

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

RECEIVED

SEP 10 2015

PUBLIC SERVICE
COMMISSION

In the matter of:

THE APPLICATION OF EAST KENTUCKY NETWORK)
LIMITED LIABILITY COMPANY FOR THE ISSUANCE)
OF A CERTIFICATE OF PUBLIC CONVENIENCE AND) CASE No 2015-00128
NECESSITY TO CONSTRUCT A TOWER IN BELL)
COUNTY, KENTUCKY).

East Kentucky Network, LLC, d/b/a Appalachian Wireless, was granted authorization to provide Personal Communications Service (“PCS”) in the Middlesboro-Harlan, KY Basic Trading Area (BTA295) 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 # 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 Bell County, East Kentucky Network, LLC pursuant to KRS 278.020 Subsection 1 and 807 KAR 5:001 Section 9 is seeking the Commission’s approval to construct a 300 foot self-supporting tower on a tract of land located on Highnite Hollow Road, Middlesboro, Bell County, Kentucky (36°38’31.4315”N 83°46’22.2003”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 in accordance with the Public Valuation Administrator. No other properties are contiguous with East Kentucky Network’s property.

Pursuant to 807 KAR 5:063 Section 1 (1)(L) and Section 1(1)(n)(1) all affected property owners according to the property valuation administrator’s record who reside or own property

within 500 feet of the proposed Tower 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.

Bell County has no formal local planning unit. In absence of this unit the Bell County Judge Executive's office was notified by certified mail, return receipt requested of East Kentucky Network Limited Liability Company's proposal and informed of their right to intervene. They were 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 The Daily News, September 9, 2015, edition. Enclosed is a copy of that notice in Exhibit 3. The Daily News is the newspaper with the largest circulation in Bell County.

A geologist was employed to determine soil and rock types. The geotechnical investigation report signed and sealed by a professional engineer registered in Kentucky 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 Company 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 applications 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 April 23, 2015, 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 lease for the site location along with a lot description.

The proposed construction site is on a piece of land that has been previously developed.

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. Two towers were found within the search area but are not capable of supporting East Kentucky Network, LLC's load and future needs; 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 11 contains a vertical sketch of the tower supplied by James W. Caudill, Kentucky registered professional engineer.

within 500 feet of the proposed Tower 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.

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Environmental Resources Management Consulting Company was employed to determine soil and rock types. The geotechnical investigation report signed and sealed by a professional engineer registered in Kentucky 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 Company 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.

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

The foregoing document was prepared by staff at East Kentucky Network, LLC d/b/a Appalachian Wireless, and reviewed by William S. Kendrick, Attorney at Law. All related questions or correspondence concerning this filing should be mailed to East Kentucky Network, LLC d/b/a/ Appalachian Wireless, 101 Technology Trail, Ivel, KY 41642.

SUBMITTED BY: Lynn Haney DATE: 9/4/15
Lynn Haney, Regulatory Compliance Director

APPROVED BY: W.A. Gillum DATE: 9/4/2015
W.A. Gillum, General Manager

ATTORNEY: Wm. S. Kendrick DATE: 9/4/15
Hon. William S. Kendrick, 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

William S. Kendrick, Attorney
Phone: (606) 263-4943
Email: wkendrick@pennstuart.com

Mailing Address:

**East Kentucky Network, LLC
d/b/a Appalachian Wireless
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 KAZC Applications
7	Driving Directions from County Court House and Map to Suitable Scale
8	Lease 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

PCS Broadband License - WQEF975 - East Kentucky Network, LLC d/b/a Appalachian Wireless

Call Sign	WQEF975	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular
Market			
Market	MTA044 - Knoxville	Channel Block	A
Submarket	12	Associated Frequencies (MHz)	001850.00000000-001865.00000000 001930.00000000-001945.00000000

Dates

Grant	05/27/2015	Expiration	06/23/2025
Effective	05/27/2015	Cancellation	

Buildout Deadlines

1st	2nd
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Notification Dates

1st	2nd
-----	-----

Licensee

FRN	0001786607	Type	Limited Liability Company
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Licensee

East Kentucky Network, LLC d/b/a Appalachian Wireless 101 Technology Trail Ivel, KY 41642 ATTN W.A. Gillum, General Manager/CEO	P:(606)477-2355
--	-----------------

Contact

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

Radio Service Type	Mobile
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.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

Gender

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.

