 carried the advertisement:

Cumberland Cellular Case #2015-00314

Amber Harrison Birdwell _____

Melanie O'Leary, Notary

My commission expires 6-23-18



Notarized Proof Of Publication

State of Kentucky

County of Adair

Before me, a notary public, in and for said county and state, this 3rd day of December, 2015, came Amber Harrison Birdwell, known to me, who duly sworn, states as follows: She is the Bookkeeper of The Adair Progress, Inc. which publishes The Adair Progress Newspaper and that the said publication of December 3rd, 2015 carried the advertisement:

Cumberland Cellular Case #2015-00314

Amber Harrison Birdwell _____

Melanie Ollery, Notary

My commission expires 6/23/18





CDL-A Dedicated Driver Needed. Home Every Day!
 FirstFleet is expanding in Bardstown, KY area delivering bakery goods to different locations within 250 mile radius on night shift. Enjoy dedicated routes with daily home time and a potential of making up to \$55000 and more per year! \$5000 Referral Bonus to you for anyone you bring with you. Paid odometer miles and stop pay for all stops. Full Medical Benefits, 401K, short and Long term disability and life insurance. Paid vacations. Quarterly safety bonuses, Fuel Bonuses and Referral bonus. Requirements: No DUI/DWI, drug or Alcohol related convictions within past 5 years. Class A CDL from state of residence. 1 yr. verifiable exp. No Chargeable D.O.T. accidents in 3 years. Clean driving/Safety record. No felonies in past 7 years. Call 502-331-0993 Ext. 6810 or visit careers.firstfleetinc.com

NOTICE

Cumberland Cellular Partnership is applying to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular radio telecommunications service in rural service area #5 of the Commonwealth of Kentucky (Adair East Cell Site). The facility is a 240 foot tower and an equipment shelter to be located at 348 R. Grider Road, Russell Springs, Adair County, 42642. Your comments and requests for intervention should be addressed to: Executive Director's Office, Public Service Commission, Post Office Box 615, 211 Sower Boulevard, Frankfort, Kentucky 40602. Please refer to Case No. 2015-00314 in your correspondence.

COMMONWEALTH OF KENTUCKY
 29TH JUDICIAL CIRCUIT
 ADAIR CIRCUIT COURT
 CASE NO. 11-CL-00118

GREENRIVER INVESTMENTS, INC.

PLAINTIFF

VS.

UNKNOWN HEIRS, LEGATEES AND DEWISEES OF ROBERT E. CRAVENS; UNKNOWN SPOUSE OF ROBERT E. CRAVENS; COMMONWEALTH OF KENTUCKY, COUNTY OF ADAIR; JAMOS FUND I, LP; JAMOS CAPITAL, LLC; UNKNOWN OCCUPANTS OF 512 Burkesville Street, MICHAEL L. HARRIS, and APEX FUND SERVICES

DEFENDANTS

* * * * *

Pursuant to the terms of a Judgment & Order of Sale entered in the above case on July 14, 2015 the undersigned will on, **THURSDAY, DECEMBER 10, 2015, at 10:00 A.M., CDT**, sell at public auction, to the highest bidder, at the **ADAIR COUNTY JUDICIAL CENTER**, in the City of Columbia, Kentucky, the following described property located in Adair County, Kentucky.

PROPERTY ADDRESS & DESCRIPTION: PVA Parcel No. C03-007-008 containing a house and lot, with the property being located at 512 Burkesville Street, Columbia, KY. The property is more particularly described as follows:

Beginning at a stone corner to the C W Marshall (former owner) property on the North side of Market Street; thence with the said Market Street S 60 W 104 feet to a stone corner to the lands of Rollin Hurt (former owner); thence with Hurt line N 38 1/2 W 266 feet to an Elm, corner said to Hurt; thence with Hurt line N 49 E 123 feet to a stone in said line and a corner to said Marshall; thence with said Marshall line S 34 E 288 1/2 feet to the beginning. There is expected from same, and not hereby conveyed, a small parcel or strip of same conveyed by Edwin Cravens and wife Mary Cravens to Luther Collins and wife Dorothy H Collins by Deed dated 28 July 1952 and recorded in Deed Book 78 at Page 639.

The above is the same property acquired by Edwin Cravens, now deceased, and his wife, Mary T Cravens, now deceased, by Deed from James Cravens, single, and Robert Cravens, single, dated 30 August 1950 and recorded in Deed Book Number 78 at Page 638. The said Edwin Cravens died intestate, a resident of Adair County, Kentucky, on 19 November 1961, survived by his wife, Mary T Cravens, co-grantee above and by sons Robert E Cravens and James M. Cravens, parties to this conveyance, his sole and only heirs at law. The grantor herein, James M Cravens, and the grantee herein, Robert E Cravens, acquired the interest of their mother, the said Mary T Cravens, in same by her Will dated 12 May 1980 and recorded in Will book Q at page 140. All recordings are at Office Adair County Court Clerk.

The remaining one-half interest was conveyed to Robert E. Cravens, by James M. Cravens and Ann I. Cravens, husband and wife, by deed dated April 8, 1982, and recorded in Deed Book 141, at page 404, in the office of the Adair County Clerk.

Reference is made to the offices of the Adair County PVA, Adair County Clerk and Adair Circuit Court Clerk for additional information regarding the property.

TERMS: --Purchaser may pay 100% of the purchase price or deposit an amount equal to 10% of the purchase price. The payment of the purchase price or the required deposit shall be made by cash, personal check or money order at the time of sale. If payment is not made in full at the conclusion of the sale, with the deposit the purchaser of said property shall be required to make good and sufficient bond with surety, due and payable in thirty (30) days, and the principal amount shall bear interest at the rate of 12% per annum from the date of the sale until fully paid. If the deposit and/or bond are not made immediately, the Commissioner shall reject the bid and resell the property forthwith. The rejected bidder shall be prohibited from further bid on that property.

Delivery of Deed shall occur upon payment of the purchase price and as provided by order of the Court. Possession of the property will be granted as provided by the judgment or order of the Court.

PARTICULARS: Appraised value: \$45,000.00

This property is indivisible and cannot be divided without materially impairing its value.

The property is being sold to satisfy a judgment of the plaintiff in the amount of \$1,960.84 as of July 31st, 2015, plus additional interest, costs and attorney fees as are provided in the judgment.

