

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

JUL 21 2017

In the matter of:

PUBLIC SERVICE
COMMISSION

THE APPLICATION OF EAST KENTUCKY NETWORK,)
LLC FOR THE ISSUANCE OF A CERTIFICATE OF)
PUBLIC CONVENIENCE AND NECESSITY TO) CASE NO. 2017-00248
CONSTRUCT A TOWER IN BREATHITT COUNTY,)
KENTUCKY)

East Kentucky Network, LLC d/b/a Appalachian Wireless was granted authorization to provide cellular service in the KY-10 Cellular Market Area (CMA452) by the Federal Communications Commission (FCC). FCC license is included as Exhibit 1. East Kentucky Network, LLC merger documents were filed with the Commission on February 2, 2001 in Case No. 2001-022. East Kentucky Network, LLC is a Kentucky Limited Liability Company that was organized on June 16, 1998. East Kentucky Network, LLC is in good standing with the state of Kentucky.

In an effort to improve service in Breathitt County, East Kentucky Network, LLC, pursuant to KRS 278.020 Subsection 1 and 807 KAR 5:001, is seeking the Commission's approval to construct a 200 foot telecommunications tower on a tract of land located at 435 Steel Fork Road, Jackson, Breathitt County, Kentucky (37°37'57.5280"N 83°18'35.5299"W). A map and detailed directions to the site can be found in Exhibit 7.

Exhibit 2 is a list of all property owners or residents according to the Property Valuation Administrator's record who reside or own property within 500 feet of the proposed tower and all property owners who own property contiguous to the property upon which construction is proposed in accordance with the records of the Property Valuation Administrator.

Pursuant to 807 KAR 5:063 Section 1(1)(l), Section 1(1)(m), and Section 2, all affected property owners according to the Property Valuation Administrator's records who reside or own

property within 500 feet of the proposed Tower or who own property contiguous to the property upon which construction is proposed were notified by certified mail return receipt requested of East Kentucky Network, LLC's proposed construction and informed of their right to intervene. They were given the docket number under which this application is filed. Enclosed in Exhibit 2 is a copy of that notification.

Breathitt County has no formal local planning unit. In absence of this unit, the Breathitt County Judge Executive's Office was notified by certified mail, return receipt requested of East Kentucky Network, LLC's proposal and informed of its right to intervene. The Breathitt County Judge Executive's Office was also given the docket number under which this application is filed. Enclosed in Exhibit 3 is a copy of that notification.

Notice of the location of the proposed construction was published in The Jackson Times, July 20, 2017, edition. Enclosed in Exhibit 3 is a copy of that notice. The Jackson Times is the newspaper with the largest circulation in Breathitt County.

A geologist was employed to determine soil and rock types and to ascertain the distance to solid bedrock. The geotechnical report is enclosed as Exhibit 4.

A copy of the tower design information is enclosed as Exhibit 5. The proposed tower has been designed by engineers at World Tower, Inc. and will be constructed under their supervision. Their qualifications are evidenced in Exhibit 5 by the seal and signature of the registered professional engineer responsible for this project.

The tower will be erected by S & S Tower Services of St. Albans, West Virginia. S & S Tower Services has vast experience in the erection of communications towers.

FAA and Kentucky Airport Zoning Commission approvals are included as Exhibit 6.

No Federal Communications Commission approval is required prior to construction of this facility. Once service is established from this tower, we must immediately notify the Federal

Communications Commission of its operation. Prior approval is needed only if the proposed facility increases the size of the cellular geographic service area. This cell site will not expand the cellular geographic service area.

East Kentucky Network, LLC will finance the subject Construction with earned surplus in its General Fund.

Estimated Cost of Construction	\$ 350,000.00
Annual Operation Expense of Tower	\$ 12,500.00

Two notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2), measuring at least two (2) feet in height and four (4) feet in width and containing all required language in letters of required height, have been posted, one at a visible location on the proposed site and one on the nearest public road. The two signs were posted on July 17, 2017, and will remain posted for at least two weeks after filing of this application as specified.

Enclosed in Exhibit 8 is a copy of East Kentucky Network, LLC's Memorandum of Lease and Memorandum of Easement Agreement for the site location along with a lot description.

The proposed construction site is on a reclaimed surface mining site some distance from the nearest structure.

East Kentucky Network, LLC's operation will not affect the use of nearby land nor its value. No more suitable site exists in the area. A copy of the search area map is enclosed in Exhibit 7. No other tower capable of supporting East Kentucky Network, LLC's load exists in the general area; therefore, there is no opportunity for co-location of our facilities with anyone else.

Enclosed, and filed as Exhibit 9 is a survey of the proposed tower site signed by a Kentucky registered professional engineer.

Exhibit 10 is a map in one (1) inch equals 200 feet scale identifying every structure and every owner of real estate within 500 feet of the proposed tower and all property owners who own contiguous property to the property upon which construction is proposed.

Exhibit 11 contains a vertical sketch of the tower supplied by Jonathan R. Newman, Kentucky registered professional engineer.

WHEREFORE, Applicant, having met the requirements of KRS 278.020(1), 278.650, 278.665 and all applicable rules and regulations of the PSC, respectfully requests that the PSC accept the foregoing Application for filing and grant a Certificate of Public Convenience and Necessity to construct and operate the proposed tower.

The foregoing document was prepared by Cindy D. McCarty, Staff Attorney for East Kentucky Network, LLC d/b/a Appalachian Wireless. All related questions or correspondence concerning this filing should be mailed to East Kentucky Network, LLC d/b/a/ Appalachian Wireless, Attn: Regulatory Compliance Department, 101 Technology Trail, Ivel, KY 41642.

SUBMITTED BY: Lynn Haney DATE: 7/19/17
Lynn Haney, Regulatory Compliance Director

APPROVED BY: W.A. Gillum DATE: 7-19-17
W.A. Gillum, General Manager

ATTORNEY: Cindy D. McCarty DATE: 7-18-2017
Hon. Cindy D. McCarty, Attorney

CONTACT INFORMATION:

W.A. Gillum, General Manager
Phone: (606) 477-2355, Ext. 111
Email: wagillum@ekn.com

Lynn Haney, Regulatory Compliance Director
Phone: (606) 477-2355, Ext. 1007
Email: lhaney@ekn.com

Cindy D. McCarty, Attorney
Phone: (606) 477-2355, Ext. 1006
Email: cmccarty@ekn.com

Mailing Address:

**East Kentucky Network, LLC
d/b/a Appalachian Wireless
Attn.: Regulatory Compliance Department
101 Technology Trail
Ivel, KY 41642**

1	FCC License
2	Copies of Cell Site Notices to Land Owners
3	Notification of County Judge Executive and Newspaper Advertisement
4	Universal Soil Bearing Analysis
5	Tower Design
6	FAA and KAZ C Approvals
7	Driving Directions from County Court House and Map to Suitable Scale
8	Memorandum of Lease and Memorandum of Easement Agreement for Proposed Site with Legal Description
9	Survey of Site Signed/Sealed by Professional Engineer Registered in State of Kentucky
10	Site Survey Map with Property Owners Identified in Accordance with PVA of County
11	Vertical Profile Sketch of Proposed Tower
12	

ULS License

Cellular License - KNKN809 - East Kentucky Network, LLC d/b/a Appalachian Wireless

Call Sign KNKN809 Radio Service CL - Cellular
Status Active Auth Type Regular

Market

Market CMA452 - Kentucky 10 - Powell Channel Block B

Submarket 0 Phase 2

Dates

Grant 08/30/2011 Expiration 10/01/2021

Effective 08/30/2011 Cancellation

Five Year Buildout Date

10/17/1996

Control Points

1 US Route 23, FLOYD, Harold, KY
P: (606)478-2355

Licensee

FRN 0001786607 Type Limited Liability Company

Licensee

East Kentucky Network, LLC d/b/a Appalachian Wireless P:(606)477-2355
101 Technology Trail F:(606)874-7551
Ivel, KY 41642
ATTN Gerald Robinette, Manager

Contact

Lukas, Nace, Gutierrez & Sachs, LLP P:(703)584-8665
Pamela L Gist Esq F:(703)584-8695
8300 Greensboro Drive E:pglist@fcclaw.com
McLean, VA 22102

Ownership and Qualifications

Radio Service Mobile
Type

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership

The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

EXHIBIT II: LIST OF PROPERTY OWNERS:

Statement Pursuant to Section 1 (1) (I) 807 KAR 5:063

Section 1 (1)(I) 1. The following is a list of every property owner who according to property valuation administrator's records, owns property within 500 feet of the proposed tower and each have been: notified by certified mail, return receipt requested, of the proposed construction,

Section 1 (1)(I) 2. Every person listed below who, according to the property valuation administrator's records, owns property within 500 feet of the proposed tower has been: Given the Commission docket number under which the application will be processed: and

Section 1 (1)(I) 3. Every person listed below who, according to property valuation administrator's records owns property within 500 feet of the proposed tower has been: Informed of his right to request intervention.

Section 2. If the construction is proposed for an area outside the incorporated boundaries of a city, the application shall state that public notices required by Section 1(1)(L) have been sent to every person who, according to the property valuation administrator, owns property contiguous to the property upon which the construction is proposed

LIST OF PROPERTY OWNERS

Mark V. Development
Box 231
Pikeville, KY 41502

Jasper Banks
1011 Clear Fork Road
Vancleve, KY 41339

Better Rentals, Inc.
P.O. Box 231
Pikeville, KY 41502

Roy Phyliss
118 Alderwood St. North
Winter Springs, FL 3208

L.C. Holbrook
2869 Highway 540
Jackson, KY 41339

Bobby Gene Hollon
2816 Overland Dr.
Orlando, FL 32806

Isaac Hollon
5212 Chasewood PL
Louisville, KY 40229

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

July 20, 2017

Isaac Hollon
5212 Chasewood PL
Louisville, KY 40229

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2017-00248)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied 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 telecommunications service in Breathitt County. The facility will include a 200-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 435 Steel Fork Road, Jackson, Breathitt County, Kentucky. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you may own property within a 500' radius of the proposed tower or own property contiguous to the property upon which construction is proposed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. The Commission must receive your initial communication within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to Case No. 2017-00248 in your correspondence.

If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,



Lynn Haney, CPA
Regulatory Compliance Director
Enclosure

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

July 20, 2017

Bobby Gene Hollon
2816 Overland Dr.
Orlando,FL 32806

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2017-00248)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied 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 telecommunications service in Breathitt County. The facility will include a 200-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 435 Steel Fork Road, Jackson, Breathitt County, Kentucky. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you may own property within a 500' radius of the proposed tower or own property contiguous to the property upon which construction is proposed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. The Commission must receive your initial communication within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to Case No. 2017-00248 in your correspondence.

If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,



Lynn Haney, CPA
Regulatory Compliance Director
Enclosure

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

July 20, 2017

L.C. Holbrook
2869 Highway 540
Jackson ,KY41339

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2017-00248)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied 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 telecommunications service in Breathitt County. The facility will include a 200-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 435 Steel Fork Road, Jackson, Breathitt County, Kentucky. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you may own property within a 500' radius of the proposed tower or own property contiguous to the property upon which construction is proposed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. The Commission must receive your initial communication within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to Case No. 2017-00248 in your correspondence.

If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,



Lynn Haney, CPA
Regulatory Compliance Director
Enclosure

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

July 20, 2017

Roy Phyliss
118 Alderwood St. North
Winter Springs ,FL 3208

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2017-00248)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied 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 telecommunications service in Breathitt County. The facility will include a 200-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 435 Steel Fork Road, Jackson, Breathitt County, Kentucky. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you may own property within a 500' radius of the proposed tower or own property contiguous to the property upon which construction is proposed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. The Commission must receive your initial communication within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to Case No. 2017-00248 in your correspondence.

If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,



Lynn Haney, CPA
Regulatory Compliance Director
Enclosure

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

July 20, 2017

Better Rentals, Inc.
P.O. Box 231
Pikeville, KY 41502

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2017-00248)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied 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 telecommunications service in Breathitt County. The facility will include a 200-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 435 Steel Fork Road, Jackson, Breathitt County, Kentucky. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you may own property within a 500' radius of the proposed tower or own property contiguous to the property upon which construction is proposed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. The Commission must receive your initial communication within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to Case No. 2017-00248 in your correspondence.

If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,



Lynn Haney, CPA
Regulatory Compliance Director
Enclosure

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

July 20, 2017

Jasper Banks
1011 Clear Fork Road
Vancleve, KY 41339

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2017-00248)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied 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 telecommunications service in Breathitt County. The facility will include a 200-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 435 Steel Fork Road, Jackson, Breathitt County, Kentucky. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you may own property within a 500' radius of the proposed tower or own property contiguous to the property upon which construction is proposed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. The Commission must receive your initial communication within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to Case No. 2017-00248 in your correspondence.

If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,



Lynn Haney, CPA
Regulatory Compliance Director
Enclosure

VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

July 20, 2017

Mark V. Development
Box 231
Pikeville ,KY41502

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2017-00248)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied 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 telecommunications service in Breathitt County. The facility will include a 200-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 435 Steel Fork Road, Jackson, Breathitt County, Kentucky. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you may own property within a 500' radius of the proposed tower or own property contiguous to the property upon which construction is proposed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. The Commission must receive your initial communication within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to Case No. 2017-00248 in your correspondence.

If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,



Lynn Haney, CPA
Regulatory Compliance Director
Enclosure

Appalachian Wireless Location Map



Site Name

Taulbee Site

Location

435 Steel Fork Rd. Jackson KY.

GPS Location

N 37 37 57.5260

W 83 18 35.5299

dba Appalachian Wireless
101 Technology Trail
Ivel, KY 41642
Phone: 606-477-2355
Fax: 606-791-2225

EAST KENTUCKY
NETWORK



To: The Jackson Times
Attn: Classifieds

From: Raina Helton
Regulatory Compliance Assistant

Email: advertising@jacksontimesky.com

Date: July 17, 2017

Re: PUBLIC NOTICE ADVERTISEMENT

Pages: 1

Please place the following Public Notice Advertisement in The Jackson Times to be ran on July 20, 2017.

PUBLIC NOTICE:

RE: Public Service Commission of Kentucky (CASE NO. 2017-00248)

Public Notice is hereby given that East Kentucky Network, LLC, dba Appalachian Wireless has applied to the Kentucky Public Service Commission to construct a cellular telecommunications tower on a tract of land located off of 435 Steel Fork Road, Jackson, Breathitt County, Kentucky. The proposed tower will be a 200 foot self-supporting tower with attached antennas. If you would like to respond to this notice, please contact the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to Case No. 2017-00248.

If you have any questions about the placement of the above mentioned notice, please call me at 606-477-2375, ext. 1005.

Thank you,

Raina Helton
Regulatory Compliance Assistant

The message above and the information contained in the documents transmitted are confidential and intended only for the person(s) named above. Dissemination, distribution or copying of this communication by anyone other than the person(s) named above is prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the address listed above via regular mail. Thank you.

VIA: U.S. CERTIFIED MAIL

July 20, 2017

John Lester Smith, Judge Executive
1137 Main Street
Jackson, KY 41339

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2017-00248)

East Kentucky Network, LLC d/b/a Appalachian Wireless has applied 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 telecommunications service in Breathitt County. The facility will include a 200-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land at 435 Steel Fork Road, Jackson, Breathitt County, Kentucky. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you are the County Judge Executive of Breathitt County.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. The Commission must receive your initial communication within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to Case No. 2017-00248 in your correspondence.

If you have any questions for East Kentucky Network, LLC, please direct them to my attention at the following address: East Kentucky Network, LLC, 101 Technology Trail, Ivel, KY 41642 or call me at 606-477-2355, Ext. 1007.

Sincerely,



Lynn Haney
Regulatory Compliance Director
Enclosure

Appalachian Wireless Location Map



Site Name

Taulbee Site

Location

435 Steel Fork Rd. Jackson KY.

GPS Location

N 37 37 57.5260

W 83 18 35.5299



230 Swartz Drive • Hazard • Kentucky • 41701

Phone (606) 555-1050

EAST KENTUCKY ENGINEERING, LLC.

**APPALACHIAN WIRELESS
Geotechnical Investigation on the
Taulbee Site
Breathitt County, Kentucky
EKYENG Project No. 165-000-0041**

PREPARED FOR:
Appalachian Wireless.
101 Technology Trail
Ivel, Kentucky 41642

PREPARED BY:
Richard Dirk Smith PE, PLS
President
East Kentucky Engineering
230 Swartz Drive
Hazard, Kentucky 41701


 , 20215, April 10th, 2017

EXECUTIVE SUMMARY

1.0 INTRODUCTION

2.0 PROJECT DESCRIPTION

3.0 SITE DESCRIPTION

3.1 SURFACE MINING

3.2 UNDERGROUND MINING

4.0 FIELD EXPLORATION

4.1 SITE INFORMATION

4.2 BORING DATA

4.3 GROUNDWATER

4.4 SEISMIC SITE CLASSIFICATION

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 GENERAL

5.2 FOUNDATIONS

5.3 SUBSIDENCE

5.4 SHALLOW FOUNDATIONS

5.5 BURIED UTILITIES

6.0 DISCUSSION AND RECOMMENDATIONS

6.1 SUBSURFACE INVESTIGATION

6.2 LABORATORY AND FIELD TESTING

6.3 ANALYSIS AND RECOMMENDATIONS

6.4 CONSTRUCTION MONITORING

6.5 GENERAL

SPECIFICATIONS

I – GENERAL

II – ENGINEERED FILL BENEATH STRUCTURES

III – GUIDELINES FOR EXCAVATIONS AND TRENCHING

IV – GENERAL CONCRETE SPECIFICATIONS

APPENDIX A – BORING DATA AND TESTING

APPENDIX B – SEISMIC DATA

APPENDIX C – MINE MAP RESEARCH

APPENDIX D – PHOTOGRAPHS

APPENDIX E – MAPS

EXECUTIVE SUMMARY

A geotechnical investigation has been performed on the Taulbee tower site, located in Breathitt County, Kentucky. This site is readily accessible. A location map is shown in Figure 1 of this report. Four (4) borings were advanced to depths of 26 to 26.5 ft. The following geotechnical considerations were identified:

- Borings utilized for this study encountered mine spoil to a depth of 26.5 ft.
- The estimated base elevation of tower mat foundation is 1470.5 ft.
- This site is on a reclaimed mine area.
- **The allowable bearing capacities of the underlying soils estimated at 2000 PSF.**
- The 2015 International Building Code seismic site classification for this site is "D".
- If during the foundation design it becomes necessary to lower the base of the footer, alternate design recommendations are included in the section of this report.
- Close monitoring of the construction operations discussed herein will be critical in achieving the design subgrade support. We, therefore, recommend that EKYENG is retained to monitor this portion of the work.