Said property should be sold free and clear of all liens, encumbrances and interest of the parties hereto except sold subject to: (a) All unpaid real estate taxes effecting the real estate for which the purchasers shall take no credit on the purchase price; (b) Easements, restrictions and stipulations of record effecting the property; (c) Any matters disclosed by an accurate survey or inspection of the property; (d) Any assessment for public improvements levied against the property. Neither the Commissioner nor the Court shall be deemed to have warranted title of said real estate to the purchaser.

The state, county, school and other property taxes for the tax year 2016 and subsequent years shall be paid by the purchaser.

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NOTICE

Cumberland Cellular Partnership is applying to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular radio telecommunications service in rural service area #5 of the Commonwealth of Kentucky (Adair East Cell Site). The facility is a 240 foot tower and an equipment shelter to be located at 348 R. Grider Road, Russell Springs, Adair County, 42642. Your comments and requests for intervention should be addressed to: Executive Director's Office, Public Service Commission, Post Office Box 615, 211 Sower Boulevard, Frankfort, Kentucky 40602. Please refer to Case No. 2015-00314 in your correspondence.



CDL-A Dedicated Driver Needed. Home Every Day!
 FirstFleet is expanding in Bardstown, KY area delivering bakery goods to different locations within 250 mile radius on night shift. Enjoy dedicated routes with daily home time and a potential of making up to \$55000 and more per year! \$5000 Referral Bonus to you for anyone you bring with you. Paid odometer miles and stop pay, for all stops. Full Medical Benefits, 401K, short and Long term disability and life insurance. Paid vacations. Quarterly safety bonuses, Fuel Bonuses and Referral bonus. Requirements: No DUI/DWI, drug or Alcohol related convictions within past 5 years. Class A CDL from state of residence. 1 yr. verifiable exp. No Chargeable D.O.T. accidents in 3 years. Clean driving/Safety record. No felonies in past 7 years. Call 502-331-0993 Ext. 6810 or visit careers.firstfleetinc.com

COMMONWEALTH OF KENTUCKY
 ADAIR CIRCUIT COURT
 29TH JUDICIAL CIRCUIT
 CASE NO. 15-CI-00015

JPMORGAN CHASE BANK, NATIONAL ASSOCIATION
 VS.
 KATHRYN D. MILLER, aka KATHERINE MILLER
 JARRETT T. MILLER aka JARRETT MILLER

PLAINTIFF
 DEFENDANTS

Pursuant to the terms of a Judgment & Order of Sale entered in the above case on June 12, 2015, and an order to reschedule dated October 27th, 2015, the undersigned will on, **THURSDAY, DECEMBER 10, 2015, at 10:00 A.M., CDT**, sell at public auction, to the highest bidder, at the **ADAIR COUNTY JUDICIAL CENTER**, in the City of Columbia, Kentucky, the following described property located in Adair County, Kentucky.

PROPERTY ADDRESS & DESCRIPTION: PVA Parcel No. 080-029, containing a house on .96 +/- acre, with the property being located at 205 James Cape Road, Columbia, Adair County, KY. The property is more particularly described as follows:

DESCRIPTION OF A TRACT OF LAND, A NEW DIVISION & BOUNDARY SURVEY, THE PROPERTY OF TOMMY W. CAPE DEED BOOK 278 PAGE 101 & JAMES CAPE DEED BOOK 97 PAGE 552 IN THE ADAIR COUNTY CLERK'S OFFICE, LOCATED APPROXIMATELY 1,000.00 FEET NORTHWEST OF HIGHWAY #900 AND ON THE NORTHWEST SIDE OF JAMES CAPE ROAD IN ADAIR COUNTY, COMMONWEALTH OF KENTUCKY AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

Beginning at a set 1/2" x 18" rebar with cap #3318 on the Northwest right of way of James Cape Road corner to Sammy Baker (Deed Book 105 page 526); thence leaving right of way with S. Baker S 76 deg. 59' 29" W 196.64 feet to a set 1/2" x 18" rebar with cap #3318; thence leaving S Baker with new division lines of parent tract N 17 deg. 56' 29" W 167.01 feet to a set 1/2" x 18" rebar with cap #3318; thence N 51 deg. 20' 32" E 104.96 feet to a 20" Beech with new marks // s pointer to a set 1/2" x 18" rebar with cap #3318 as witness; thence S 77 deg. 25' 12" E 193.29 feet to a set 1/2" x 18" rebar with cap #3318 on the aforementioned right of way; thence with right of way S 16 deg. 00' 35" W 99.36 feet to a point; thence S 0 deg. 13' 52" W 42.58 feet to the point of beginning, contains 0.96 acre and plat to be recorded in the deed books of the Adair County Clerk's Office.

This survey is subject to any and all easements, restrictions and rights of way of record at this time. All bearings are based on the Magnetic North which was observed in the field N 8 deg. 27' 12" W 78.38 feet from the point of beginning with reference bearing S 12 deg. E along a random base line on 11/16/05.

I hereby certify that this survey was done under my direct supervision by the method of Random Traverse with sideshots and the unadjusted precision ratio of the traverse was 1/27,626.05'. This survey is a Class 'B' Survey and meets the Minimum Standards required by the State of Kentucky as defined by KRS 322. Signed: Michael E. McKinney, PLS #3318, County Surveyor.

This being the same lands conveyed to Katherine Miller and Jarrett Miller, husband and wife, by James Cape and Arlena Cape, husband and wife, on the 22 day of October, 2012, and recorded in Deed Book 323, at page 640, in the office of the Adair County Clerk.

Reference is made to the offices of the Adair County PVA, Adair County Clerk and Adair Circuit Court Clerk for additional information regarding the property.

TERMS: --Purchaser may pay 100% of the purchase price or deposit an amount equal to 10% of the purchase price. The payment of the purchase price or the required deposit shall be made by cash, personal check or money order at the time of sale. If payment is not made in full at the conclusion of the sale, with the deposit the purchaser of said property shall be required to make good and sufficient bond with surety, due and payable in thirty (30) days, and the principal amount shall bear interest at the rate of 12% per annum from the date of the sale until fully paid. If the deposit and/or bond are not made immediately, the Commissioner shall reject the bid and resell the property forthwith. The rejected bidder shall be prohibited from further bid on that property.

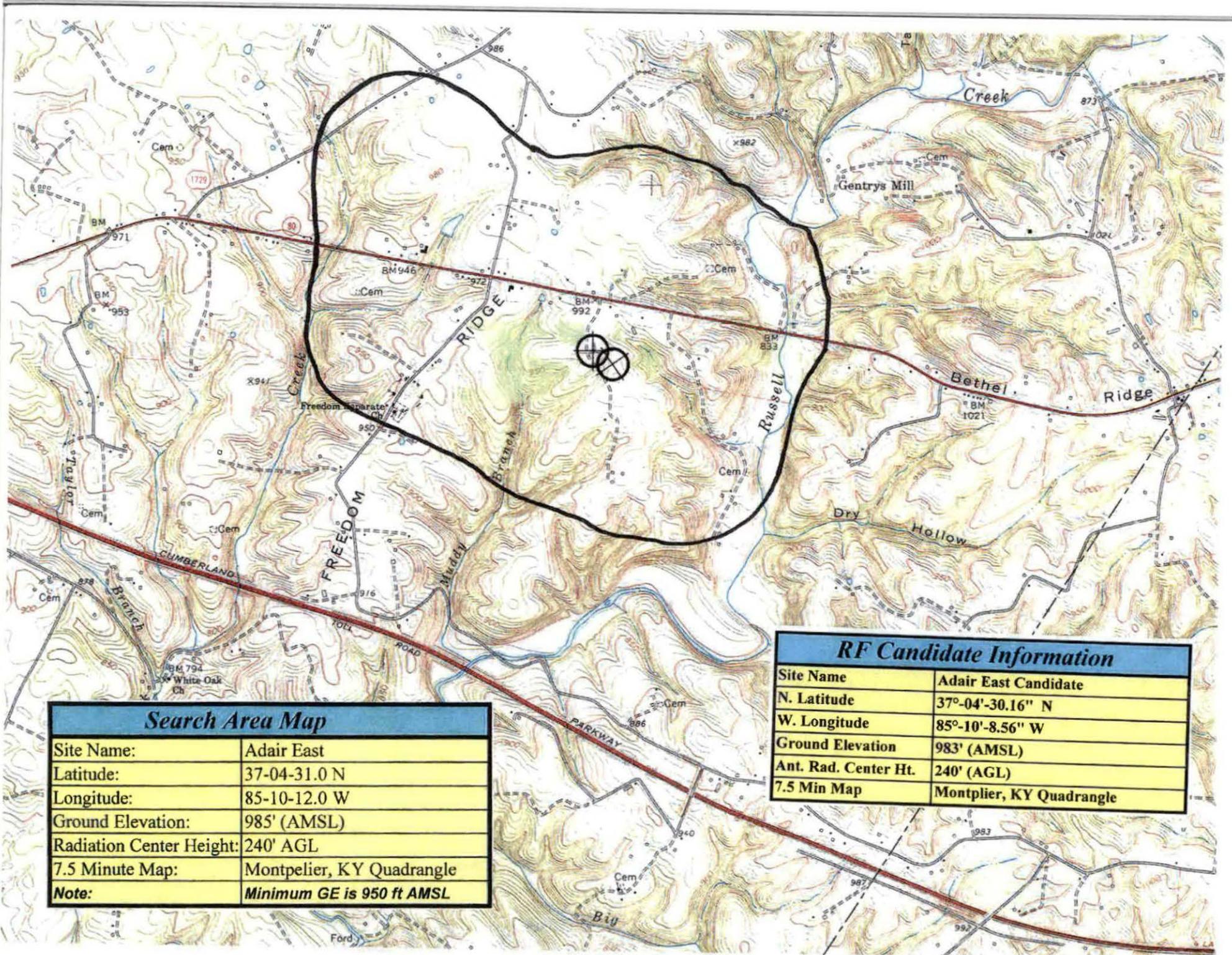
Delivery of Deed shall occur upon payment of the purchase price and as provided by order of the Court. Possession of the property will be granted as provided by the judgment or order of the Court.

PARTICULARS: Appraised value: \$40,000.00

This property is indivisible and cannot be divided without materially impairing its value.

The property is being sold to satisfy a judgment of the plaintiff in the amount of \$53,213.48, as of March 5, 2015, plus interest, costs and attorney fees of \$1,150.00, as are provided in the judgment.

Said property should be sold free and clear of all...



Search Area Map	
Site Name:	Adair East
Latitude:	37-04-31.0 N
Longitude:	85-10-12.0 W
Ground Elevation:	985' (AMSL)
Radiation Center Height:	240' AGL
7.5 Minute Map:	Montpelier, KY Quadrangle
Note:	Minimum GE is 950 ft AMSL

RF Candidate Information	
Site Name	Adair East Candidate
N. Latitude	37°-04'-30.16" N
W. Longitude	85°-10'-8.56" W
Ground Elevation	983' (AMSL)
Ant. Rad. Center Ht.	240' (AGL)
7.5 Min Map	Montplier, KY Quadrangle