This executive summary is included to provide a general overview of the project and should not be relied upon except for the purpose it was prepared. Please rely on the complete report for the information on the findings, recommendations, and all other concerns.

1. INTRODUCTION

East Kentucky Engineering (EKYENG) was retained by Mr. Marty Thacker of Appalachian Wireless to prepare a geotechnical engineering report for the proposed tower site located on the Taulbee Property, in Breathitt County, Kentucky. A site location map is shown in Figure No. 1.

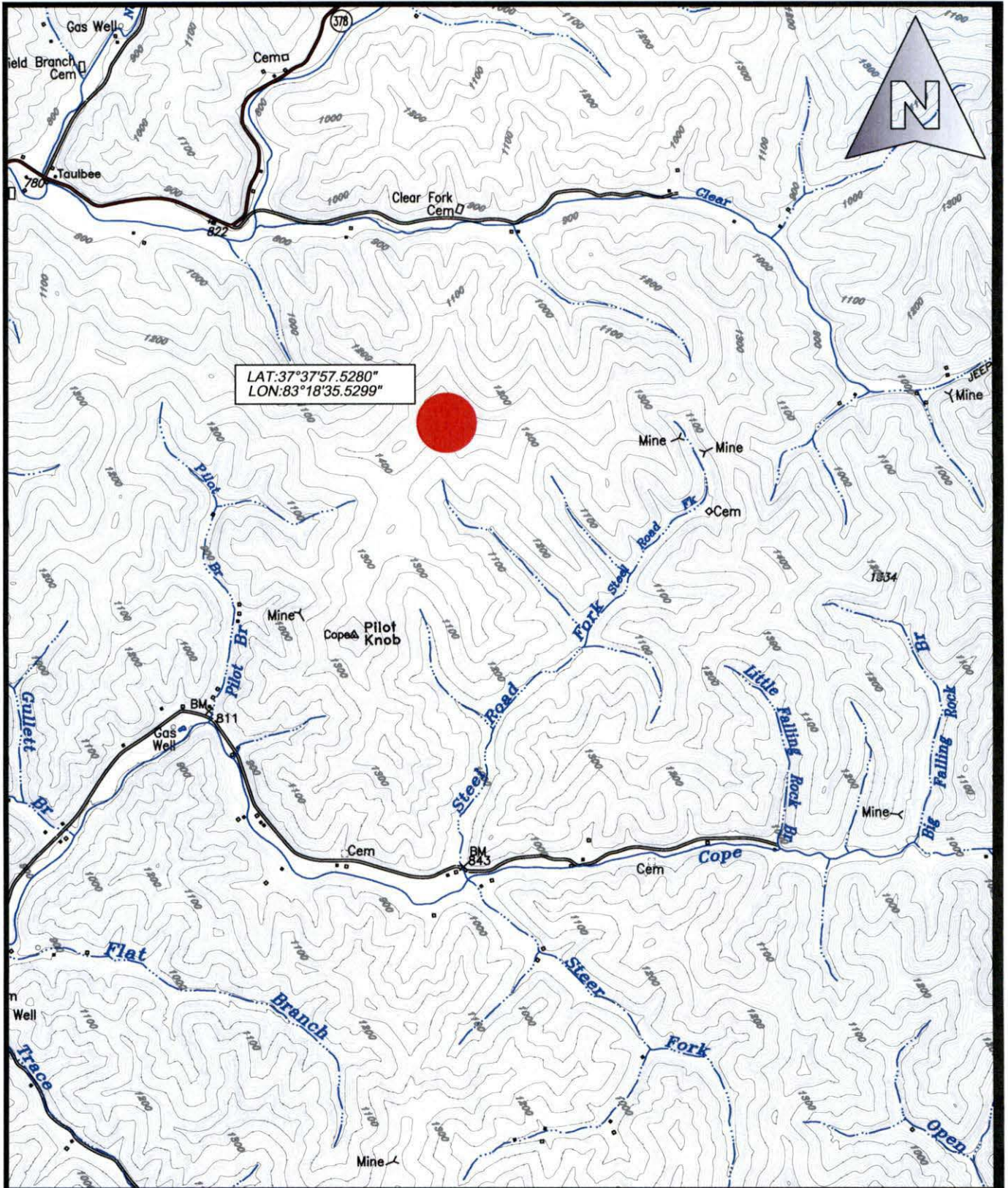
Four (4) borings were advanced to depths of 26 to 26.5 ft. Horn and Associates, Inc. provided drilling services to obtain these borings. Logs of the borings along with a boring location plan are included in Appendix A. The purpose of these services is to provide information and geotechnical engineering recommendations about subsurface conditions, earthwork, seismic considerations, groundwater conditions and foundation design.

2.0 PROJECT DESCRIPTION

The proposed communication facility will consist of a self-supporting tower of undetermined height and ancillary support areas. The footing area will be approximately 36.5 ft. X 36.5 ft. with an estimated base of the tower footer elevation at 1470.5 ft. Based upon information provided, we estimate the structural loads will be similar to the following conditions;

CONDITION	LOAD
Total Shear	40 Kips
Axial Load	50 Kips

We anticipate that overturning will govern the structural design. If the loading is significantly different than these expected values, EKYENG should be notified to re-evaluate the recommendations provided in this report.



LAT: 37°37'57.5280"
 LON: 83°18'35.5299"

Drawn: RDS	Date: 4/4/17
Job: 165-040	Scale: 1"=2000'

Appalachian Wireless
 USGS Quadrangle
 Location Map
 Taulbee Tower Site
 Figure No. 1

East Kentucky Engineering, LLC.
 230 Swartz Drive
 Hazard, KY 41701
 (606)551-1050

3.0 SITE DESCRIPTION & HISTORICAL MINING

3.1 GENERAL INFORMATION

The site location is a knob on a reclaimed mine site. The site has reasonable vegetative cover. EKYENG reviewed available historical mine maps from the Kentucky Division of Mine Safety, Kentucky Mine Mapping Information System ("KMMIS"). Based on available data, significant historical Surface Mining has occurred.

3.2 SURFACE MINING

This site is on a reclaimed surface mine. The mining at the tower location was done by Panbow Energy Company and Delta Machinery Company. The Skyline Seam (1320 ft.), the Hindman (1280 ft.), the Haddix Seam, the Adele Seam and the nickel Seam were contour mined by Panbow Energy in the early 1990's. Later, Delta Machinery Mountain topped the Skyline Seam and the Hindman Seam. The final map reviewed by Delta Machinery was dated 2000.

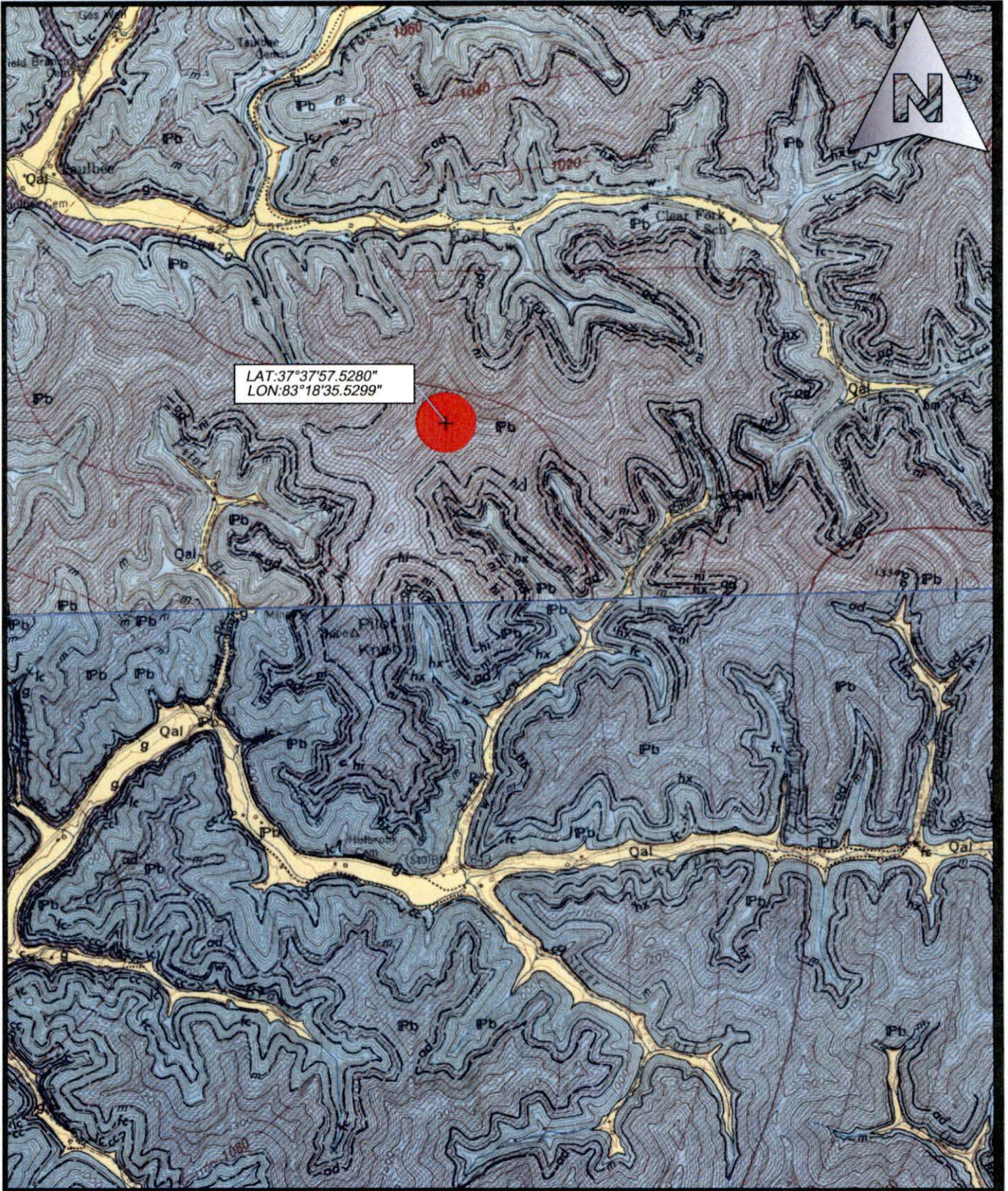
3.3 UNDERGROUND MINING

Our research found one proposed underground mine near this proposed site. Hess mining proposed an underground mining operation in the Skyline Seam east of the tower site in 1991. Based upon our research no underground was conducted.

4.0 FIELD EXPLORATION

4.1 SITE INFORMATION

A boundary survey was conducted on the Taulbee property and provided to EKYENG. The proposed tower location was established and tied to the existing boundary. An estimated footer location was determined, and boring locations were placed at the corners of proposed foundation for the towers support.



LAT: 37°37'57.5280"
 LON: 83°18'35.5299"

Drawn: RDS	Date: 4/4/17
Job: 165-040	Scale: 1"=2000'

Appalachian Wireless
 Geologic Quadrangle
 Location Map
 Taulbee Tower Site
 Figure No.2

East Kentucky Engineering, LLC.
 230 Swartz Drive
 Hazard, KY 41701
 (606) 551-1050

4.2 BORING DATA

Four (4) borings were made in the relative positions shown on the Site Map in Appendix E. The boring logs and resulting data are included in Appendix E. These borings were made with a track mounted boring rig using hollow-stem augers and employing standard penetration resistance methods (ASTM D-1586, which includes 140-pound hammer, 30-inch drop, and two-inch-O.D. split-spoon sampler) at maximum depth intervals of five feet or at major changes in stratum, whichever occurred first. The disturbed split-spoon samples were visually classified, logged, sealed in moisture-proof jars, and taken to the EKYENG laboratory for study. The depths where these "A"-type split-spoon samples were collected are noted on the boring logs. The results of the natural moisture contents by boring and interval are shown in Table 1.

TABLE 1
RESULTS OF NATURAL MOISTURE CONTENT TESTS (ASTM D-4643)

BORING NO.	DEPTH INCREMENT, (FT.)	NATURAL MOISTURE CONTENT, %
B1	4.5-5.8	7.5%
B1	9.5-11.0	6.7%
B1	14.5-16.0	8.3 %
B1	19.5-21.0	7.4 %
B1	24.5-26.0	6.8 %
B2	4.5-6.0	8.7 %
B2	9.5-11.0	6.6 %
B2	14.5-16.0	3.9 %
B2	19.5-21.0	12.7 %
B2	24.5-26.0	10.7 %
B3	5.0-6.5	8.5%
B3	10.0-11.5	13.2%
B3	15.0-16.5	6.0%
B3	20.0-21.5	4.6%
B3	25.0-26.5	12.4%

BORING NO.	DEPTH INCREMENT, (FT.)	NATURAL MOISTURE CONTENT, %
B4	5.0-6.5	8.3%
B4	10.0-11.5	8.0%
B4	15.0-16.5	8.3%
B4	20.0-21.5	8.0%
B4	25.0-26.5	8.3%

The position at which the core was taken is indicated on the boring logs and shown on the site map in Appendix C. The corresponding Blow counts are shown in Table No. 2.

TABLE NO. 2
STANDARD PENETRATIONS

Boring	Run Interval	Blow Counts	Description
B1	4.5-5.8	7-17-50/30	Spoil
B1	9.5-11.0	4-4-3	Spoil
B1	14.5-16.0	4-9-6	Spoil
B1	19.5-21.0	4-6-8	Spoil
B1	24.5-26.0	6-4-6	Spoil
B2	4.5-6.0	2-2-2	Spoil
B2	9.5-11.0	4-3-4	Spoil
B2	14.5-16.0	23-20-6	Spoil
B2	19.5-21.0	3-3-6	Spoil
B2	24.5-26.0	13-13-16	Spoil
B3	5.0-6.5	3-13-10	Spoil
B3	10.0-11.5	6-3-7	Spoil
B3	15.0-16.5	10-8-16	Spoil
B3	20.0-21.5	19-4-4	Spoil
B3	25.0-26.5	3-3-5	Spoil

Boring	Run Interval	Blow Counts	Description
B4	5.0-6.5	6-12-19	Spoil
B4	10.0-11.5	3-3-5	Spoil
B4	15.0-16.5	7-7-7	Spoil
B4	20.0-21.5	4-4-6	Spoil
B4	25.0-26.5	8-8-17	Spoil

4.3 GROUNDWATER

Groundwater in Eastern Kentucky is characterized by water flowing through a system of internal fractures that lead to an alluvial aquifer near the bottom of valley floors. Large, defined aquifers other than the alluvium are not common, especially in higher elevations such as where this tower site is proposed. Therefore, groundwater should not be a concern in this area. During boring activities, no groundwater resources were observed.

4.4 SEISMIC SITE CLASSIFICATION

Based on the encountered soil conditions at the project site, the site classification was determined to be "Site Class D" per the 2015 Kentucky Building Code. In addition, a S_{DS} coefficient of 0.205 g was calculated, and a S_{D1} coefficient of 0.139 g was also calculated for design based on the aforementioned building code.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 GENERAL

The structure will be a self-supporting free standing tri-pole tower. Due to wind loading, lattice tower foundations can experience both vertical loads and

horizontal loads. The vertical loads act in both an upward and downward direction as the tower attempts to overturn and can act in any directions.

5.2 FOUNDATIONS

It is our understanding that the foundations for these structures can be designed to bear on low bearing pressure soils. This report demonstrates the different expected bearing capacities based upon the type of material encountered from the boring logs and sampling taken at the site.

The approximate elevation of the surface of the site is 1477.0 ft. with an expected base of the footer at 1470.5 ft. in elevation. The standard penetration tests were conducted at 5-foot intervals within the first 25 feet material. The blow counts (N) ranged from 4 to 50/0" to this depth.

5.3 SUBSIDENCE

Based on our research, there is no presence of underground mine opening, auger holes or high wall mining opening beneath this proposed tower site. Subsidence should not be an issue.

5.4 SHALLOW FOUNDATIONS

Typically, we do not recommend shallow foundations on sites consisting of spoil. Settlement can and is likely to occur once the final structure's loading is in place. No settlement calculations have been evaluated for this report. If shallow foundations are used, it should be noted that the material type and bearing capacity can vary significantly due to the inconsistency of the underlying material. Based on the laboratory and field testing, visual inspection of the materials and practical experience we have estimated that the allowable bearing capacity at this site will be 2,000 psf once the following remediation is completed.

If shallow foundations are used, we recommend that the site is over excavated to a minimum of eight ft. below the footing subgrade and ten ft. plus the footing

depth outside the footing area. Any large rock and unsuitable material be removed and backfilled with a select backfill or dense grade aggregate. The material is to be placed in 8-inch horizontal lifts, compacted to not less than 95% of the maximum density as determined by the standard Proctor dry unit weight (ASTM D-968) and within +2% and -2% of the optimum moisture content. This remediation should assist in preventing differential settlement.

It is furthermore recommended that the slabs-on-grade be supported on 4 to 6-inch layer of relatively clean granular material such as sand and gravel or crushed stone. This will help distribute concentrated loads and equalize moisture conditions beneath the slab. Proper drainage must be incorporated into this granular layer to preclude future wet areas in the finished slab-on-grade. However, all topsoil and other deleterious materials encountered during site preparation must be removed and replaced with 4000 psi. concrete below the foundation base. Provided that a minimum of 4 inches of granular material is placed below the new slab-on-grade, a modulus of subgrade reaction (k_{30}) of 100 lbs./cu. in. can be used for the design of the slabs.