Proposed Adair East Tower in Adair County

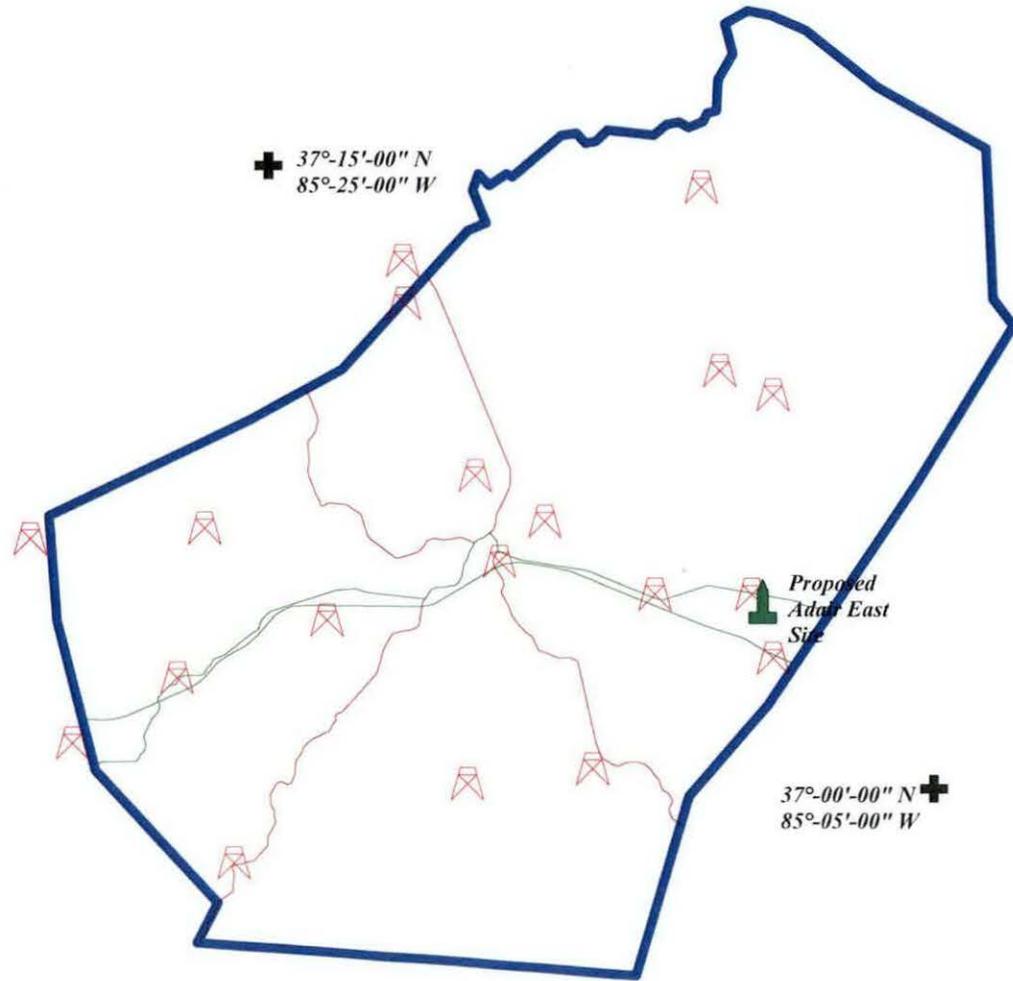
— Adair County Boundary

⚠ Wireless Tower Locations Registered with the FCC

📶 Proposed Tower Location

⊕ Tick Marks

Prepared By: LNSG Engineering 9/25/2015



**Information on Towers Registered with the FCC
in Adair County and 1/2 Mile Area Outside of the County Boundary**

FCC Tower Reg. No.	North Latitude	West Longitude	City, State	Tower Owner
1041289	37-00-07 N	85-19-01 W	Fairplay, KY	TEXAS EASTERN COMMUNICATIONS, INC.
1043061	37-07-32 N	85-18-48 W	Columbia, KY	CUMBERLAND CELLULAR PARTNERSHIP DBA BLUEGRASS CELLULAR
1043197	37-10-4.2 N	85-11-25.8 W	Columbia, KY	Shoreline Communications, Inc.
1044249	37-09-29 N	85-09-50 W	Purdy, KY	WESTERN KENTUCKY UNIVERSITY
1044821	37-06-00 N	85-32-10.1 W	Edmonton, KY	KENTUCKY, COMMONWEALTH OF DBA = KY EMERGENCY WARNING SYSTEM KEWS
1044964	37-06-26.2 N	85-16-41.9 W	Columbia, KY	TRI COUNTY BROADCASTING CORPORATION DBA = WAIN RADIO
1048811	37-04-40.6 N	85-10-27.6 W	Russell Springs, KY	SHORELINE COMMUNICATIONS INC.
1228813	37-05-28.2 N	85-18-3.9 W	Columbia, KY	SBA Properties, Inc.
1242039	37-02-38.7 N	85-27-43.8 W	Edmonton, KY	Cumberland Cellular Partnership d/b/a Bluegrass Cellular
1243210	37-12-42.6 N	85-20-58.8 W	Columbia, KY	SBA Infrastructures, LLC
1252869	37-01-4.2 N	85-30-53.2 W	Edmonton, KY	Shared Sites Acquisition LLC
1254374	37-4-2.8 N	85-23-14.3 W	Columbia, KY	Shared Sites Acquisition LLC
1257173	37-4-40.7 N	85-13-22.6 W	Columbia, KY	Shared Sites Acquisition LLC
1257489	37-3-7.6 N	85-9-49.2 W	Russell Springs, KY	Shared Sites Acquisition LLC
1261657	36-58-11.8 N	85-26-0.6 W	Breeding, KY	Cumberland Cellular Partnership
1268209	37-11-40.7 N	85-20-55.2 W	Columbia, KY	Cumberland Cellular Partnership
1272696	37-6-16 N	85-26-55.1 W	Columbia, KY	Cumberland Cellular Partnership
1274206	37-14-29.3 N	85-11-59.5 W	Knifley, KY	Cumberland Cellular Partnership
1278367	37-0-27.8 N	85-15-14.6 W	Glens Fork, KY	Cumberland Cellular Partnership



Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CUMBERLAND CELLULAR PARTNERSHIP D/B/A BLUEGRASS CELLULAR

CUMBERLAND CELLULAR PARTNERSHIP D/B/A BLUEGRA
PO BOX 5012
ELIZABETHTOWN, KY 42702-5012

Call Sign KNKN814	File Number
Radio Service CL - Cellular	
Market Number CMA447	Channel Block B
Sub-Market Designator 0	

FCC Registration Number (FRN): 0001786409

Market Name Kentucky 5 - Barren

Grant Date 08-31-2010	Effective Date 03-03-2011	Expiration Date 10-01-2020	Five Yr Build-Out Date	Print Date 03-24-2011
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Site Information:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
1	37-06-37.0 N	085-58-40.0 W	320.0	82.3	1205611

Address: Prewitt's Knob, 4.8 km WSW of

City: CAVE CITY County: BARREN State: KY Construction Deadline:

Antenna	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		177.600	194.100	184.800	162.400	189.800	184.600	178.000	165.400
Transmitting ERP (watts)		0.710	17.400	93.440	120.380	32.400	3.090	0.300	0.340
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		177.600	194.100	184.800	162.400	189.800	184.600	178.000	165.400
Transmitting ERP (watts)		1.180	0.300	0.350	2.570	34.720	120.380	93.440	15.510
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		177.600	194.100	184.800	162.400	189.800	184.600	178.000	165.400
Transmitting ERP (watts)		116.290	30.310	1.400	0.270	0.270	0.270	0.700	31.720