Support structure for this tower can be placed on the bench areas as needed. It is recommended that test pits are examined to ensure that any of these structures are on the rock bench and not on soil pushover that is common near the out slopes of the existing mine area. If pockets of soft, loose or otherwise unsuitable material are encountered in the footing excavations, and it is inconvenient to lower the footings, the proposed footing elevations may be re-established by backfilling after the undesirable material has been removed. The undercut excavation beneath each footing should extend to suitable bearing soils, and the dimensions of the excavation base should be determined by imaginary planes extending outward and down on a 1 (vertical) to 1 (horizontal) slope from the base perimeter of the footing. The entire excavation should then be refilled with a well-compacted engineered fill, or lean concrete (Please note that the width of the lean concrete zone should be equal or wider than the width

of the overlying footing element). Special care should be exercised to remove any sloughed, loose or soft materials near the base of the excavation slopes. Also, special care should be taken to "tie-in" the compacted fill with the excavation slopes, with benches as necessary, to ensure that no pockets of loose or soft materials will be left in place along the excavation slopes below the foundation bearing level. All Federal, State and Local regulations should be strictly adhered to relative to excavation side-slope geometry.

5.5 BURIED UTILITIES

Excavations for buried utility pipelines should follow the guidelines set forth in this report. Depending on the pipeline material, a minimum thickness of at least 0.5 feet of select fine-grained granular bedding material should be used beneath all below-grade pipes, with a minimum cover thickness of at least 3 feet to afford an "arching" effect and reduce stresses on the pipe. The cover thickness may be reduced if the external loading condition on the pipe is relatively light or if the pipe is designed to withstand the external loading condition. It is not recommended that "pea-gravel" or other "open-work" aggregates be used for trench backfill since these materials are nearly impossible to compact and tend to pond water within their interstices.

6.0 WARRANTY

Our professional services have been performed, our findings obtained and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. No other warranty, express or implied, is made.

While the services of EKYENG are a valuable and integral part of the design and construction teams, we do not warrant, guarantee, or insure the quality or completeness of services provided by other members of those teams, the quality, completeness, or satisfactory performance of construction plans and

specifications which we have not prepared, nor the ultimate performance of building site materials.

6.1 SUBSURFACE EXPLORATION

Subsurface exploration is normally accomplished by test borings, although test pits are sometimes employed. The method of determining the boring location and the surface elevation at the boring is noted in the report, and is presented on the Boring Location Plan or on the boring log. The location and elevation of the boring should be considered accurate only to the degree inherent with the method used.

The boring log includes sampling information, description of the materials recovered, approximate depth of boundaries between soil and rock strata and groundwater data. The boring log represents conditions specifically at the location and time the boring was made. The boundaries between different soil strata are indicated at specific depths; however, these depths are in fact approximate and are somewhat dependent upon the frequency of sampling (The transition between soil strata is often gradual). Free groundwater level readings are made at the times and under conditions stated on the boring logs (Groundwater levels change with time and season). The borehole does not always remain open sufficiently long enough for the measured water level to coincide with the groundwater table.

6.2 LABORATORY AND FIELD TESTS

Laboratory and field tests are performed by specific ASTM standards unless otherwise indicated. All determinations included in each ASTM standard are not always required and performed. Each test report indicates the measurements and determinations made.

6.3 ANALYSIS AND RECOMMENDATIONS

The geotechnical report is prepared primarily to aid in the engineering design of site work and structural foundations. Although the information in the report is

expected to be sufficient for these purposes, it is not intended to determine the cost of construction or to stand alone as a construction specification.

Our engineering report recommendations are based primarily on data from test borings made at the locations shown in a boring location drawing included. Soil variations may exist between borings, and these variations may not become evident until construction. If significant variations are then noted, the geotechnical engineer should be contacted so that field conditions can be examined and recommendations revised if necessary.

The geotechnical engineering report states our understanding as to the location, dimensions and structural features proposed for the site. Any significant changes in the nature, design, or location of the site improvements **MUST** be communicated to the geotechnical engineer such that the geotechnical analysis, conclusions, and recommendations can be appropriately adjusted. The geotechnical engineer should be given the opportunity to review all drawings that have been prepared based on their recommendations.

6.4 CONSTRUCTION MONITORING

Construction monitoring is a vital element of complete geotechnical services. The field engineer/inspector is the owner's "representative" observing the work of the contractor, performing tests as required in the specifications, and reporting data developed from such tests and observations. The field engineer or inspector does not direct the contractor's construction means, methods, operations or personnel. The field inspector/engineer does not interfere with the relationship between the owner and the contractor and, except as an observer, does not become a substitute owner on site. The field inspector/engineer is responsible for his own safety but has no responsibility for the safety of other personnel at the site. The field inspector/engineer is an important member of a team whose responsibility is to watch and test the work being done and report to the owner whether that work is being carried out in general conformance with the plans and specifications.

6.5 GENERAL

The scope of our services did not include an environmental assessment for the presence or absence of hazardous or toxic materials in the soil, surface water, groundwater or air, on, within or beyond the site studied. Any statements in the report or on the boring logs regarding odors, staining of soils or other unusual items or conditions observed are strictly for the information of our client.

To evaluate the site for possible environmental liabilities, we recommend an environmental assessment, consisting of a detailed site reconnaissance, a record review, and report of findings. Additional subsurface drilling and samplings, including groundwater sampling, may be required.

This report has been prepared for the exclusive use of Appalachian Wireless, for specific application to the proposed cellular tower located on the Taulbee Property located in Breathitt County, Kentucky. Specific design and construction recommendations have been provided in the various sections of the report. The report shall, therefore, be used in its entirety. This report is not a bidding document and shall not be used for that purpose. Anyone reviewing this report must interpret and draw their conclusions regarding specific construction techniques and methods were chosen. EKYENG is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploratory and laboratory test data presented in this report.

SPECIFICATIONS

I – GENERAL

1.0 STANDARDS AND DEFINITIONS

1.1 STANDARDS - All standards refer to latest edition unless otherwise noted.

1.1.1 ASTM D-698-70 (Method C) "Standard Test Methods for Moisture, Density Relations of Soils and Soil Aggregate Mixtures Using 5.5-lb (2.5 kg.) Rammer and 12-inch (305-mm) Drop".

1.1.2 ASTM D-2922 "Standard Test Method for Density of Soil and Soil Aggregate in Place by Nuclear methods (Shallow Depth)".

1.1.3 ASTM D-1556 "Standard Test Method for Density of Soil in place by the Sand-Cone Method".

1.2 DEFINITIONS

1.2.1 Owner - In these specifications the word "Owner" shall mean Appalachian Wireless.

1.2.2 Engineer - In these specifications the word "Engineer" shall mean the Owner designated engineer.

1.2.3 Design Engineer - In these specifications the words "Design Engineer" shall mean the Owner designated design engineer.

1.2.4 Contractor - In these specifications the word "Contractor" shall mean the firm or corporation undertaking the execution of any work under the terms of these specifications.

1.2.5 Approved - In these specifications the word "approved" shall refer to the approval of the Engineer or his designated representative.

1.2.6 As Directed - In these specifications the words "as directed" shall refer to the directions to the Contractor from the Owner or his designated representative.

2.0 GENERAL CONDITIONS

- 2.1** The Contractor shall furnish all labor, material and equipment and perform all work and services except those set out and furnished by the Owner, necessary to complete in a satisfactory manner the site preparation, excavation, filling, compaction, grading as shown on the plans and as described therein.

This work shall consist of all mobilization clearing and grading, grubbing, stripping, removal of existing material unless otherwise stated, preparation of the land to be filled, filling of the land, spreading and compaction of the fill, and all subsidiary work necessary to complete the grading of the cut and fill areas to conform with the lines, grades, slopes, and specifications.

This work is to be accomplished under the observation of the Owner or his designated representative.

- 2.2** Prior to bidding the work, the Contractor shall examine, investigate and inspect the construction site as to the nature and location of the work, and the general and local conditions at the construction site, including, without limitation, the character of surface or subsurface conditions and obstacles to be encountered on and around the construction site; and shall make such additional investigation as he may deem necessary for the planning and proper execution of the work.

If conditions other than those indicated are discovered by the Contractor, the Owner should be notified immediately. The material which the Contractor believes to be a changed condition should not be disturbed so that the owner can investigate the condition.

- 2.3** The construction shall be performed under the direction of an experienced engineer who is familiar with the design plan.

II - ENGINEERED FILL BENEATH STRUCTURES CLEARING AND GRADING SPECIFICATIONS

1.0 GENERAL CONDITIONS

The Contractor shall furnish all labor, materials, and equipment, and perform all work and services necessary to complete in a satisfactory manner the site preparation, excavation, filling, compaction and grading as shown on the plans and as described therein.

This work shall consist of all clearing and grading, removal of existing structures unless otherwise stated, preparation of the land to be filled, filling of the land, spreading and compaction of the fill, and all subsidiary work necessary to complete the grading of the cut and fill areas to conform with the lines, grades, slopes, and specifications.

This work is to be accomplished under the constant and continuous supervision of the Owner or his designated representative.

In these specifications, the terms "approved" and "as directed" shall refer to directions to the Contractor from the Owner or his designated representative.

2.0 SUBSURFACE CONDITIONS

Prior to bidding the work, the Contractor shall examine, investigate and inspect the construction site as to the nature and location of the work, and the general and local conditions at the construction site, including without limitation, the character of surface or subsurface conditions and obstacles to be encountered on and around the construction site; and shall make such additional investigation as he may deem necessary for the planning and proper execution of the work. Borings and/or soil investigations shall have been made. Results of these borings and studies will be made available by the Owner to the Contractor upon his request, but the Owner is not responsible for any interpretations or conclusions with respect thereto made by the Contractor based on such information, and the Owner further has no responsibility for the accuracy of the borings and the soil investigations.

If conditions other than those indicated are discovered by the Contractor, the Owner should be notified immediately. The material which the Contractor believes to be a changed condition should not be disturbed so that the Owner can investigate the condition.

3.0 SITE PREPARATION

Within the specified areas, all trees, brush, stumps, logs, tree roots, and structures scheduled for demolition shall be removed and disposed of.

All cut and fill areas shall be properly stripped. Topsoil will be removed to its full depth and stockpiled for use in finish grading. Any rubbish, organic and other objectionable soils, and other deleterious material shall be disposed of off the site, or as directed by the Owner or his designated representative if on site disposal is provided. In no case shall such objectionable material be allowed in or under the fill unless specifically authorized in writing.

Prior to the addition of fill, the original ground shall be compacted to job specifications as outlined below. Special notice shall be given to the proposed fill area now. If wet spots, spongy conditions, or groundwater seepage is found, corrective measures must be taken before the placement of fill.

4.0 FORMATION OF FILL AREAS

Fills shall be formed of satisfactory materials placed in successive horizontal layers of not more than eight (8) inches in loose depth for the full width of the cross-section. The depth of lift may be increased if the Contractor can demonstrate the ability to compact a larger lift. If compaction is accomplished using hand-tamping equipment, lifts will be limited to 4-inch loose lifts. Engineered fill placed below the structure bearing elevation shall be compacted to at least 95% of the maximum dry unit weight with a moisture content within 2% of the optimum moisture content as determined by the modified Proctor test. The top size of the material placed shall not exceed 4 inches.

All material entering the fill shall be free of organic matter such as leaves, grass, roots, and other objectionable material.

The operations on earth work shall be suspended at any time when satisfactory results cannot be obtained because of rain, freezing weather, or other unsatisfactory conditions. The Contractor shall keep the work areas graded to provide the drainage always.

The fill material shall be of the proper moisture content before compaction efforts are started. Wetting or drying of the material and manipulation to secure a uniform moisture content throughout the layer shall be required. Should the material be too wet to permit proper compaction or rolling, all work thus affected shall be delayed until the material has dried to the required moisture content. The moisture content of the fill material should be no more than two (2) percentage points higher or lower than optimum unless otherwise authorized. Sprinkling shall be done with equipment that will satisfactorily distribute the water over the disced area. Any areas inaccessible to a roller shall be consolidated and compacted by mechanical tampers. The equipment shall be operated in such a manner that hardpan, cemented gravel, clay or other chunky soil material will be broken up into small particles and become incorporated with the other material in the layer.

In the construction of filled areas, starting layers shall be placed in the deepest portion of the fill, and as placement progresses, additional layers shall be constructed in horizontal planes. Original slopes shall be continuously, vertically benched to provide horizontal fill planes. The size of the benches shall be formed so that the base of the bench is horizontal and the back of the bench is vertical. As many benches as are necessary to bring the site to final grade shall be constructed. Filling operations shall begin on the lowest bench, with the fill being placed in horizontal eight (8) inch thick loose lifts unless otherwise authorized. The filling shall progress in this manner until the entire first bench has been filled, before any fill is placed on the succeeding benches. Proper drainage shall be maintained always during benching and filling of the benches, to ensure that all water is drained away from the fill area.

Frozen material shall not be placed in the fill nor shall the fill be placed upon frozen material.

The Contractor shall be responsible for the stability of all fills made under the contract, and shall replace any portion, which in the opinion of the Owner or his designated representative, has become displaced due to carelessness or negligence on the part of the Contractor. Fill damaged by inclement weather shall be repaired at the Contractor's expense.

5.0 SLOPE RATIO AND STORM WATER RUN-OFF

Slopes shall not be greater than 2 (horizontal) to 1 (vertical) in both cut and fill, or as illustrated on the construction drawings. Excavations shall be constructed in accordance with all Federal, State and local codes relative to slope geometry.

6.0 GRADING

The Contractor shall furnish, operate, and maintain such equipment as is necessary to construct uniform layers, and control smoothness of grade for maximum compaction and drainage.

7.0 COMPACTING

The compaction equipment shall be approved equipment of such design, weight, and quantity to obtain the required density in accordance with these specifications.

8.0 TESTING AND INSPECTION SERVICES

Testing and inspection services will be provided by the Owner.

III GUIDELINES FOR EXCAVATIONS AND TRENCHES

The following represents some general guidelines relative to the design and construction of excavations and trenches. It must be emphasized that these guidelines are not intended to represent a "safety plan," but rather are presented herein to provide general guidance regarding the design characteristics and safety measures for excavations and trenches.

1. Check with the following utilities prior to breaking ground:
 - Sewer
 - Telephone
 - Fuel
 - Electric
 - Water
 - Gas
 - Cable

When utility companies or owners do not respond to your request within 48 hours, the contractor may only then proceed provided the contractor does so with caution by using detection equipment or other acceptable means to locate utility installations.

Once the excavation is open, the contractor should protect and support the exposed underground utilities or remove installations to safeguard workers and prevent damage to exposed utilities.

2. Access and egress ramps must be designed by a "competent person" and structural ramps used for equipment must be designed by a "competent person" with qualified knowledge in structural design. In addition:
 - Ramps must be secured to prevent displacement;
 - Ramps used in lieu of steps must have cleats to prevent slipping; and
 - Trenching excavations four feet or greater in depth must have a stairway, ladder, ramps or other safe means to egress with lateral travel no more than 25 feet.
3. Workers must be provided with reflector garments, such as warning orange or red vests, when exposed to vehicular traffic.
4. Contractors must not allow workers to work under or near equipment when there is danger of falling debris, spillage or equipment-related injuries.

5. Mobile equipment, operating adjacent to an open excavation or approaching the edge of an excavation, must have one of the following when the operator's view is obstructed:
 - Warning System
 - Mechanical Signals
 - Barricades
 - Stop Logs
 - Hand Signals
6. The contractor must check the atmosphere for hazardous gases and oxygen deficiencies when excavating four feet or greater around landfills, or when hazardous substances are stored nearby, and when the contractor expects there could be any exposure to the workers.
7. When hazardous atmospheric conditions exist, or when conditions could change, the contractor must make emergency rescue equipment readily available including breathing apparatus, safety harnesses with life lines and a basket stretcher.
8. When workers enter bell-bottom pier holes or other deep and confined excavations, the worker must wear (always while performing work in the confined space) a separate life line attached to a harness. The line must be attended by someone above while work is being performed. The worker must check for hazardous atmospheric conditions prior to entry.
9. The contractor must ensure that water does not accumulate in open excavations and must inspect the excavation prior to allowing workers to re-enter after heavy rains.
10. Adjacent structures (buildings, walls, etc.) must be supported or secured to prevent worker exposure to unsafe conditions and damage to existing structures.
11. A registered professional engineer must approve operations when a contractor underpins existing structures to ensure worker safety and prevent damage to existing structures.
12. Workers must not be exposed to loose soil and rock or materials in and around excavations. Materials, such as removed soil and rock, must not be stored closer than two feet from the edge of the excavation.
13. Daily inspections of the excavation, the adjacent areas and protective systems must be made by a "competent person" for evidence of possible cave-ins, indications of failure of protective systems, hazardous

atmospheres or other hazardous conditions. The "competent person" must stop work immediately and remove workers from the excavation when conditions change and pose a threat to their safety.

- 14.** Workers must not be exposed to fall hazards associated with excavations. Protective walkways or bridges with standard guard rails must be provided.
- 15.** All wells, pits, shafts etc. must be barricaded or covered. After completion of work, all wells, pits, shafts etc. must be backfilled.

IV - GENERAL CONCRETE SPECIFICATIONS

1.0 GENERAL

It is the intent of this specification to secure, for every part of the work, concrete of homogenous structure which, when hardened, will have the required strength and resistance to weathering. To this end, the limiting values of concrete and the requirements hereinafter specified must be met. Standard tests of the cement, aggregates, concrete and reinforcement will be made by the Owner as it sees fit. The Contractor shall furnish the material for all required samples plus such labor as required to obtain samples. The Contractor shall provide to authorized representatives of the Owner, convenient access to all parts of the work of all concreting operations for the purpose of sampling and inspection.

2.0 SCOPE

Contractor shall furnish all materials, labor, services, transportation, tools, equipment, and related items required to complete work indicated on the drawings and/or specified.

Unless otherwise noted or as modified by more stringent requirements specified herein, all plain and reinforced concrete work shall be performed in full compliance with applicable requirements of the Building Code Requirements for Reinforced Concrete ACI 318.

Contractor shall obtain Owner's approval of all subgrades, footing bottoms, forms, and reinforcement just prior to placing concrete.

Contractor shall coordinate the work specified in this section with that specified in other sections so that all anchors, pipes and other embedded items are properly installed before concrete is placed.

Contractor shall clean all exposed concrete surfaces and obtain approval of Owner for method of cleaning.

3.0 MATERIALS

All materials shall be of the respective quality specified herein, delivered, stored, and handled as to prevent inclusion of foreign matter and damage by dampness or breakage. Packaged material shall be stored in original container until ready for use. Materials showing evidence of dampness or other damage may be rejected.

A. Fine and Coarse Aggregates: Coarse and fine aggregates shall conform to ASTM Specification C33. The maximum size of aggregate shall not be larger than one-fifth (1/5) of the narrowest dimensions between forms, or larger than three fourths (3/4) of the minimum clear spacing between reinforcement.

1. Fine Aggregate: Sand shall be composed essentially of clean, hard, strong, durable grains free of structurally weak grains, organic matter, loam, clay, silt, salt, mica or other fine materials that may affect bonding of the cement paste.

2. Coarse Aggregate: Cement concrete shall consist of crushed rock or screened gravel and shall be composed essentially of clean, hard, strong and impermeable particles, resistant to wear and frost and free from deleterious amounts of organic matter, loam, clay, salts, mica, and soft, thin, elongated, laminated or disintegrated stone, and shall be inert to water and cement.
- B. Portland Cement: Portland cement shall conform to ASTM Specification C150. Type I or Type II Portland Cement shall be used provided that they are not intermixed during any one batch. Type II Portland Cement shall not be used unless indicated on the plans.
 - C. Water: Water for mixing and curing shall be clean, fresh, and free from deleterious materials.
 - D. Metal Reinforcement: Rebar shall be Grade 60 and with deformations conforming to ASTM Specification A305. Welded wire mesh shall conform to W4 x W4 size and be of Grade 60 steel.
 - E. Admixtures: Except as herein noted, admixtures shall not be used.
 1. Under adverse weather conditions only retarding or accelerating agents containing no chloride may be used.
 2. Air-Entraining Agent shall be used for all concrete will give an entrained air range of not less than 4 percent but no greater than 8 percent in the finished product. Under no circumstances shall the air-entraining be interground with cement.
 3. Approval in writing shall be required from Owner prior to the use of any admixture.

4.0 FORM

Forms shall be constructed with proper shoring and cross-bracing, safeguarding the total structure and specifically lateral stability and sufficiently strong to stand vibrations of concrete and to carry, without appreciable deflection or displacement, all dead and live loads to which they may be subjected.

5.0 INSERTS, ETC.

Anchors, bolts, dowels, conduit, water stops, vent pipes and other similar built-in or concreted-in items shall be properly located, accurately positioned and secured. The Contractor shall cooperate in placing of such items with other contractors who require a fastening device for their work and he shall maintain them in proper location during the progress of his work.

6.0 REINFORCEMENT

Reinforcement at the time concrete is placed shall be free from rust, scale or other coatings that will destroy or reduce the bond.

Reinforcement shall be accurately placed and securely tied at intersections and shall be securely held in position during the placing of concrete by pacers, chairs, or other approved supports.

The reinforcement of foundations, footings and other principal structural members in which the concrete is deposited against the ground shall not have less than three (3) inches of concrete between it and the ground contact surface. If concrete surfaces after removal of the forms are to be exposed to the weather or to be in contact with the ground or rock, reinforcement shall be protected with not less than two (2) inches of concrete,

7.0 CONCRETE

Concrete for the various parts of the work shall be of 4000 pounds per square inch compressive strength with a minimum 28-day cure. Contractor is responsible to provide a mix of not less than 6 bags of cement per yard of concrete and not more than 7 gallons of water per bag of cement, producing a minimum slump of 2-1/2 inches and a maximum slump of 4-1/2 inches. Concrete that exceeds the above range of maximum or minimum slump requirements may be rejected by the Owner. All concrete shall be air-entrained. Contractors are required to furnish the name or names of the company(s) that will be providing the mix. The Owner reserves the right to disapprove any concrete supplier that has been known to supply an undesirable material to the Owner on previous occasions.

8.0 DEPOSITING CONCRETE

4.1. Preparation for Placing Concrete: Before depositing concrete, the Contractor shall:

1. Remove from space to be occupied by concrete all debris, including snow, ice, and water unless otherwise permitted by Owner.
2. Provide diversion, satisfactory to Owner, of any flow of water to an excavation to avoid washing the freshly deposited concrete.
3. Coat the forms prior to placing of reinforcing steel as required in form work.
4. Secure firmly in correct position, all reinforcement and other items to be encased and remove therefrom all coating including ice and frost.

B. Transportation of Concrete from Batch Plant: The concrete shall be delivered to the site of the work and discharge shall be completed within 90 minutes after addition of the cement and water to the

aggregates. Each batch of concrete delivered at the job site shall be accompanied by a time slip issued at the batching plant, bearing the time of charging of the mixer drum with the cement and aggregates.

- C. Transporting of Concrete from Mixer to Place of Final Deposit: Transportation shall be done as rapidly as practical by means which shall prevent the separation or loss of the ingredients. If chutes are used, they shall be at a slope not flatter than one vertical to two horizontal. Buggies or carts shall be equipped with pneumatic rubber tires or surfaces of runways shall be sufficiently smooth or both so as not to cause separation or segregation of concrete ingredients. Concrete shall not be allowed to drop freely more than 4 feet. Where greater drops are required, canvas "elephant trunks" or galvanized iron chutes equipped with suitable hopper heads shall be employed and a sufficient number placed to ensure that the concrete may be effectively compacted into horizontal layers not exceeding 12 inches in thickness with minimum lateral movements.
- D. Depositing of Concrete: Depositing of concrete shall:
1. Proceed continuously after once starting until reaching the end of a section of construction joint location shown on the drawings, or as approved by the Owner. The operations shall be conducted so that no concrete is deposited on concrete sufficiently hardened to cause formation of seams, and planes of weakness.
 2. Be as near as practical to its final position in the forms.
 3. Proceed to maintain constantly a top surface which is approximately level.
 4. Be placed before initial set has occurred, and in no event after it has contained its water content for more than 90 minutes.
 5. Be thoroughly worked and compacted by means of suitable tools to provide impermeability, durability and strength and shall be thoroughly worked around reinforcements and embedded items and into corners of forms and to be free from voids, pockets or honeycombing. Care shall be taken to provide impermeability.

- E. Vibration Equipment: Vibration equipment shall be of the appropriate type and shall, always, be adequate in number of units and power of each unit to properly consolidate all concrete.
- F. Monolithic Pours: Proper delivery of concrete shall be the Contractor's responsibility to make a mono-lithic pour without delays and changes of cold joints.

9.0 CURING

All concrete work shall be protected from injurious action by the sun, rain, flowing water, frost and other injury and shall be covered with plastic after application of curing compound for three (3) days on pours located above ground.

Contractor shall not remove any formwork for a minimum period of 24 hours after a concrete pour without written approval of the Owner.

10.0 CONCRETE FINISHES

Finishes of all exposed concrete shall be free of defects which impair its durability or adversely affect its appearance. All such surfaces when stripped, shall be uniform in appearance and any surfaces displaying any deviations from adjacent uniform surfaces shall be rejected and subject to removal.

Finished work shall be level and plumb, true to lines, and dimensions. Finished plane surfaces shall be smooth, and as nearly perfect as practical; however, deviations from a true plane shall not exceed 1/8 inch when measured from a 6-foot straight edge placed against the surface to any point on the surface and under the straight edge.

All exposed surfaces shall have defects corrected, protrusions removed, and holes filled.

APPENDIX A BORING DATA

7 Day Water Level

Summer Drop

30 in.

7 Day Water Level

hammer Drop

30 in.

Project Name <u>APP Tower</u>		Hole Number <u>3</u>	Total Depth <u>26.5</u>
Federal Project No. <u>TAUBEE</u>		Location <u>Frozen KY</u>	
State Project No. _____		Surface Elevation _____	
Drilling/Sampling Method <u>HSA</u>		Date Started <u>4-6-17</u>	Date Completed _____
Boring Diameter <u>8"</u>		Driller <u>Steven J</u> Weather _____	

From To	Soil and Rock Description	Sample/Run Interval	Blow Counts/RQD	Sample/Run No.	Sample Type	% Recovery
0.0 26.5	Mine Spoil	5.0 6.5	3-13-10	5-1	SPT	1.2
		10.0 11.5	6-3-7	5-2		1.5
	TO @ 26.5	15.0 16.5	10-8-16	5-3		1.3
		20.0 21.5	19-4-4	5-4		1.0
		25.0 26.5	3-3-3	5-5		

Water Level @ Drilling _____ 24 Hr. Water Level _____ 7 Day Water Level _____
 Moving/Delay Time _____ Hammer Weight 140 lbs. Hammer Drop 30 in.

7 Day Water Level

Summer Drop

30 in.

APPENDIX B SEISMIC

USGS Design Maps Summary Report

User-Specified Input

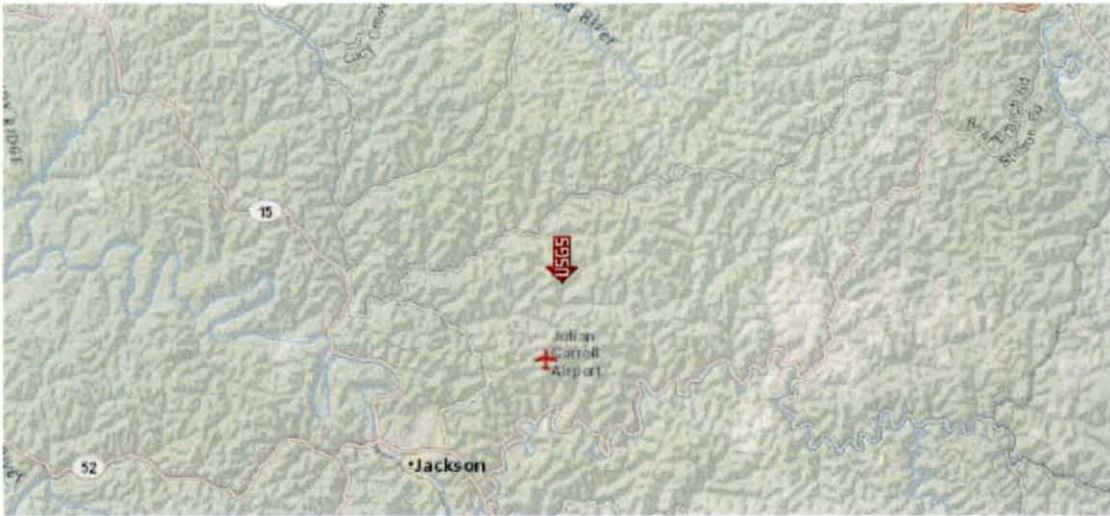
Report Title Taulbee Tower Site
Wed April 19, 2017 19:36:58 UTC

Building Code Reference Document 2012/2015 International Building Code
(which utilizes USGS hazard data available in 2008)

Site Coordinates 37.6326°N, 83.3099°W

Site Soil Classification Site Class D – “Stiff Soil”

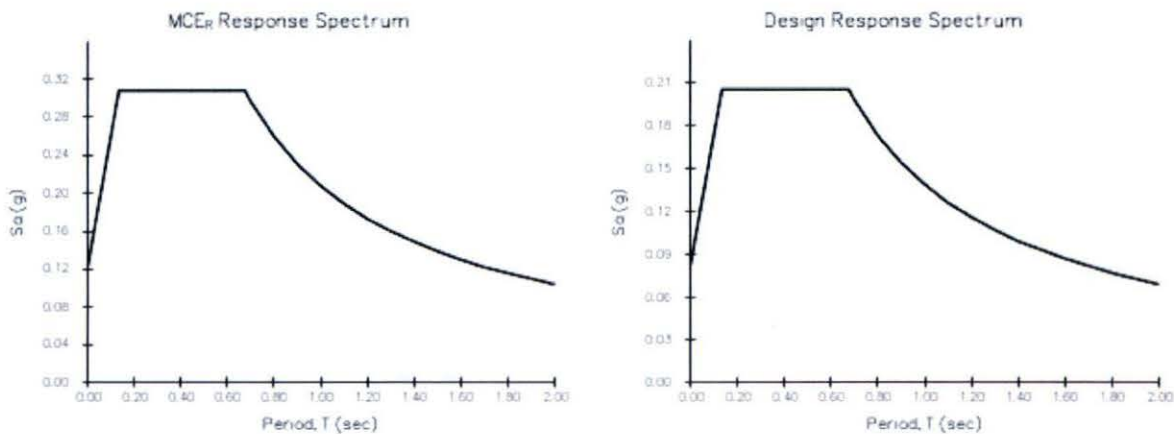
Risk Category IV (e.g. essential facilities)



USGS-Provided Output

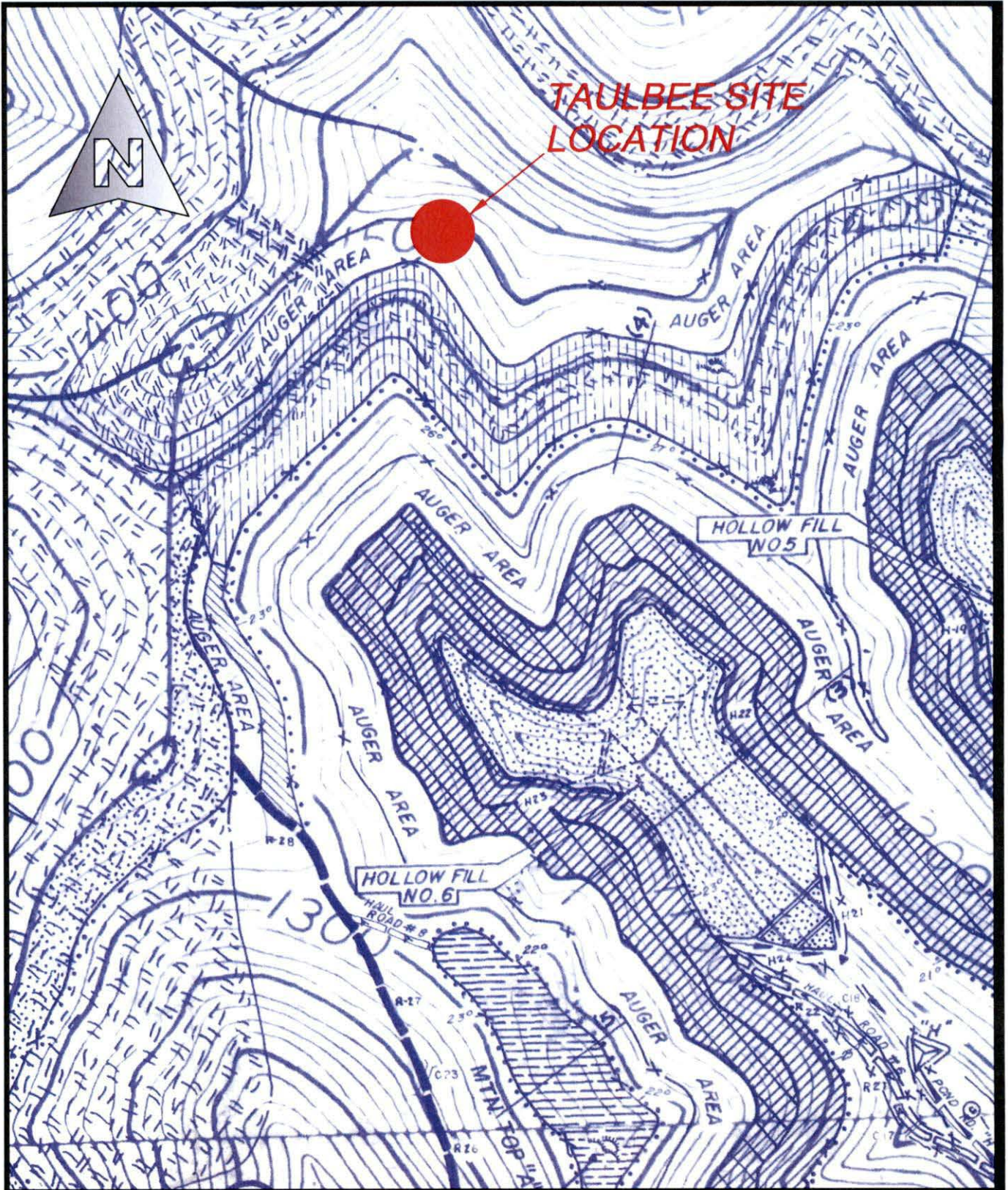
$S_S = 0.193 \text{ g}$	$S_{MS} = 0.308 \text{ g}$	$S_{DS} = 0.205 \text{ g}$
$S_1 = 0.087 \text{ g}$	$S_{M1} = 0.208 \text{ g}$	$S_{D1} = 0.139 \text{ g}$