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
2	37-03-16.0 N	085-05-15.0 W	335.3	66.4	1060800

Address: 1.6 km WNW of the intersec. of Cumberland Pkwy & US Hwy 127

City: RUSSELL SPRINGS County: RUSSELL State: KY Construction Deadline:

Conditions:

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

Licensee Name: CUMBERLAND CELLULAR PARTNERSHIP d/b/a BLUEGRASS CELLULAR

Call Sign: KNKN814

File Number:

Print Date: 03-24-2011

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		113.300	103.600	104.000	125.000	118.800	115.000	137.800	105.600
Transmitting ERP (watts)		36.000	36.000	36.000	36.000	36.000	36.000	36.000	36.000

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
3	37-19-27.0 N	085-55-08.0 W	288.0	82.3	1043058
Address: DIVIDING RIDGE; 5.6 KM NNW					
City: MUNFORDVILLE		County: HART	State: KY	Construction Deadline:	

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		134.900	131.500	136.600	170.600	162.500	148.400	144.200	157.200
Transmitting ERP (watts)		80.000	80.000	80.000	80.000	80.000	80.000	80.000	80.000

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	36-58-37.0 N	085-53-48.0 W	267.0	128.9	1202695
Address: Temple hill Road, 4.16 mi southeast of Glasgow Municipal Airport					
City: GLASGOW		County: BARREN	State: KY	Construction Deadline:	

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		147.200	128.800	106.500	137.600	143.900	180.200	170.600	155.700
Transmitting ERP (watts)		0.950	14.450	91.200	97.720	36.310	2.140	0.320	0.200
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		147.200	128.800	106.500	137.600	143.900	180.200	170.600	155.700
Transmitting ERP (watts)		0.790	0.200	0.320	2.090	34.670	97.720	89.130	15.810
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		147.200	128.800	106.500	137.600	143.900	180.200	170.600	155.700
Transmitting ERP (watts)		97.720	66.070	6.030	0.400	0.200	0.520	5.500	64.570

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
5	36-53-50.0 N	084-57-27.0 W	294.1	128.0	1200492
Address: Lake Cumberland, 11.3 km NW of					
City: MONTICELLO		County: WAYNE	State: KY	Construction Deadline:	

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		153.300	156.700	129.200	85.700	128.300	152.100	180.500	161.300
Transmitting ERP (watts)		4.700	4.400	8.200	50.600	127.400	160.300	108.400	38.500

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
6	36-59-41.0 N	085-33-38.0 W	310.0	128.0	1043059
Address: Hickory Ridge					
City: Edmonton		County: METCALFE	State: KY	Construction Deadline:	

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		189.300	185.900	145.400	169.400	181.600	164.000	171.600	183.800
Transmitting ERP (watts)		63.400	63.400	63.400	63.400	63.400	63.400	63.400	63.400

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
7	36-43-21.4 N	085-07-37.2 W	410.8	77.7	1239784
Address: On Mountain Lane					
City: Albany		County: CLINTON	State: KY	Construction Deadline:	

Licensee Name: CUMBERLAND CELLULAR PARTNERSHIP d/b/a BLUEGRASS CELLULAR

Call Sign: KNKN814

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Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		224.400	172.000	96.100	151.900	211.500	206.300	193.800	200.600
Transmitting ERP (watts)		214.860	95.980	11.540	0.590	0.480	0.570	12.360	100.500
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		224.400	172.000	96.100	151.900	211.500	206.300	193.800	200.600
Transmitting ERP (watts)		1.150	28.320	152.110	195.960	52.740	5.040	0.480	0.550
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		224.400	172.000	96.100	151.900	211.500	206.300	193.800	200.600
Transmitting ERP (watts)		1.910	0.480	0.570	4.190	56.510	195.960	152.110	25.240

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
8	36-41-54.0 N	085-41-07.0 W	286.5	90.2	1065560
Address: 403 Martin Subdivision					
City: Tompkinsville		County: MONROE	State: KY	Construction Deadline:	

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		91.100	102.400	166.600	106.300	91.800	124.600	107.900	97.400
Transmitting ERP (watts)		100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	36-42-45.0 N	084-29-53.0 W	388.0	128.0	1043060
Address: 2.7 KM SOUTHWEST OF					
City: Whitley City		County: MCCREARY	State: KY	Construction Deadline:	

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		115.300	140.200	111.300	77.100	88.000	150.900	147.400	183.900
Transmitting ERP (watts)		130.970	169.690	43.870	4.120	0.380	0.470	1.010	24.530
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		115.300	140.200	111.300	77.100	88.000	150.900	147.400	183.900
Transmitting ERP (watts)		0.500	3.670	49.220	169.690	130.970	20.880	1.560	0.380
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		115.300	140.200	111.300	77.100	88.000	150.900	147.400	183.900
Transmitting ERP (watts)		9.490	0.470	0.380	0.490	10.890	86.030	187.140	82.160

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
10	37-07-32.0 N	085-18-48.0 W	243.2	128.0	1043061
Address: 2.1 KM North of					
City: COLUMBIA		County: ADAIR	State: KY	Construction Deadline:	

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		98.900	97.600	62.700	93.000	69.900	86.900	132.000	98.600
Transmitting ERP (watts)		239.640	126.580	20.700	2.100	0.480	2.050	17.500	119.190
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		98.900	97.600	62.700	93.000	69.900	86.900	132.000	98.600
Transmitting ERP (watts)		3.050	25.240	104.080	134.110	50.730	6.640	0.400	0.300
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		98.900	97.600	62.700	93.000	69.900	86.900	132.000	98.600
Transmitting ERP (watts)		3.170	0.300	0.350	6.140	45.530	132.880	110.500	28.320