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



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

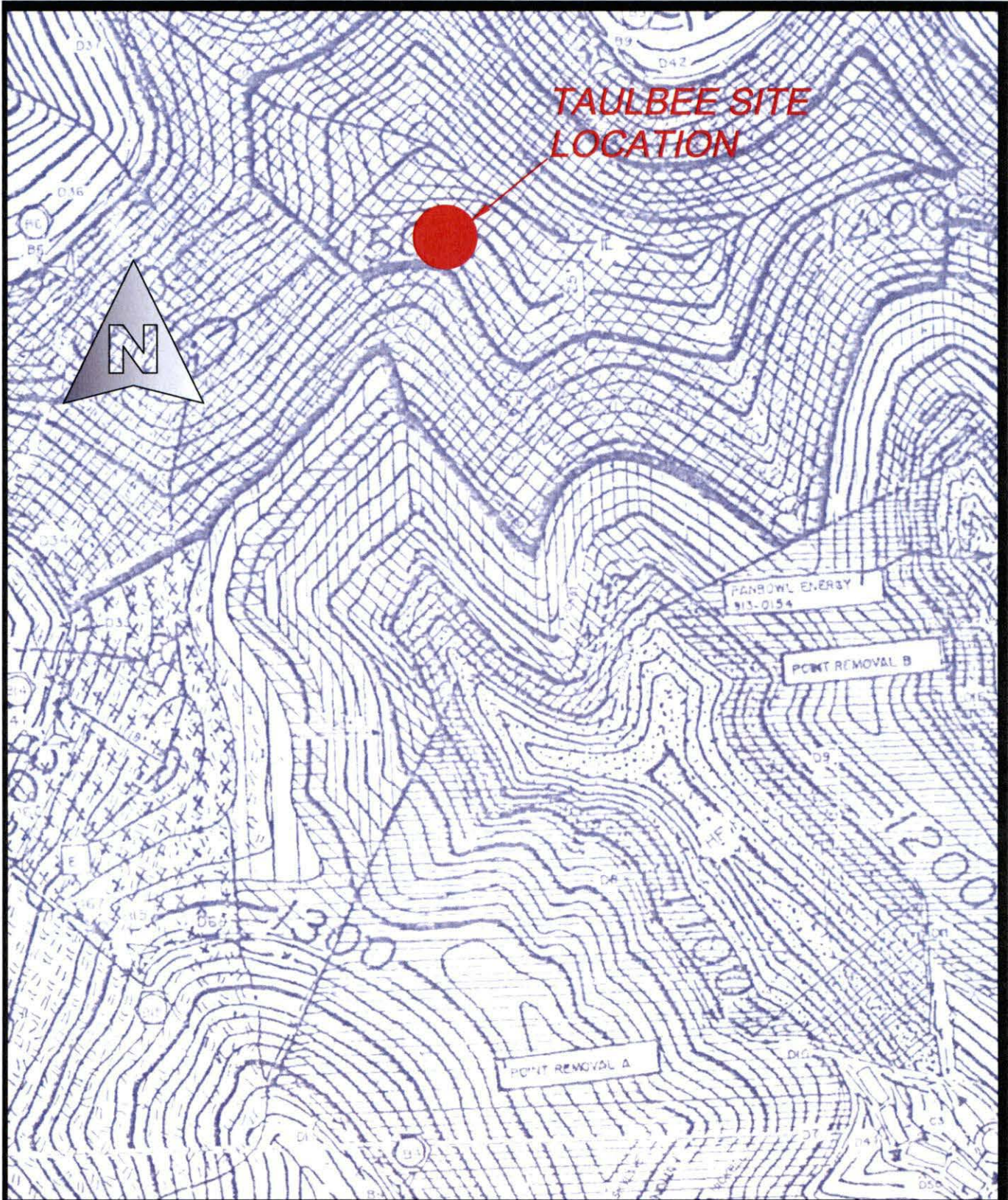
APPENDIX C MINE MAP RESEARCH



Drawn: RDS	Date: 4/6/17
Job: 165-040	Scale: 1"=2000'

Appalachian Wireless
 Panbow Energy
 Mine Lic. Map
 Taulbee Tower Site
 Map Date 1991

East Kentucky Engineering, LLC.
 230 Swartz Drive
 Hazard, KY 41701
 (606) 551-1050



Drawn: RDS	Date: 4/6/17
Job: 165-040	Scale: 1"=2000'

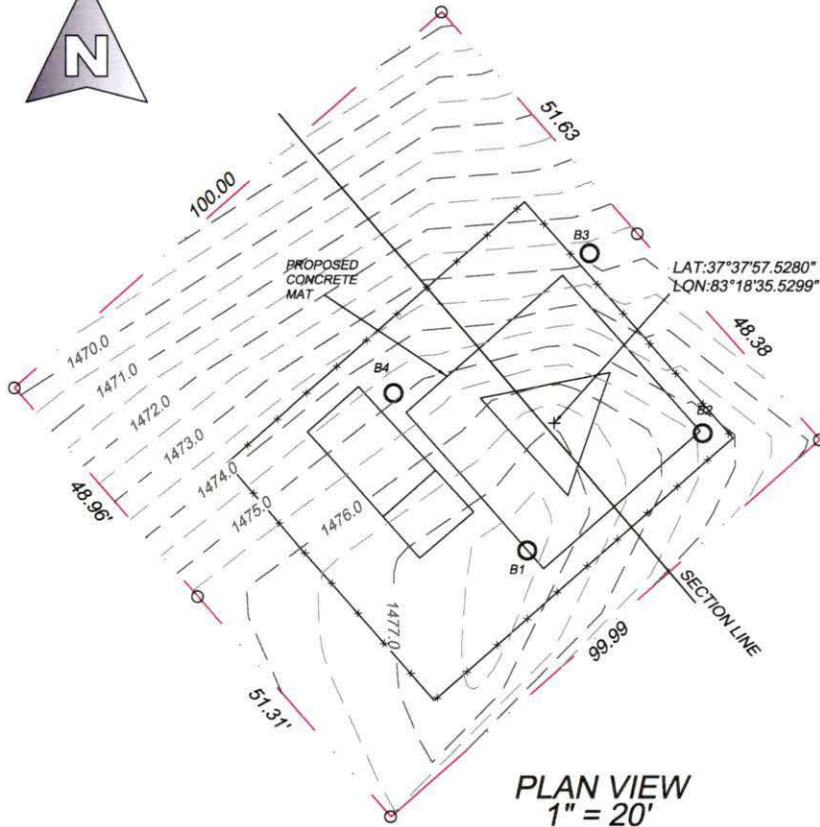
Appalachian Wireless
 Delta Machinery Company
 Mine Lic. Map
 Taulbee Tower Site
 Map Date 2000

East Kentucky Engineering, LLC.
 230 Swartz Drive
 Hazard, KY 41701
 (606) 551-1050

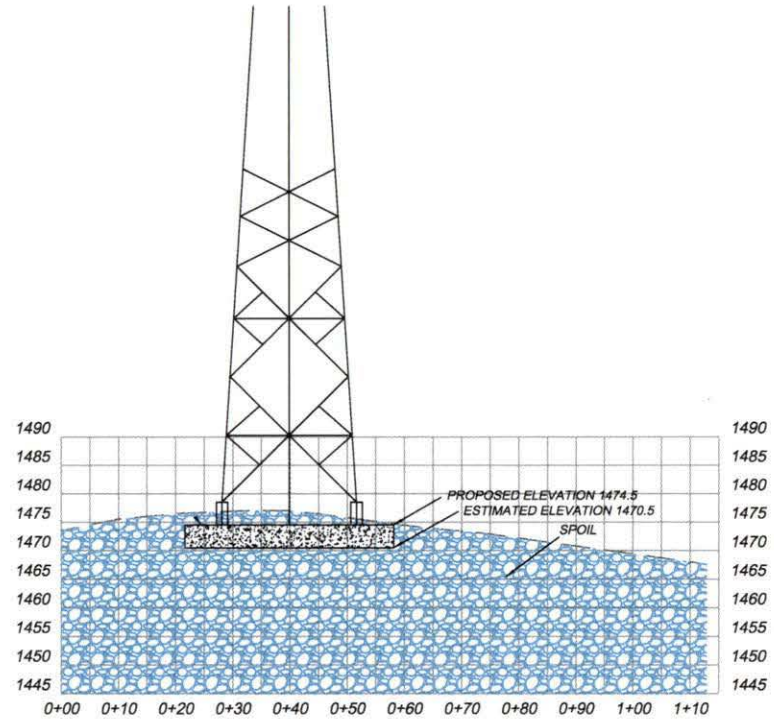
APPENDIX D PHOTOGRAPHS







PLAN VIEW
1" = 20'



SECTION
1" = 20'

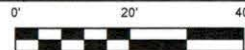
East Kentucky Engineering, LLC



Hazard Location
230 Swartz Drive
Hazard, KY 41701
(806) 551-1050
Email: rdsekyeng@outlook.com



4/6/2017
230 SWARTZ DRIVE
HAZARD, KENTUCKY
41701



Drawn by: RDS	Date: 4-12-2017
Job #: 165-0040	Scale: NOTED
File Location:	

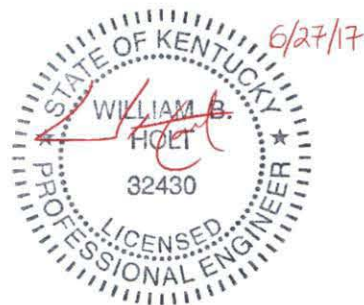
APPALACHIAN
WIRELESS
TAULBEE TOWER SITE
BREATHITT COUNTY, KENTUCKY



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

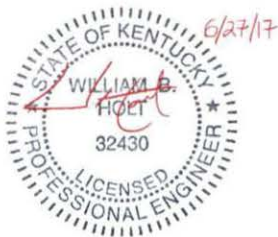
200' MODEL WSST TOWER
FOR: APPALACHIAN WIRELESS
SITE: TAULBEE
BREATHITT COUNTY, KY
DESIGN PACKAGE



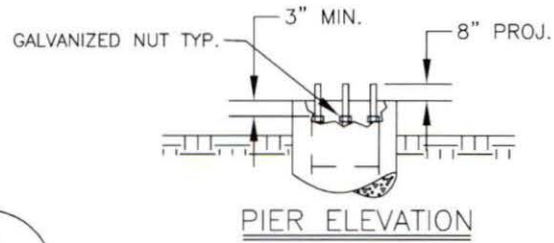
Fabrication, Installation, and Maintenance of TV, AM, FM, & Wireless Communications Towers

GENERAL NOTES

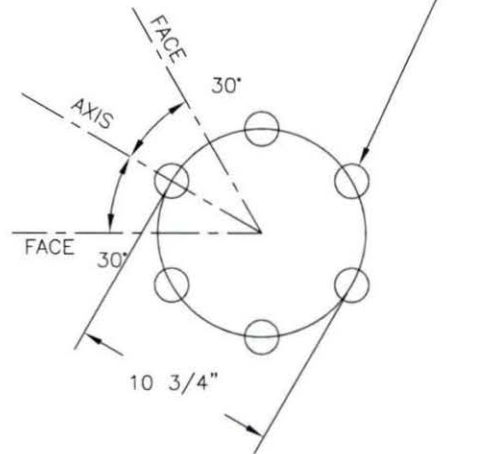
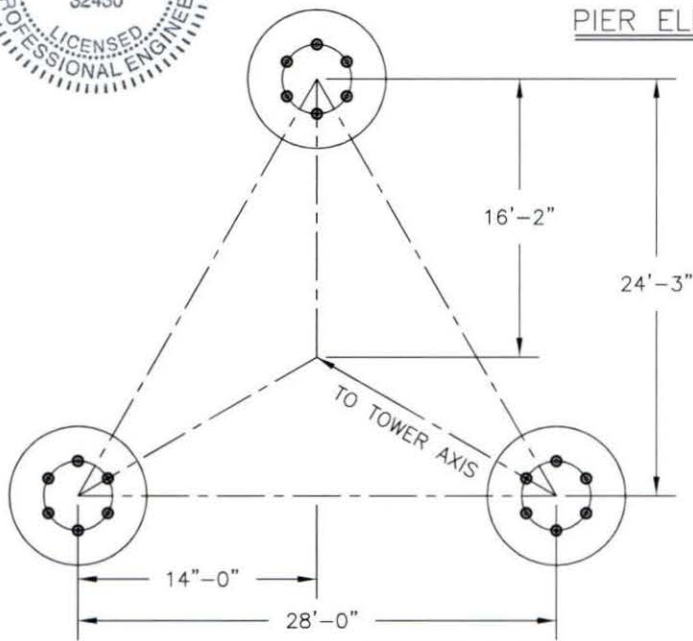
1. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISION OF THE AMERICAN WELDING SOCIETY AWS. D 1.1.
2. TOWER AND ALL FABRICATED ACCESSORIES ARE HOT-DIP GALVANIZED.
3. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO THE STANDARD SPECIFICATION FOR ZINC COATING OF IRON AND STEEL HARDWARE ASTM A153.
4. LEG 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 A325X, THREAD EXCLUDED FROM SHEAR PLANE.
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: 200' MODEL WSST TOWER FOR: APPALACHIAN WIRELESS SITE: TAULBEE BREATHITT COUNTY, KY				
SCALE	DWN.	LKG	CKD.	DATE 6-27-17
FILE	DWG. NO.			Q17483N



ANCHOR BOLTS
 (6) 1 1/2" ϕ X 78"
 (ASTM A354 GR. BC)
 EQUALLY SPACED WITH
 TOP TEMPLATE AND
 EMBEDDED PLATE



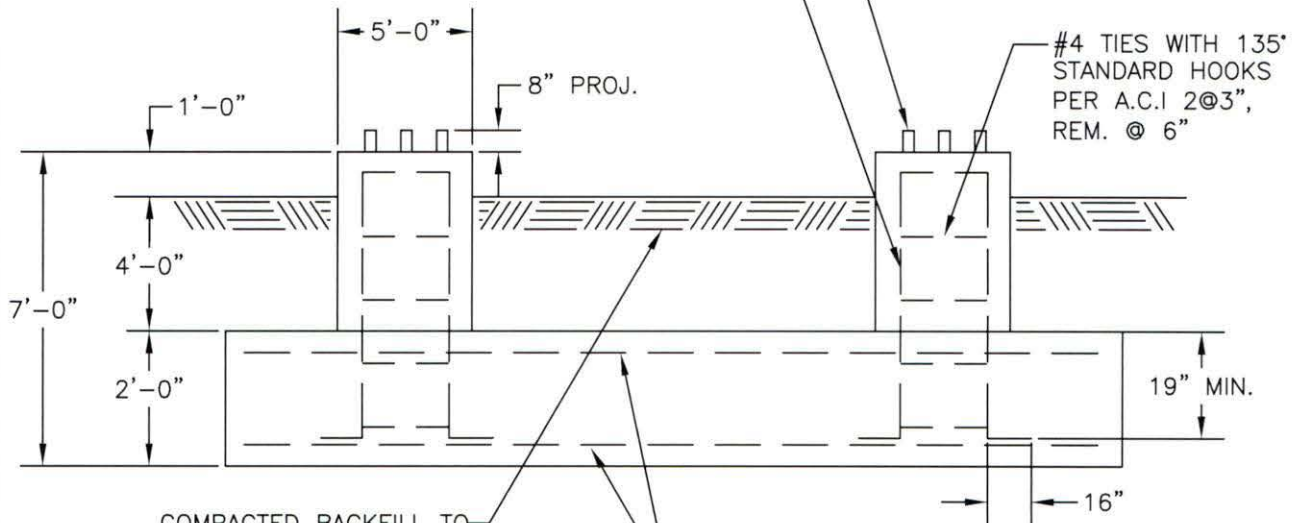
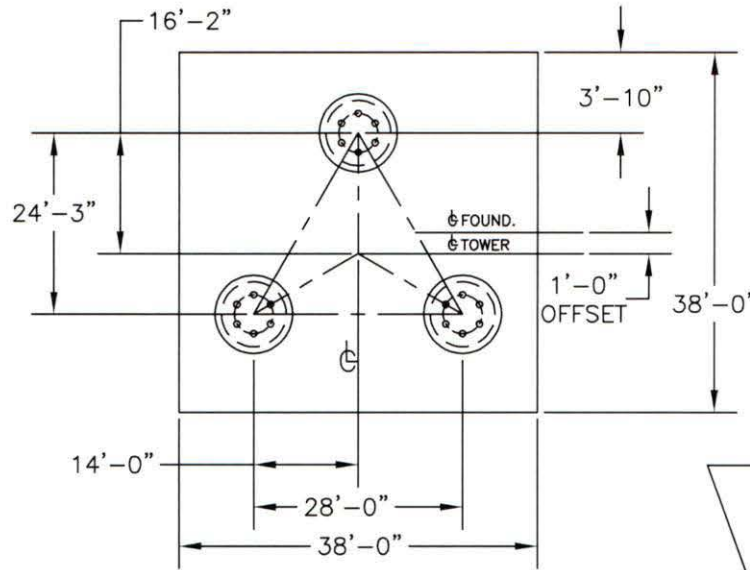
TITLE:
 200' MODEL WSST TOWER
 FOR: APPALACHIAN WIRELESS
 SITE: TAULBEE
 BREATHTT COUNTY, KY

WORLD TOWER

SCALE	NONE	DWN.	LKG	CKD.	DATE	6-27-17
FILE					DWG. NO.	Q17483AB

117.9 CU. YDS.
CONCRETE REQ'D.

BASE REACTIONS	
OTM:	13634.0 FT. KIPS
COMP.	596.0 KIPS
UPLIFT	502.0 KIPS
SHEAR (3 LEGS)	87.0 KIPS
WT. NO ICE	100.0 KIPS
WT. 3/4" ICE	330.0 KIPS

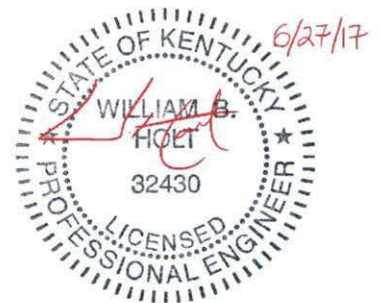


COMPACTED BACKFILL TO
ACHIEVE MINIMUM DENSITY
OF 100 PCF

45-#10 REBARS
EACH WAY TOP AND BOTTOM
(TOTAL = 180)

GENERAL NOTES

1. CONCRETE TO HAVE 4000 PSI MIN. COMPRESSIVE STRENGTH AFTER 28 DAYS.
2. ALL REINFORCEMENT 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 EAST KENTUCKY ENGINEERING, LLC. PROJECT NUMBER 165-000-0041 DATED APRIL 10, 2017.
5. FOUNDATION DESIGN REACTIONS BASED UPON FUTURE TOWER EXTENSION TO 300'

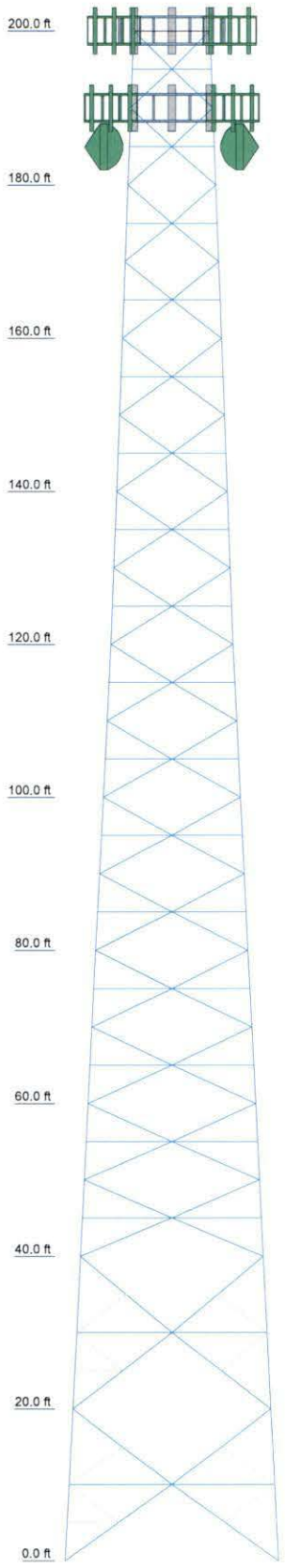


TITLE: FOUNDATION DETAIL
200' MODEL WSST TOWER
FOR: APPALACHIAN WIRELESS
SITE: TAULBEE
BREATHITT COUNTY, KY

WORLD TOWER

SCALE NONE	DWN. LKG	CKD.	DATE 6-27-17
FILE	DWG. NO. Q17483F		

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	Weight (K)
95	SR 3 1/4	SR 3 1/2	SR 3 3/4	SR 4	A572-50	A36	L4x4x1/4	L4x4x5/16	SR 4 1/2	L4x4x1/4	50.1
Leg Grade	L3x3x3/16	L3x3x1/4	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4	L4x4x1/4	L4x4x5/16	SR 4 1/2	L4x4x1/4	
Diagonals	L2x2x3/16	L2x2x3/16	L2 1/2x2 1/2x3/16	L3x3x3/16	L3x3x3/16	L3x3x1/4	L4x4x1/4	L4x4x5/16	SR 4 1/2	L4x4x1/4	
Top Girts											
Horizontals											
Red. Horizontals											
Red. Diagonals											
Inner Bracing											
Face Width (ft)	11.5	13	14.5	16	18	20	22	24	26	28	
# Panels @ (ft)	2.8	3.4	4.0	4.1	4.6	5.3	5.9	7.0	8.4	10	



DESIGNED APPURTENANCE LOADING

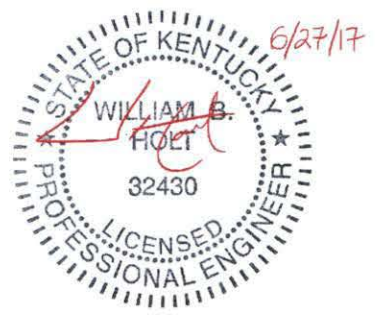
TYPE	ELEVATION	TYPE	ELEVATION
Beacon Lighting	200	(2) WPA800102/4CF w/ mt pipe	190
(2) WPA800102/4CF w/ mt pipe	200	(2) WPA800102/4CF w/ mt pipe	190
(2) WPA800102/4CF w/ mt pipe	200	BXA-70063-6CF w/ mt pipe	190
(2) WPA800102/4CF w/ mt pipe	200	BXA-70063-6CF w/ mt pipe	190
BXA-70063-6CF w/ mt pipe	200	BXA-70063-6CF w/ mt pipe	190
BXA-70063-6CF w/ mt pipe	200	WD13X53 Antenna Mounting Frame	190
BXA-70063-6CF w/ mt pipe	200	WD13X53 Antenna Mounting Frame	190
WD13X53 Antenna Mounting Frame	200	WD13X53 Antenna Mounting Frame	190
WD13X53 Antenna Mounting Frame	200	(3) RRU-11	189.5
WD13X53 Antenna Mounting Frame	200	6 FT DISH	185
(3) RRU-11	199.5	6 FT DISH	185
(2) WPA800102/4CF w/ mt pipe	190		

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Breathitt County, Kentucky.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 90.00 mph basic wind in accordance with the TIA-222-G Standard.
4. 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.
5. Deflections are based upon a 60.00 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 66.3%

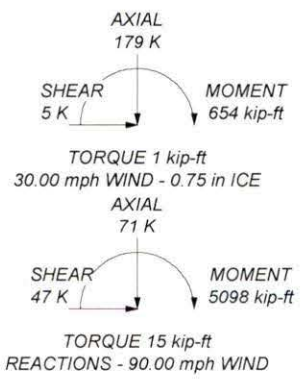


ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:

DOWN: 234 K
SHEAR: 29 K

UPLIFT: -171 K
SHEAR: 22 K



World Tower Company		Job: 200' WSST Tower / Run Q17483	
1213 Compressor Drive		Project: Taulbee, KY	
Mayfield, KY		Client: Appalachian Wireless	Drawn by: WBH
Phone: (270) 247-3642		Code: TIA-222-G	Date: 06/26/17
FAX:		Scale: NTS	Dwg No. E-1
Path: G:\World Tower\KY\Q17483.Taulbee\Analysis\Q17483.en			



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

Aeronautical Study No.
 2017-ASO-1210-OE

Issued Date: 06/14/2017

Ali Kuzehkanani
 East Kentucky Network, LLC
 8300 Greensboro Drive, Suite 1200
 Tysons, VA 22102

**** 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 Taulbee
Location:	Taulbee, KY
Latitude:	37-37-57.52N NAD 83
Longitude:	83-18-35.52W
Heights:	1477 feet site elevation (SE) 205 feet above ground level (AGL) 1682 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 to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 1, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

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

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

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 12/14/2018 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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

This determination is based, in part, on the foregoing description which includes specific coordinates , heights, frequency(ies) and power . Any changes in coordinates , heights, and frequencies or use of greater power 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.

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 (847) 294-7575, or vivian.vilaro@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-ASO-1210-OE.

Signature Control No: 320190100-335094440

(DNE)

Vivian Vilaro
Specialist

Attachment(s)
Frequency Data
Map(s)

cc: FCC

Frequency Data for ASN 2017-ASO-1210-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

TOPO Map for ASN 2017-ASO-1210-OE





KENTUCKY AIRPORT ZONING COMMISSION

MATTHEW BEVIN
Governor

421 Buttermilk Pike
Covington, KY 41017
www.transportation.ky.gov
502-341-2700

June 14, 2017

APPROVAL OF APPLICATION

APPLICANT:

East Kentucky Network, LLC.
East Kentucky Network, LLC.
8300 Greensboro Drive|Suite 1200
McLean, VA 22102

SUBJECT: AS-013-JKL-2017-011

STRUCTURE: Antenna Tower
LOCATION: Taulbee, KY
COORDINATES: 37° 37' 57.52" N / 83° 18' 35.52" W
HEIGHT: 205' AGL/1682' AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 205' AGL/ 1682' AMSL Antenna Tower near Taulbee, KY 37° 37' 57.52" N / 83° 18' 35.52" 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

MATTHEW BEVIN
Governor

421 Buttermilk Pike
Covington, KY 41017
www.transportation.ky.gov
502-341-2700

CONSTRUCTION/ALTERATION STATUS REPORT

June 14, 2017

AERONAUTICAL STUDY NUMBER: AS-013-JKL-2017-011

East Kentucky Network, LLC.
East Kentucky Network, LLC.
8300 Greensboro Drive Suite 1200
McLean, VA 22102

This concerns the permit which was issued to you by the Kentucky Airport Zoning Commission on April 14, 2017. 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, 421 Buttermilk Pike, Covington, KY, 41017. 502-341-2700.

STRUCTURE: Antenna Tower
LOCATION: Taulbee, KY
COORDINATES: 37° 37' 57.52" N / 83° 18' 35.52" W
HEIGHT: 205' AGL /1682'AMSL

CONSTRUCTION/ALTERATION STATUS

1. The project () is abandoned. () is not abandoned.

2. 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

2017-011



KENTUCKY TRANSPORTATION CABINET
KENTUCKY AIRPORT ZONING COMMISSION

TC 56-50
Rev. 07/2010
Page 2 of 2

APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

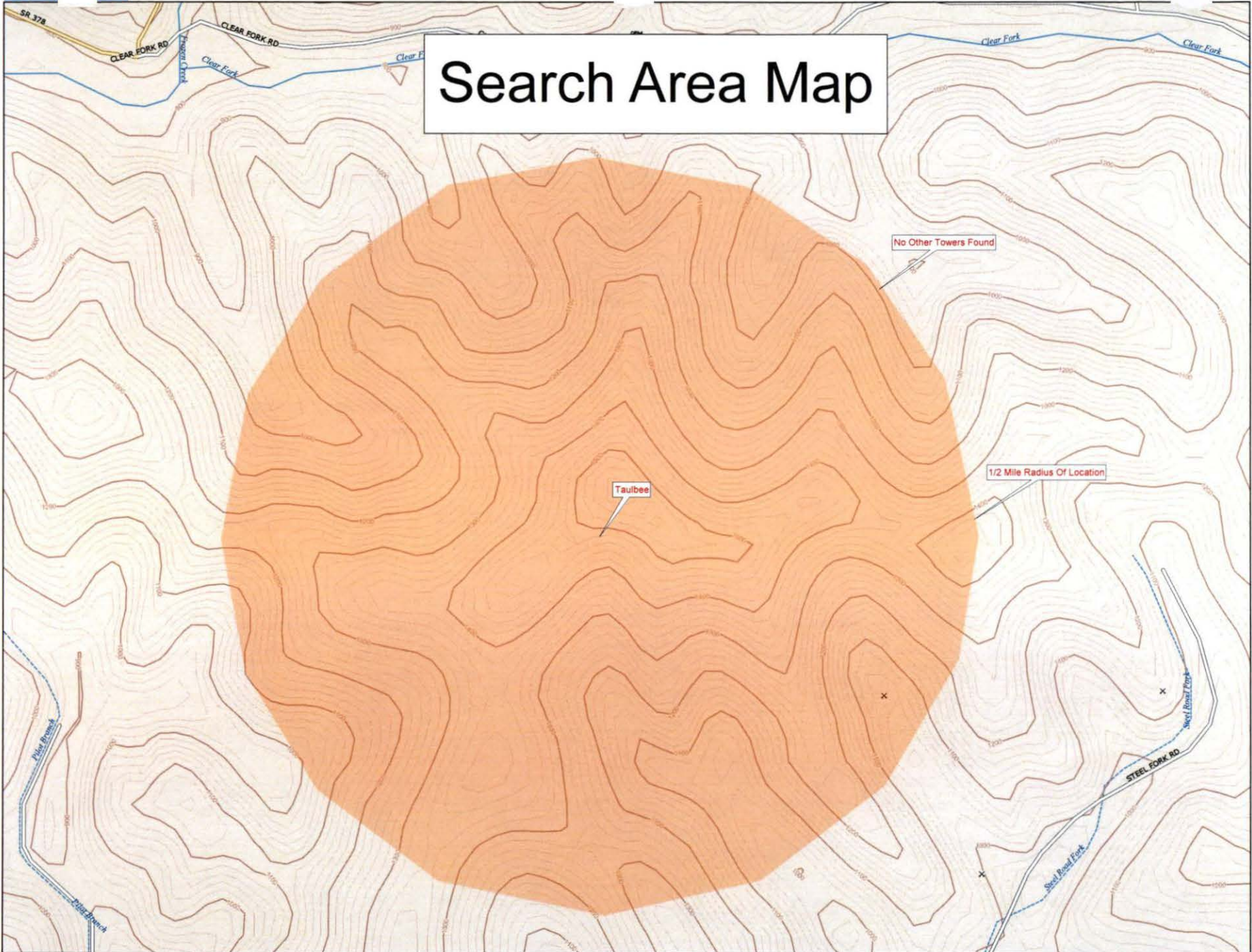
APPLICANT (name) East Kentucky Network, LLC c/o LNGS		PHONE 703-584-8667	FAX 703-584-8692	KY AERONAUTICAL STUDY # A9-03-JKL-2017-011
ADDRESS (street) 8300 Greensboro Dr, #1200		CITY McLean		STATE VA
APPLICANT'S REPRESENTATIVE (name) Ali Kuzehkanani		PHONE 703-584-8667	FAX 703-584-8692	ZIP 22102
ADDRESS (street) 8300 Greensboro Dr, #1200		CITY Tysons		STATE VA
APPLICATION FOR <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing				WORK SCHEDULE
DURATION <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days)				Start 02/28/17 End 03/05/17
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 checked="" type="checkbox"/> White- medium intensity <input type="checkbox"/> White- high intensity <input type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white <input type="checkbox"/> Other		
LATITUDE 37°37'57.52"		LONGITUDE 83°18'35.52"		DATUM <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27 <input type="checkbox"/> Other
NEAREST KENTUCKY City Taulbee County Breathitt ✓		NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT Julian Carroll Airport		
SITE ELEVATION (AMSL, feet) 1477		TOTAL STRUCTURE HEIGHT (AGL, feet) 310-205'		CURRENT (FAA aeronautical study #)
OVERALL HEIGHT (site elevation plus total structure height, feet) 1787-1682				PREVIOUS (FAA aeronautical study #)
DISTANCE (from nearest Kentucky public use or Military airport to structure) 2.7 mi				PREVIOUS (KY aeronautical study #)
DIRECTION (from nearest Kentucky public use or Military airport to structure) North				
DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.) Approx. 1.4 miles ESE of Taulbee (Breathitt), KY				
DESCRIPTION OF PROPOSAL A new 300' tower with top-mounted antennas (overall height of 310' 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? 01/25/17				
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 Ali Kuzehkanani	TITLE Dir of Engineering	SIGNATURE <i>Ali Kuzehkanani</i>		DATE 01/25/17
COMMISSION ACTION <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved				
SIGNATURE <i>[Signature]</i>			DATE 6-14-17	

Driving Directions for Taulbee

Starting at the intersection of Main Street and Brown Street in Jackson, KY. On Brown Street, turn right onto Main Street and drive 0.10 miles to the traffic light. Turn left onto KY1812 and drive 0.10 miles to the intersection of KY1812 and KY15. Turn left onto KY15 North drive 4.7 miles to the intersection of KY15 and KY1812 and turn left. Drive 3.8 miles to the intersection of KY1812 and KY540. Turn left onto KY540 and drive 3.6 miles. Turn left onto Steel Fork. Drive 0.4 miles and take the gravel road (signs will be posted here). Drive through the gate and go 1 mile (sign will be posted here).

Prepared By:
Daryl Bartley
Appalachian Wireless
606-477-2355

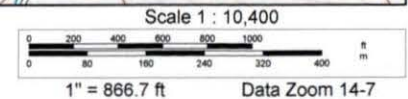
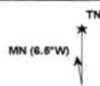
Search Area Map



Data use subject to license.

© DeLorme. Topo North America™ 9.

www.delorme.com



MEMORANDUM OF EASEMENT AGREEMENT

THIS MEMORANDUM OF EASEMENT AGREEMENT ("Agreement") is made and entered into on this 5th day of January, 2017, with a commencement date of January 1st, 2017, by and between **ISAAC HOLLON** and **DEBORAH HOLLON**, his wife, with a mailing address of 5212 Chasewood Place, Louisville, Kentucky 40229, hereinafter referred to as "**Grantors**," and **EAST KENTUCKY NETWORK, LLC D/B/A APPALACHIAN WIRELESS**, a Kentucky limited liability company, with a mailing address of 101 Technology Trail, Ivel, Kentucky, 41642, hereinafter referred to as "**Grantee**."

WITNESSETH:

1. **Demised Premises.** For good and valuable consideration, Grantors have entered into an Easement Agreement (the "Agreement") of even date herewith, in which Grantors have granted to Grantee a nonexclusive easement on, over, and across the existing roadway shown on the plat attached hereto and made a part herein as **Exhibit A**, prepared by Steve Haywood, Licensed Professional Land Surveyor, and located on that certain tract of real estate in Breathitt County, Kentucky, conveyed to Isaac Hollon, by the deed recorded in the Breathitt County Clerk's Office in Deed Book 126, Page 39 (the "**Premises**"). The purpose of this Easement is to allow Grantee to access certain property leased by Grantee from Bobby Gene Hollon and Hollie Hollon, as evidenced by that certain Memorandum of Lease dated January 9, 2017 and of record in the Breathitt County Clerk's Office in Lease Book 40, Page 289 (the "**Lease**"). The Grantors also granted to Grantee a right of way and easement to construct, maintain and operate telephone, fiber, and power transmission lines over any of the Grantors' property for service of a tower and

related facilities that are to be located upon the property which is the subject of the Lease (the "**Leased Property**"), along with other associated.

2. **Term.** The term of the Agreement shall extend until such time as the Lease is no longer in force and effect and the Leased Property has been abandoned by Grantee.

3. **Binding Effect.** All of the terms, conditions, and covenants hereof shall be binding and shall inure to the benefit of the heirs, representatives, successors, and assigns of the parties hereto.

4. **Purpose.** This Memorandum of Easement Agreement is prepared solely for the purpose of recordation, and is not intended to, nor shall it be deemed to, modify any of the terms and conditions set forth in the Agreement, nor to construe any of the rights, duties or responsibilities of Grantors and Grantee. In the event of any conflict between the terms and conditions of this Memorandum and the terms and conditions of the Agreement, the terms and conditions of the Agreement shall supersede and control.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN TESTIMONY WHEREOF, Grantors and Grantee have caused their names to be signed hereto, as of the day and year first above written.

GREGORY G. WELSH
Notary Public State at Large
Kentucky ID #558557
Commission Expires June 9, 2020

GRANTORS:

Isaac Hollon
ISAAC HOLLON
Deborah Hollon
DEBORAH HOLLON

COMMONWEALTH OF KENTUCKY
COUNTY OF Jefferson

The foregoing instrument was acknowledged before me on this 3rd day of January, 2017, by ISAAC HOLLON and DEBORAH HOLLON, Grantors.

CW
Notary Public

My Commission Expires 06-09-2020

GRANTEE:

EAST KENTUCKY NETWORK, LLC
D/B/A APPALACHIAN WIRELESS

W A Gillum
By: W.A. Gillum
Its: CEO/ General Manager

COMMONWEALTH OF KENTUCKY
COUNTY OF Floyd

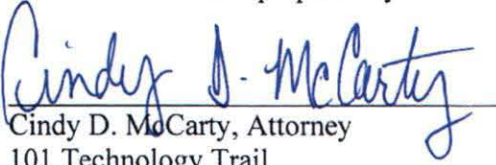
The foregoing instrument was acknowledged before me on this 5th day of January, 2017, by W.A. Gillum, CEO/General Manager of East Kentucky Network, LLC d/b/a Appalachian Wireless, Grantee.

Raina L. Helton
Notary Public

My Commission Expires Feb 6, 2020



This instrument was prepared by:

A handwritten signature in blue ink that reads "Cindy D. McCarty". The signature is written in a cursive style and is positioned above a horizontal line.