Licensee Name: CUMBERLAND CELLULAR PARTNERSHIP d/b/a BLUEGRASS CELLULAR

Call Sign: KNKN814

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Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.	
11	36-47-11.0 N	085-23-02.0 W	261.5			96.0			1040490	
Address: 0.8 KM WEST OF										
City: BURKESVILLE County: CUMBERLAND State: KY Construction Deadline:										
Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			109.300	130.200	87.400	84.800	79.600	143.200	144.000	116.600
Transmitting ERP (watts)			98.040	339.930	263.870	43.790	3.320	0.840	0.980	7.270
Antenna: 2	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			109.300	130.200	87.400	84.800	79.600	143.200	144.000	116.600
Transmitting ERP (watts)			0.840	0.980	21.450	174.340	372.730	166.490	20.020	1.030
Antenna: 3	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			109.300	130.200	87.400	84.800	79.600	143.200	144.000	116.600
Transmitting ERP (watts)			91.490	8.740	0.840	0.960	2.000	49.140	263.870	339.930
12	36-59-14.9 N	085-04-03.0 W	300.2			77.4			1249806	
Address: 263 N. Main St. (KY13172-A)										
City: JAMESTOWN County: RUSSELL State: KY Construction Deadline:										
Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			57.700	75.100	111.400	128.200	123.100	114.300	81.000	84.000
Transmitting ERP (watts)			122.700	38.140	3.840	0.260	0.300	0.480	13.100	80.300
Antenna: 2	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			57.700	75.100	111.400	128.200	123.100	114.300	81.000	84.000
Transmitting ERP (watts)			0.730	16.030	73.680	93.270	27.350	2.910	0.110	0.350
Antenna: 3	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			57.700	75.100	111.400	128.200	123.100	114.300	81.000	84.000
Transmitting ERP (watts)			1.130	0.260	0.370	2.600	30.680	93.270	73.680	13.650
13	36-48-34.0 N	084-50-46.0 W	469.4			61.0			1004214	
Address: 3.2 KM SSE OF										
City: MONTICELLO County: WAYNE State: KY Construction Deadline:										
Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			228.600	182.200	197.200	200.500	184.400	184.400	224.900	236.200
Transmitting ERP (watts)			54.700	60.000	45.500	19.000	14.460	19.000	45.580	60.000
15	36-48-09.1 N	085-49-35.8 W	307.8			128.0			1215547	
Address: Within the City Limits of										
City: Mt. Hermon County: MONROE State: KY Construction Deadline:										
Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			162.800	133.200	119.800	115.200	131.300	145.600	162.100	140.800
Transmitting ERP (watts)			232.350	122.730	20.070	2.030	0.470	1.980	16.970	115.570
Antenna: 2	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			162.800	133.200	119.800	115.200	131.300	145.600	162.100	140.800
Transmitting ERP (watts)			4.690	38.790	159.940	206.090	77.960	10.200	0.610	0.470
Antenna: 3	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			162.800	133.200	119.800	115.200	131.300	145.600	162.100	140.800
Transmitting ERP (watts)			3.360	0.320	0.370	6.500	48.220	140.750	117.050	30.000

Licensee Name: CUMBERLAND CELLULAR PARTNERSHIP d/b/a BLUEGRASS CELLULAR

Call Sign: KNKN814

File Number:

Print Date: 03-24-2011

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
16	37-11-42.5 N	085-57-13.0 W	267.6	99.1	1224165
Address: Highway 31 E					
City: Horse Cave County: HART State: KY Construction Deadline:					

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		144.600	161.700	141.600	143.100	128.800	110.800	132.400	144.300
Transmitting ERP (watts)		75.000	75.000	75.000	75.000	75.000	75.000	75.000	75.000

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
17	36-53-08.5 N	086-01-21.5 W	219.5	77.7	1229912
Address: Barren River Lake, 1450 meters southeast of					
City: Lucas County: BARREN State: KY Construction Deadline:					

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		82.400	76.400	65.300	73.600	82.100	72.000	115.600	93.200
Transmitting ERP (watts)		64.900	199.280	206.330	66.120	8.020	0.530	1.470	8.910
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		82.400	76.400	65.300	73.600	82.100	72.000	115.600	93.200
Transmitting ERP (watts)		0.430	2.430	18.770	100.610	213.240	169.110	35.230	3.480
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		82.400	76.400	65.300	73.600	82.100	72.000	115.600	93.200
Transmitting ERP (watts)		115.020	18.140	1.460	0.580	6.420	36.290	153.840	208.960

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
18	37-04-08.3 N	084-59-07.6 W	301.8	58.0	
Address: Russell East cell, in the town of					
City: Salem County: RUSSELL State: KY Construction Deadline:					

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		81.000	40.300	49.900	91.700	90.200	70.300	49.000	56.800
Transmitting ERP (watts)		100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
19	37-01-53.2 N	086-02-59.7 W	230.1	53.3	
Address: Barren West cell, 1.1 km SE of intersection of Route 255 and Cumberland Parkway					
City: Bon Ayr County: BARREN State: KY Construction Deadline:					

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		55.700	67.500	70.600	70.200	84.700	80.400	76.100	77.400
Transmitting ERP (watts)		100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
20	36-59-57.9 N	085-42-14.4 W	304.8	38.1	
Address: Barren East cell, 1.5 km ESE of					
City: Wisdom County: METCALFE State: KY Construction Deadline:					

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		83.300	114.100	78.900	77.000	55.500	93.600	87.400	91.500
Transmitting ERP (watts)		150.000	150.000	150.000	150.000	150.000	150.000	150.000	150.000

Licensee Name: CUMBERLAND CELLULAR PARTNERSHIP d/b/a BLUEGRASS CELLULAR

Call Sign: KNKN814

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Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.	
21	36-52-38.0 N	085-39-59.1 W	347.5			42.4				
Address: 5 km east of										
City: Summer Shade County: METCALFE State: KY Construction Deadline:										
Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			137.400	116.400	133.000	131.400	89.400	109.500	135.600	112.400
Transmitting ERP (watts)			150.000	150.000	150.000	150.000	150.000	150.000	150.000	150.000

Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.	
22	37-04-40.0 N	085-10-28.0 W	299.0			86.9			1048811	
Address: ADAIR EAST, 7955 RUSSELL SPRINGS ROAD										
City: RUSSELL SPRINGS County: ADAIR State: KY Construction Deadline:										
Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			102.500	66.500	51.100	64.800	79.300	101.700	114.900	89.900
Transmitting ERP (watts)			50.000	50.000	50.000	50.000	50.000	50.000	50.000	50.000

Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.	
23	37-00-11.8 N	085-55-24.4 W	245.4			79.2			1223174	
Address: Glasgow Downtown, 105 Lincoln Road										
City: Glasgow County: BARREN State: KY Construction Deadline:										
Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			84.200	76.200	52.300	64.600	83.100	98.900	87.600	89.200
Transmitting ERP (watts)			97.720	66.070	6.030	0.400	0.200	0.520	5.500	64.570
Antenna: 2	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			84.200	76.200	52.300	64.600	83.100	98.900	87.600	89.200
Transmitting ERP (watts)			0.950	14.450	91.200	97.720	36.310	2.140	0.320	0.200
Antenna: 3	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			84.200	76.200	52.300	64.600	83.100	98.900	87.600	89.200
Transmitting ERP (watts)			0.790	0.200	0.320	2.090	34.670	97.720	89.130	15.810

Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.	
24	37-02-38.7 N	085-27-43.8 W	296.5			77.7			1242039	
Address: Metcalfe East, 8050 Edmonton Road (KY Hwy 80)										
City: Edmonton County: ADAIR State: KY Construction Deadline:										
Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			161.000	138.800	115.000	99.600	89.900	117.500	121.500	113.200
Transmitting ERP (watts)			77.450	72.730	71.700	71.700	88.370	73.200	74.730	74.400

Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.	
25	37-16-37.2 N	085-53-34.8 W	190.0			38.0				
Address: Munfordville Downtown, water tank in the town of										
City: Munfordville County: HART State: KY Construction Deadline:										
Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			29.900	29.900	29.900	29.900	29.900	29.900	29.900	29.900
Transmitting ERP (watts)			150.440	165.870	63.900	9.040	0.700	1.050	7.940	44.270
Antenna: 2	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			29.900	29.900	29.900	29.900	29.900	29.900	29.900	29.900
Transmitting ERP (watts)			2.520	13.000	52.710	92.710	79.030	32.460	4.430	0.340

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Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		29.900	29.900	29.900	29.900	29.900	29.900	29.900	29.900
Transmitting ERP (watts)		17.850	1.800	0.480	4.050	25.570	109.870	157.100	105.670

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
26	36-43-19.8 N	085-57-41.8 W	249.9	35.0	
Address: Fountain Run WT, within the Town of					
City: Fountain Run		County: MONROE	State: KY	Construction Deadline:	

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		52.500	29.900	29.900	48.200	45.100	49.200	59.600	79.500
Transmitting ERP (watts)		182.210	79.990	9.240	0.460	0.370	0.480	10.610	83.760
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		52.200	29.900	29.900	48.200	45.100	49.200	59.600	79.500
Transmitting ERP (watts)		0.980	23.880	127.520	165.220	42.710	4.010	0.370	0.460
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		52.200	29.900	29.900	48.200	45.100	49.200	59.600	79.500
Transmitting ERP (watts)		0.990	0.260	0.290	1.960	27.370	95.990	74.790	12.850

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	36-38-51.6 N	085-17-33.1 W	320.0	59.4	
Address: Dale Hollow, 2 km SSE of					
City: Frogue		County: CUMBERLAND	State: KY	Construction Deadline:	

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		113.600	98.400	103.500	120.600	144.000	175.000	143.400	133.200
Transmitting ERP (watts)		137.670	42.790	4.300	0.300	0.340	0.540	14.700	90.110
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		113.600	98.400	103.500	120.600	144.000	175.000	143.400	133.200
Transmitting ERP (watts)		0.260	13.660	49.610	13.050	0.700	0.190	0.190	0.190
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		113.600	98.400	103.500	120.600	144.000	175.000	143.400	133.200
Transmitting ERP (watts)		0.310	0.190	0.190	0.190	0.680	23.200	45.240	7.010

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
28	37-23-18.7 N	085-45-39.7 W	238.7	77.7	1263443
Address: Jonesville, 3182 Pikeview Road					
City: Magnolia		County: HART	State: KY	Construction Deadline:	

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		68.600	45.100	99.400	107.600	113.700	79.200	87.100	75.400
Transmitting ERP (watts)		112.340	72.530	10.730	0.730	0.260	0.300	3.390	38.070
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		68.600	45.100	99.400	107.600	113.700	79.200	87.100	75.400
Transmitting ERP (watts)		0.350	9.130	63.170	117.640	43.710	4.900	0.260	0.280
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		68.600	45.100	99.400	107.600	113.700	79.200	87.100	75.400
Transmitting ERP (watts)		2.040	0.260	0.310	0.960	19.520	91.310	100.120	22.420

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Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.
29	37-07-44.7 N	085-02-39.7 W	324.0			77.7			1257754
Address: Sycamore Flat, 309 Damon Creek Spur Road									
City: Russell Springs County: RUSSELL State: KY Construction Deadline:									

Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			123.600	130.100	81.100	103.900	102.600	103.500	107.800	130.600
Transmitting ERP (watts)			15.860	47.610	33.560	5.730	0.490	0.260	0.260	1.450
Antenna: 2	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			123.600	130.100	81.100	103.900	102.600	103.500	107.800	130.600
Transmitting ERP (watts)			0.260	0.280	4.180	40.380	104.990	56.880	7.760	0.470
Antenna: 3	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			123.600	130.100	81.100	103.900	102.600	103.500	107.800	130.600
Transmitting ERP (watts)			23.470	2.370	0.260	0.260	0.510	11.360	61.740	82.330

Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.
30	36-40-50.0 N	084-25-12.0 W	429.8			55.0			
Address: Pine Knot WT, 3.7 km NE of									
City: Pine Knot County: MCCREARY State: KY Construction Deadline:									

Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			129.900	144.800	120.800	61.600	48.300	104.400	142.100	119.500
Transmitting ERP (watts)			34.460	120.850	94.160	16.180	1.240	0.330	0.360	2.470
Antenna: 2	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			129.900	144.800	120.800	61.600	48.300	104.400	142.100	119.500
Transmitting ERP (watts)			0.330	0.370	7.250	61.030	131.990	61.030	7.420	0.400
Antenna: 3	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			129.900	144.800	120.800	61.600	48.300	104.400	142.100	119.500
Transmitting ERP (watts)			33.670	3.250	0.330	0.350	0.710	16.940	92.010	120.850

Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.
31	37-11-40.7 N	085-20-55.2 W	250.5			77.7			1268209
Address: Cane Valley, 1600 Farris Road									
City: Columbia County: ADAIR State: KY Construction Deadline:									

Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			87.600	83.900	78.400	67.700	85.300	97.600	112.200	124.200
Transmitting ERP (watts)			33.150	24.820	6.320	0.350	0.260	0.330	6.770	25.920
Antenna: 2	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			87.600	83.900	78.400	67.700	85.300	97.600	112.200	124.200
Transmitting ERP (watts)			0.630	15.510	83.280	107.290	28.880	2.760	0.260	0.300
Antenna: 3	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			87.600	83.900	78.400	67.700	85.300	97.600	112.200	124.200
Transmitting ERP (watts)			1.050	0.260	0.310	2.290	30.940	107.290	83.280	13.820

Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.
32	37-18-59.5 N	086-03-19.7 W	277.4			50.0			
Address: Cub Run WT, 1.25 km NNE of									
City: Cub Run County: HART State: KY Construction Deadline:									

Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			120.300	94.100	62.500	94.500	93.900	94.900	119.500	122.500
Transmitting ERP (watts)			148.100	66.150	7.950	0.410	0.330	0.390	8.520	69.270

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Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		120.300	94.100	62.500	94.500	93.900	94.900	119.500	122.500
Transmitting ERP (watts)		0.800	19.520	104.850	135.070	36.350	3.470	0.330	0.380
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		120.300	94.100	62.500	94.500	93.900	94.900	119.500	122.500
Transmitting ERP (watts)		1.320	0.330	0.390	2.890	38.950	135.070	104.850	17.400

Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)		Antenna Structure Registration No.	
33	36-57-06.3 N	084-49-13.8 W	251.1			91.1		1203422	
Address: 8.23 miles (13.25 km) North of Monticello									
City: Monticello County: WAYNE State: KY Construction Deadline:									

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		29.900	48.500	30.900	29.900	29.900	46.300	82.000	44.500
Transmitting ERP (watts)		67.690	33.350	4.420	0.290	0.260	0.260	3.760	31.120
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		29.900	48.500	30.900	29.900	29.900	46.300	82.000	44.500
Transmitting ERP (watts)		0.690	8.910	20.050	22.160	13.680	2.830	0.260	0.300
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		29.900	48.500	30.900	29.900	29.900	46.300	82.000	44.500
Transmitting ERP (watts)		1.050	0.260	0.310	2.290	30.940	107.290	83.280	13.820

Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)		Antenna Structure Registration No.	
34	36-38-23.0 N	085-46-38.0 W	271.3			45.0			
Address: Gamaliel WT, 1.75 km East of									
City: Gamaliel County: MONROE State: KY Construction Deadline:									

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		45.300	35.300	29.900	36.900	61.400	52.700	77.300	68.100
Transmitting ERP (watts)		263.850	136.600	17.700	1.020	0.540	0.670	11.130	103.240
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		45.300	35.300	29.900	36.900	61.400	52.700	77.300	68.100
Transmitting ERP (watts)		5.290	57.720	173.330	110.860	15.750	1.050	0.370	0.470
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		45.300	35.300	29.900	36.900	61.400	52.700	77.300	68.100
Transmitting ERP (watts)		9.240	0.460	0.370	0.480	10.610	83.760	182.210	79.990

Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)		Antenna Structure Registration No.	
35	36-50-27.1 N	084-28-44.2 W	425.5			79.6		1233359	
Address: 165 HWY 90 (KY13162-A)									
City: Parkers Lake County: MCCREARY State: KY Construction Deadline:									

Antenna: 1	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		163.500	149.600	145.400	136.000	86.200	163.400	148.700	171.200
Transmitting ERP (watts)		2.890	33.620	100.380	66.750	9.990	0.680	0.260	0.280
Antenna: 2	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		163.500	149.600	145.400	136.000	86.200	163.400	148.700	171.200
Transmitting ERP (watts)		0.260	0.260	0.330	7.940	56.880	104.990	40.380	4.580
Antenna: 3	Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)		163.500	149.600	145.400	136.000	86.200	163.400	148.700	171.200
Transmitting ERP (watts)		20.870	16.620	3.640	0.420	0.450	1.630	14.750	20.590

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Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.	
36	36-59-34.1 N	084-56-03.7 W	291.7			77.7			1259175	
Address: Alligator, 15.3 km southeast of										
City: Russell Springs County: RUSSELL State: KY Construction Deadline:										
Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			54.100	59.700	88.000	102.000	98.600	134.200	90.900	67.000
Transmitting ERP (watts)			152.110	67.940	8.170	0.420	0.340	0.400	8.750	71.150
Antenna: 2	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			54.100	59.700	88.000	102.000	98.600	134.200	90.900	67.000
Transmitting ERP (watts)			0.690	14.430	63.180	78.560	25.130	2.880	0.260	0.340
Antenna: 3	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			54.100	59.700	88.000	102.000	98.600	134.200	90.900	67.000
Transmitting ERP (watts)			1.140	0.260	0.340	2.400	26.930	78.560	63.180	12.860

Location	Latitude	Longitude	Ground Elevation (meters)			Structure Hgt to Tip (meters)			Antenna Structure Registration No.	
37	37-19-35.7 N	085-45-55.6 W	227.1			77.7			1257254	
Address: 5553 North Jackson Highway										
City: Munfordville County: HART State: KY Construction Deadline:										
Antenna: 1	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			51.400	77.900	102.200	109.800	95.200	105.800	54.500	60.400
Transmitting ERP (watts)			122.700	78.480	11.150	0.740	0.260	0.340	3.750	40.860
Antenna: 2	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			51.400	77.900	102.200	109.800	95.200	105.800	54.500	60.400
Transmitting ERP (watts)			0.280	0.380	9.920	69.800	128.750	47.020	5.070	0.260
Antenna: 3	Azimuth (from true north)		0	45	90	135	180	225	270	315
Antenna Height AAT (meters)			51.400	77.900	102.200	109.800	95.200	105.800	54.500	60.400
Transmitting ERP (watts)			6.540	0.320	0.260	0.340	7.510	59.300	128.990	56.630

Control Points:

Control Pt. No. 1
 Address: 316-W LINCOLN TRAIL
 City: RADCLIFF County: State: KY Telephone Number:

Waivers/Conditions:

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