Cindy D. McCarty, Attorney
101 Technology Trail
Ivel, Kentucky 41642
(606) 339-1006

Description for the
Taulbee Tower Site
Portion of the Bobby Gene Hollon Property

A certain tract of land located in the community of Taulbee, Breathitt, Kentucky and being on the Ridge between Steel Road Fork and Clear Fork of Frozen Creek of the North Fork of the Kentucky River more particularly described as follows:

Unless stated otherwise any monument referred to herein as a Re-Bar and Cap is a set ½" steel re-bar eighteen (18") in length with a yellow plastic cap stamped Summit L.S. #2661. All bearings stated herein are referred to Grid North based on Kentucky Single Zone State Plane NAD 83 coordinates.

Beginning at a set Re-Bar and Cap near a high knob and being N 03°06'53" W a distance of 198.02 feet to a found roof bolt witness by a metal fence post on the property line of Bobby Gene Hollon (D.B. 126 P. 51) and having Kentucky Single Coordinates of N: 3,763,242.51 E: 5,627,739.92.

Thence, up the hill S 40°47'41" E a distance of 51.63' to a set Re-Bar and Cap on the existing ridge;
Thence, down the hill S 40°48'18" E a distance of 48.38' to a set Re-Bar and Cap;
Thence, around the hill S 49°11'40" W a distance of 99.99' to a set Re-Bar and Cap;
Thence, up the hill N 40°48'20" W a distance of 51.31' to a set Re-Bar and Cap on the existing ridge;
Thence, down the hill N 40°48'13" W a distance of 48.69' to a set Re-Bar and Cap;
Thence, around the hill N 49°11'15" E a distance of 100.00' to a set Re-Bar and Cap to the point of beginning and containing 0.23 acres more or less according to a survey conducted by persons under the direct supervision of Steven E. Haywood, PLS #2661 with Summit Engineering on August 29, 2016 and being a portion of the same tract of property conveyed to Bobby Gene Hollon by John Hubert Hollon and others by deed dated July 7th, 1973 and recorded in Deed Book 126 Page 51 in the records of the Breathitt County Court Clerk's office.



Steven E. Haywood, PLS 2661



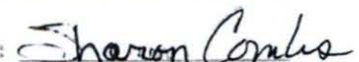
Date: 8/31/2016

RECEIVED

JAN 19 2017

A.M. _____ P.M. 1:00
BREATHITT, COUNTY CLERK

DOCUMENT NO: 115181
RECORDED ON: 1/20/2017 2:45:00 PM
COUNTY CLERK: BECKY CURTIS
COUNTY: BREATHITT CO
BOOK: D253 PAGE: 694 - 698 EASE

Signed: 



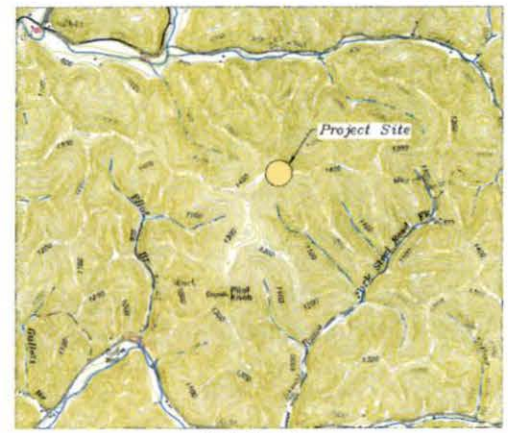
Bobby G. Hollon
D.B. 126 P. 51
PVA #133-00-00-008.00

Roof Bolt Found
Witnessed by Steel Fence Post
Point of Beginning
N: 3,763,242.51
E: 5,627,739.92

Legend

- ⊙ 1/2" re-bar set with a plastic cap stamped Summit Engineering, L.S. #2661 unless otherwise noted.
- ◇ Fence Post
- ⊕ Tree (Type Noted)
- Boundary
- - - - - Adjoining Property Lines
- - - - - Electric Line

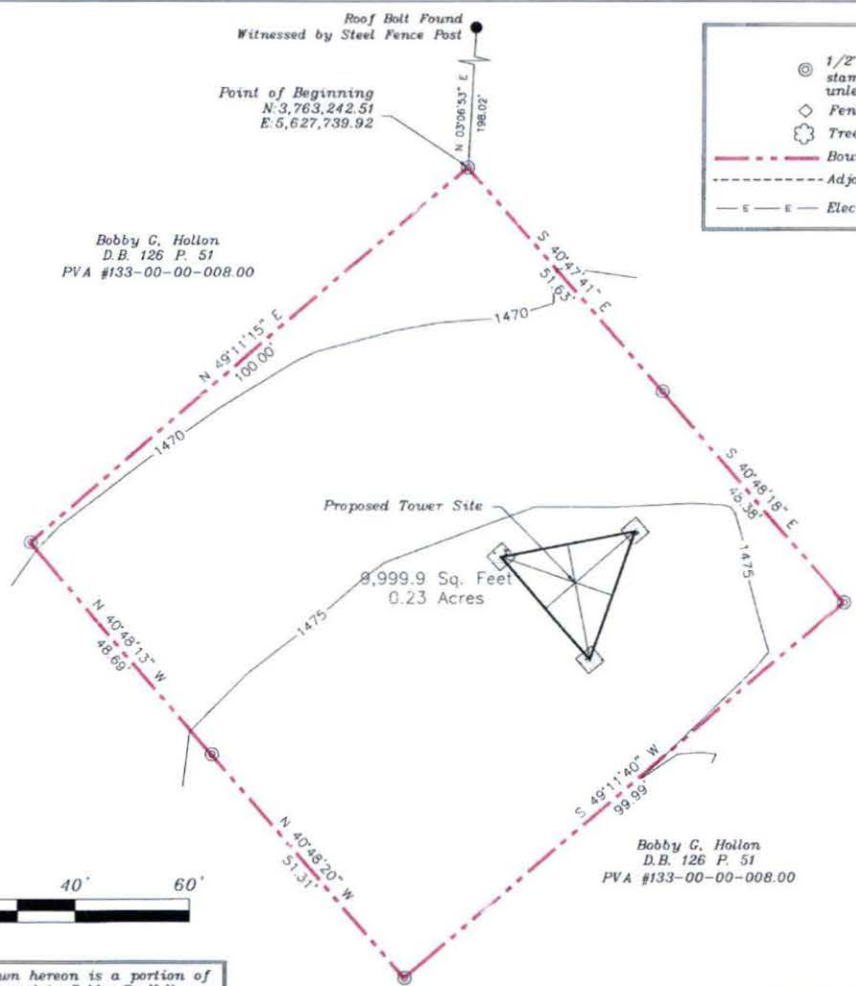
Proposed Tower Location
N: 3,763,170.22
E: 5,627,758.72
EL: 1476.96 (Existing Ground)
LAT: 37°37'57.5280"
LON: 83°18'35.5299"



Vicinity Map
Not to Scale
Lee City and Quicksand, Kentucky
7 1/2' Quadrangle Map

Flood Hazard Information:
The site shown hereon does not lie within a Flood Hazard area.
FIRM Panel 75 of 500
Breathitt County, Kentucky
Map # 21025C0075C
Map Effective Date: April 2, 2008

Survey Dates:
8-29-2016



Bobby G. Hollon
D.B. 126 P. 51
PVA #133-00-00-008.00



STATE OF KENTUCKY
STEVE HAYWOOD
2661
LICENSED PROFESSIONAL LAND SURVEYOR

SURVEYOR'S STATEMENTS

1. The survey shown hereon was conducted under my direct supervision.
2. The method used was by random traverse with sideshots.
3. The mathematical error of closure was 1/70,262.35
4. The bearings and distances were not adjusted for closure.
5. The basis for the bearings: Grid North, KY Single Zone NAD 83
6. This is a Class "B" Rural survey.
7. This plat of survey represents a Boundary Survey and complies with 201 KAR 18:150

Signature: *Steve Haywood* 2661
Date: 8-31-16
Surveyor's Seal: Steven E. Haywood PLS No. 2661

The tract of land shown hereon is a portion of the tract of land conveyed to Bobby G. Hollon by John Hubert Hollon and others by deed dated July 7th, 1973 and recorded in Deed Book 126 Page 51 in the records in the Breathitt County Court Clerk's office.

The tract of land shown hereon is located near the ridge on the Steel Road Fork of the Cope Fork of Frozen Creek Breathitt County, Kentucky

Contours shown hereon are based on a field survey conducted on August 29, 2016.

Client Information:
East Kentucky Network
d/b/a Appalachian Wireless
101 Technology Trail
Ivel, KY 41642

Surveyor Information:
Steven E. Haywood, PLS #2661
Summit Engineering, Inc.
265 Hambley Blvd.
Pikeville, KY 41501

Owner Information:
Bobby Gene Hollon
2816 Overland Ave.
Orlando, FL 32806

EAST KENTUCKY NETWORK d/b/a Appalachian Wireless 101 Technology Trail, Ivel, KY 41642				SUMMIT ENGINEERING, INC. 131 SUMMIT DRIVE PIKEVILLE, KY 41501 (606) 432-1447
Plot Map Proposed Taulbee Tower Site Located on Steel Road Fork Breathitt County, KY				
Scale: 1"=20'	Drawn By: MAC/SEH	Chk By:	Apprvd. By:	PER. NO.:
Plot Date: 31 AUGUST 2016 - 12:45 PM				ATT:
File Name: Z:\Est Ky Network\Taulbee\Taulbee Plat map.dwg				

MEMORANDUM OF LEASE

THIS MEMORANDUM OF LEASE is made and entered into on this 9th day of January, 2017, with a commencement date of January 1st, 2017 (the "**Commencement Date**"), by and between **BOBBY GENE HOLLON** and **HOLLIE HOLLON**, with an address of 2816 Overlake Avenue, Orlando, Florida 32806, hereinafter referred to as "**Lessors**", and **EAST KENTUCKY NETWORK, LLC D/B/A APPALACHIAN WIRELESS**, a Kentucky limited liability company, with a mailing address of 101 Technology Trail, Ivel, Kentucky, 41642, hereinafter referred to as "**Lessee**."

WITNESSETH

1. **Demised Premises.** For good and valuable consideration, Lessors leased to Lessee, and Lessee has leased from Lessors that certain tract of real estate located in Breathitt County, Kentucky, and being a portion of the same land conveyed to Lessors by Deed dated July 7, 1973, and recorded on May 16, 1974, in Deed Book 126, Page 51, in the Breathitt County Clerk's Office. Said property is more particularly described in the description **attached** hereto and made a part hereof as **Exhibit A** and the plat **attached** hereto and made a part hereof as **Exhibit B**, prepared by Steve Haywood, Licensed Professional Land Surveyor (hereinafter referred to as the "**Premises**"). The Lessors have also granted unto Lessee full and complete rights of ingress, egress and regress to and from the Premises over any property owned by Lessors and other associated rights for installation of utilities, maintenance, and other purposes.

2. **Term.** The initial term of the Lease is for a period of five (5) years from the Commencement Date set forth above.

3. **Renewals.** The Lease shall automatically renew for an additional six (6) terms of five (5) years each, unless Lessee provides sixty (60) days written notice prior to the end of the current term that it does not wish to renew.

4. **Binding Effect.** All of the terms, conditions, and covenants hereof shall be binding and inure to the benefit of the parties and their respective heirs, representatives, successors, and assigns.

5. **Purpose.** This Memorandum of Lease is prepared solely for the purpose of recordation, and is not intended to, nor shall it be deemed to, modify any of the terms and conditions set forth in the Lease, nor to construe any of the rights, duties or responsibilities of Lessors and Lessee. In the event of any conflict between the terms and conditions of this Memorandum and the terms and conditions of the Lease, the terms and conditions of the Lease shall supersede and control.

IN WITNESS WHEREOF, Lessors and Lessee have caused their names to be signed hereto, as of the day and year first above written.

LESSORS:

Bobby Gene Hollon
BOBBY GENE HOLLON

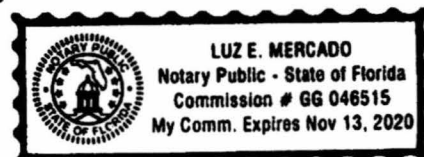
Hollie Hollon
HOLLIE HOLLON

STATE OF FLORIDA,
COUNTY OF Orange, TO WIT;

The foregoing instrument was acknowledged before me on this 6 day of January, ²⁰¹⁷ ~~2016~~, by Bobby Gene Hollon and Hollie Hollon, Lessors.

Luiz E. Mercado
Notary Public

My Commission Expires 11/13/2020



LESSEE:

EAST KENTUCKY NETWORK, LLC D/B/A
APPALACHIAN WIRELESS

W A Gillum

By: W.A. Gillum

Its: CEO/ General Manager

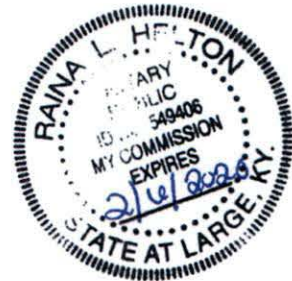
COMMONWEALTH OF KENTUCKY
COUNTY OF Floyd

The foregoing instrument was acknowledged before me on this 10th day of January, 2019, by W.A. Gillum, CEO/General Manager of East Kentucky Network, LLC d/b/a Appalachian Wireless, Lessee.

Raina L Helton

Notary Public

My Commission Expires Feb 16, 2020



This instrument was prepared by:

Cindy D. McCarty

Cindy D. McCarty, Attorney at Law
101 Technology Trail
Ivel, Kentucky 41642
(606) 339-1006

Description for the
Taulbee Tower Site
Portion of the Bobby Gene Hollon Property

A certain tract of land located in the community of Taulbee, Breathitt, Kentucky and being on the Ridge between Steel Road Fork and Clear Fork of Frozen Creek of the North Fork of the Kentucky River more particularly described as follows:

Unless stated otherwise any monument referred to herein as a Re-Bar and Cap is a set ½" steel re-bar eighteen (18") in length with a yellow plastic cap stamped Summit L.S. #2661. All bearings stated herein are referred to Grid North based on Kentucky Single Zone State Plane NAD 83 coordinates.

Beginning at a set Re-Bar and Cap near a high knob and being N 03°06'53" W a distance of 198.02 feet to a found roof bolt witness by a metal fence post on the property line of Bobby Gene Hollon (D.B. 126 P. 51) and having Kentucky Single Coordinates of N: 3,763,242.51 E: 5,627,739.92.

Thence, up the hill S 40°47'41" E a distance of 51.63' to a set Re-Bar and Cap on the existing ridge; Thence, down the hill S 40°48'18" E a distance of 48.38' to a set Re-Bar and Cap; Thence, around the hill S 49°11'40" W a distance of 99.99' to a set Re-Bar and Cap; Thence, up the hill N 40°48'20" W a distance of 51.31' to a set Re-Bar and Cap on the existing ridge; Thence, down the hill N 40°48'13" W a distance of 48.69' to a set Re-Bar and Cap; Thence, around the hill N 49°11'15" E a distance of 100.00' to a set Re-Bar and Cap to the point of beginning and containing 0.23 acres more or less according to a survey conducted by persons under the direct supervision of Steven E. Haywood, PLS #2661 with Summit Engineering on August 29, 2016 and being a portion of the same tract of property conveyed to Bobby Gene Hollon by John Hubert Hollon and others by deed dated July 7th, 1973 and recorded in Deed Book 126 Page 51 in the records of the Breathitt County Court Clerk's office.


Steven E. Haywood, PLS 2661



Date: 8/31/2016

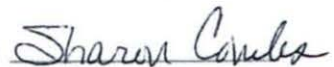


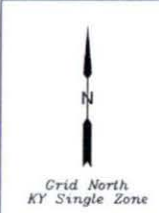
DOCUMENT NO: 115179
RECORDED ON: 1/20/2017 1:50:00 PM
COUNTY CLERK: BECKY CURTIS
COUNTY: BREATHITT CO
BOOK: L48 PAGE: 289 - 292 LEASE

RECEIVED

JAN 19 2017

A.M. _____ P.M. 1:00
BREATHITT, COUNTY CLERK

Signed: 



Bobby C. Hollon
D.B. 126 P. 51
PVA #133-00-00-008.00

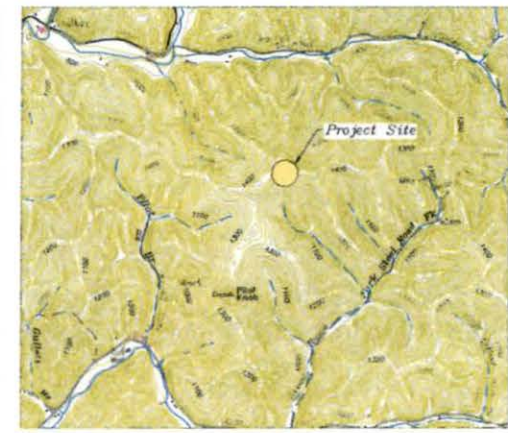
Roof Bolt Found
Witnessed by Steel Fence Post

Point of Beginning
N: 3,763,242.51
E: 5,627,739.92

Legend

- ⊙ 1/2" re-bar set with a plastic cap stamped Summit Engineering, L.S. #2661 unless otherwise noted.
- ◇ Fence Post
- ⊕ Tree (Type Noted)
- Boundary
- - - - - Adjoining Property Lines
- E — E — Electric Line

Proposed Tower Location
N: 3,763,170.22
E: 5,627,758.72
EL: 1476.96 (Existing Ground)
LAT: 37°37'57.5280"
LON: 83°18'35.5299"

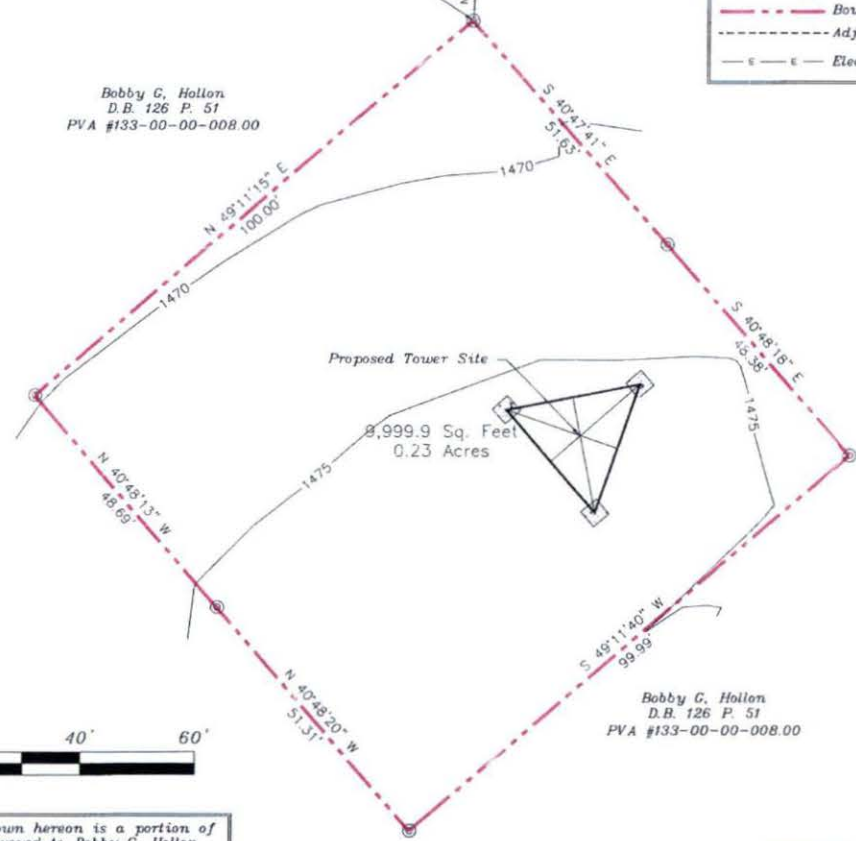


Vicinity Map
Not to Scale
Lee City and Quicksand, Kentucky
7 1/2' Quadrangle Map

Flood Hazard Information:
The site shown hereon does not lie within a Flood Hazard area.

FIRM Panel 75 of 500
Breathitt County, Kentucky
Map # 21025C0675C
Map Effective Date: April 2, 2008

Survey Dates:
8-29-2016



Bobby C. Hollon
D.B. 126 P. 51
PVA #133-00-00-008.00



The tract of land shown hereon is a portion of the tract of land conveyed to Bobby C. Hollon by John Hubert Hollon and others by deed dated July 7th, 1973 and recorded in Deed Book 126 Page 51 in the records in the Breathitt County Court Clerk's office.

The tract of land shown hereon is located near the ridge on the Steel Road Fork of the Cope Fork of Frozen Creek Breathitt County, Kentucky

Contours shown hereon are based on a field survey conducted on August 29, 2016.

Surveyor Information:
Steven E. Haywood, PLS #2661
Summit Engineering, Inc.
265 Hambley Blvd.
Pikeville, KY 41501

Client Information:
East Kentucky Network
d/b/a Appalachian Wireless
101 Technology Trail
Ivel, KY 41642

Owner Information
Bobby Gene Hollon
2816 Overland Ave.
Orlando, FL 32806

STATE OF KENTUCKY
STEVE HAYWOOD
2661
PROFESSIONAL
LAND SURVEYOR

Surveyors Seal

SURVEYOR'S STATEMENTS

- The survey shown hereon was conducted under my direct supervision.
- The method used was by random traverse with sideshots.
- The mathematical error of closure was 1.70,262.35
- The bearings and distances were not adjusted for closure.
- The basis for the bearings: Grid North, KY Single Zone NAD 83
- This is a Class "B" Rural survey.
- This plat of survey represents a Boundary Survey and complies with 201 KAR 18:150

Steven E. Haywood 2661 8-21-16
Date: Steven E. Haywood PLS No. 2661

EAST KENTUCKY NETWORK
d/b/o Appalachian Wireless
101 Technology Trail, Ivel, KY 41642

Plot Map
Proposed Tower Site
Located on Steel Road Fork
Breathitt County, KY

Scale: 1"=20' Drawn By: MAC/SEH Chk By: Apprvd. By: PER. NO.
Plot Date: 31 AUGUST 2016 - 12:45 PM ATT:
File Name: Z:\Est Ky Network\Toubee\Toubee Plot map.dwg

SUMMIT ENGINEERING, INC
131 SUMMIT DRIVE
PIKEVILLE, KY 41501
(800) 432-1447

PIKEVILLE, LEXINGTON & HENDERSON
KY & SOUTH CHARLESTON, WV

TAULBEE TOWER

SITE SURVEY WITH PROPOSED TOWER & BUILDING LOCATION

CENTER OF TOWER
LAT: 37°37'57.5280"
LON: 83°18'35.5299"

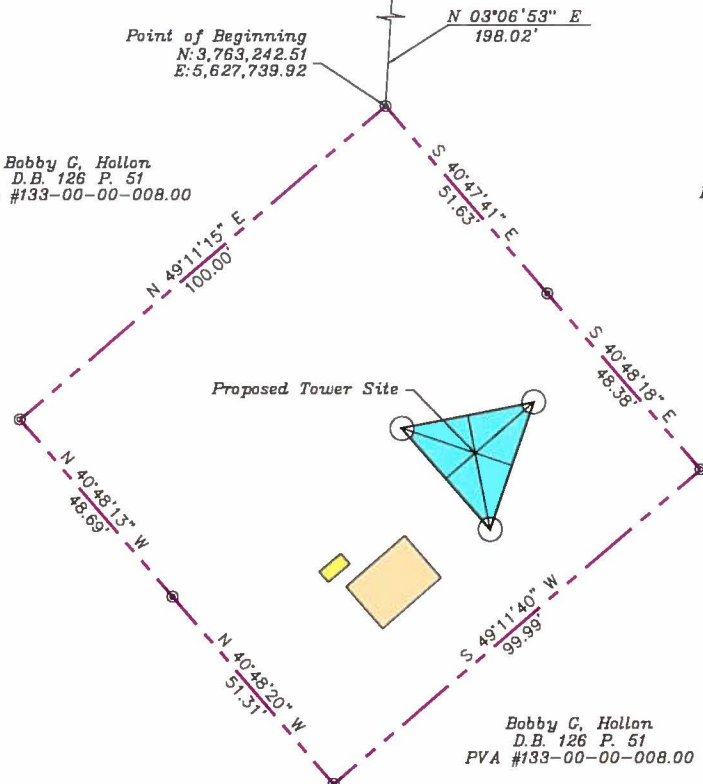
Roof Bolt Found
Witnessed by Steel Fence Post

Point of Beginning
N: 3,763,242.51
E: 5,627,739.92

N 03°06'53" E
198.02'

Bobby G. Hollon
D.B. 126 P. 51
PVA #133-00-00-008.00

KY Single Zone



Legend

- ⊙ 1/2" re-bar set with a plastic cap stamped Summit Engineering, L.S. #2661 unless otherwise noted.
- ◇ Fence Post
- ⊕ Tree (Type Noted)
- Boundary
- - - - - Adjoining Property Lines
- - - - - Electric Line

- NAD83 KY Single Zone
State Plane Coordinates
N: 3,763,170.22
E: 5,627,758.72
EL: 1476.96 (Existing Ground)

FAA Certification

In Accordance with FAA Order 8260.19C, Appendix C, I hereby certify that the Obstacle Accuracy Codes for the proposed Tower meets or exceeds accuracy 2C (+50 ft Horizontal and +20 ft Vertical).

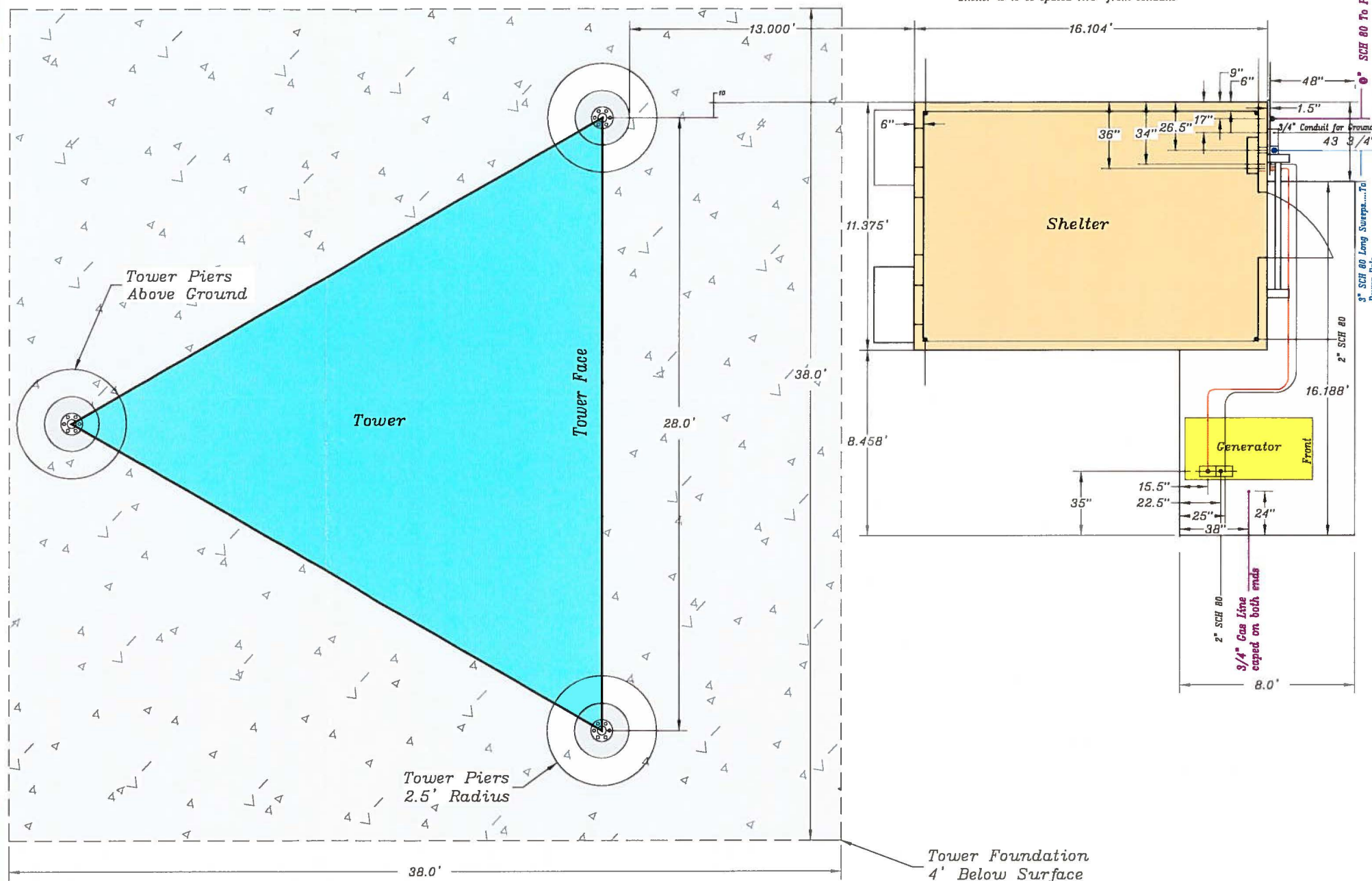
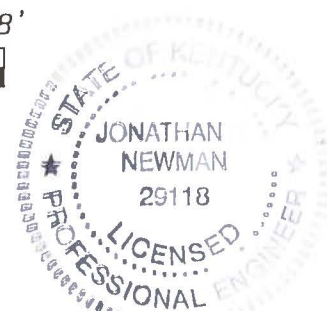
Steven E. Haywood 2661 7-6-17
Steven E. Haywood, PLS #2661 Date

STATE OF KENTUCKY
STEVE HAYWOOD
2661
LICENSED PROFESSIONAL LAND SURVEYOR



SCALE: 1" = 6'

Jonathan Newman 7-6-17
Jonathan Newman PE# 29118 DATE



EAST KENTUCKY NETWORK D/B/A APPALACHIAN WIRELESS 101 TECHNOLOGY TRAIL, IVEL, KY 41643				SUMMIT ENGINEERING, INC. 265 HAMBLEY BLVD. PIKEVILLE, KY. 41501 (606) 432-1447	
Taulbee Tower Site Map On the Property of Bobby G. Hollon on Steel Road Fork of Cope Fork of Frozen Cr. Breathitt County, KY					
Scale: As Noted	Drawn By: MAC	Chk By: MAC	Apprvd. By:	PER. NO:	
Plot Date: 06 JULY 2017 - 1:54 PM				ATT:	
File Name: Z:\East Ky Network\Taulbee\Taulbee Site Map_Revised 7-6-17.dwg					

Filing
CONTAINS
LARGE OR OVERSIZED
DRAWINGS

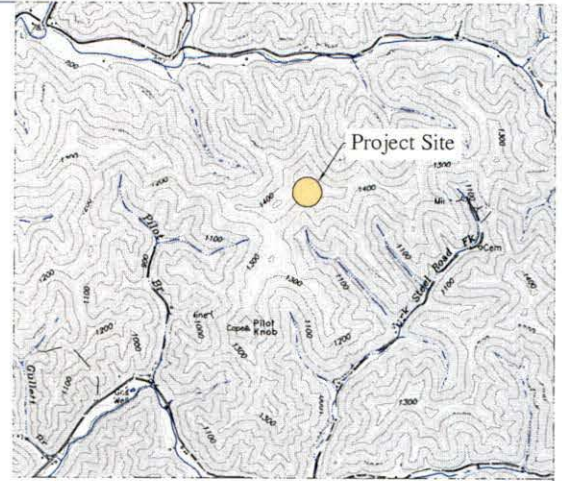
Case No. 2017-00248

RECEIVED ON:
07/21/2017

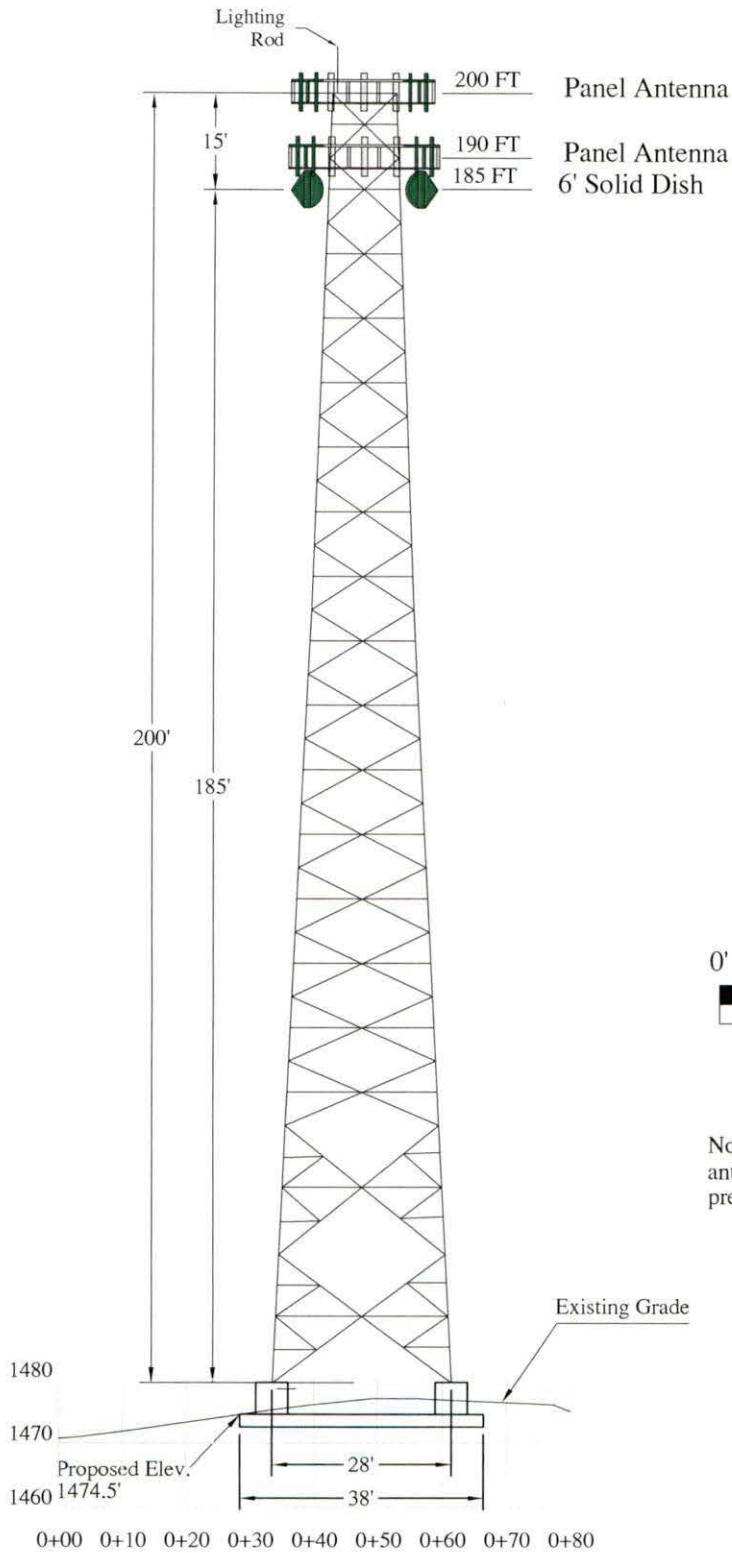
TAULBEE TOWER

VERTICAL PROFILE SKETCH

APPALACHIAN WIRELESS



Vicinity Map
Not to Scale
Lee City and Quicksand, Kentucky
7 1/2' Quadrangle Map




Graphic Scale
1" = 30'

Note: This is a vertical sketch of the tower indicating the proposed antenna and dish elevations. No design criteria was considered in the preparations of this drawing.



Jonathan Newman 7-6-17
Jonathan Newman, PE #29118 Date

DATE: 7/6/2017	SCALE: 1"=30'	East Kentucky Network D/B/A/ Appalachian Wireless 101 Technology Trail, Ivel, KY 41642 Vertical Profile Sketch Taulbee Tower	SUMMIT ENGINEERING, INC.  LEXINGTON, PIKEVILLE & HENDERSON, KY SOUTH CHARLESTON, WV
DRAWN BY: MAC/SEH			