LIST OF PROPERTY OWNERS

Bell County
P.O. Box 339
Pineville, KY 40977

Kentucky Utilities
120 S Limestone St.
Lexington, KY 40507

Time Warner
P.O. Box 7467
Charlotte, NC 28241

Corrigan TLP
654 N State Street
Jackson, MS 39202

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
KY 41642
IE: (606) 874-7550
FAX: (606) 874-7551



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

September 3, 2015

Bell County
P.O. Box 339
Pineville, KY 40977

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2015-00128)

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 Bell County. The facility will include a 300-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land on Highnite Hollow Road, Middlesboro, Bell 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 or reside within a 500' radius of the proposed tower.

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. 2015-00128 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,

A handwritten signature in black ink that reads "Lynn Haney". The signature is written in a cursive, flowing style.

Lynn Haney
Regulatory Compliance Director
Enclosure 1



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

September 3, 2015

Kentucky Utilities
120 S Limestone Street
Lexington, KY 40507

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Lynn Haney
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
KY 41642
E: (606) 874-7550
FAX: (606) 874-7551



VIA: U.S. CERTIFIED MAIL

PUBLIC NOTICE

September 3, 2015

Time Warner
P.O. Box 7467
Charlotte, NC 28241

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Sincerely,

A handwritten signature in cursive script that reads "Lynn Haney".

Lynn Haney
Regulatory Compliance Director
Enclosure 1

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
IVEL, KY 41642
TEL: (606) 874-7550
FAX: (606) 874-7551

VIA: U.S. CERTIFIED MAIL KENTUCKY

NETWORK



PUBLIC NOTICE

September 3, 2015

Corrigan TLP
654 N State Street
Jackson, MS 39202

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Sincerely,

Lynn Haney
Regulatory Compliance Director
Enclosure 1

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

EAST KENTUCKY
NETWORK



To: The Daily News
Attn: Classifieds

From: Raina Helton
Regulatory Compliance Assistant

Email: krhymer@civitasmedia.com **Date:** September 4, 2015

Re: PUBLIC NOTICE ADVERTISEMENT **Pages:** 1

Please place the following Public Notice Advertisement in The Daily News to be ran on September 9, 2015.

PUBLIC NOTICE:

RE: Public Service Commission of Kentucky (CASE NO. 2015-00128)

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 at Highnite Hollow Road, Middlesboro, Bell County, Kentucky. The proposed tower will be a 300 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. 2015-00128.

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.

Next Generation Communications

EAST KENTUCKY NETWORK
101 TECHNOLOGY TRAIL
KY 41642
TE: (606) 874-7350
FAX: (606) 874-7351

EAST KENTUCKY
NETWORK



VIA: U.S. CERTIFIED MAIL

September 3, 2015

Albey Brock, Judge Executive
P.O. Box 339
Pineville, KY 40977

RE: Public Notice-Public Service Commission of Kentucky (Case No. 2015-00128)

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 Bell County. The facility will include a 300-foot self-supporting tower with attached antennas extending upwards, and an equipment shelter located on a tract of land on Highnite Hollow Road, Middlesboro, Bell 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 Bell 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. 2015-00128 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
Geotechnical Investigation on the
Middlesboro Site
Bell County, Kentucky
ERMC² Project No. 165-000-0003**

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

PREPARED BY:
Richard Dirk Smith PE, PLS
General Manager Appalachian Region
**ENVIRONMENTAL RESOURCES MANAGEMENT
CONSULTING COMPANY**
230 Swartz Drive
Hazard, Kentucky 41701


_____, 20215, July 9, 2015



EXECUTIVE SUMMARY

- 1.0 INTRODUCTION**
- 2.0 PROJECT DESCRIPTION**
- 3.0 SITE DESCRIPTION**
 - 3.1 General Information
 - 3.2 Surface Mining
 - 3.3 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 SHALLOW FOUNDATIONS
 - 5.4 DEEP 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 – SITE MAPS BOUNDARY MAPS & EARTHWORK

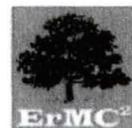


EXECUTIVE SUMMARY

A geotechnical investigation has been performed on the Middlesboro Tower site. Located near an unnamed tributary of Beans Fork in Bell County, Kentucky. This site is readily accessible. A location map is shown in Figure 1 of this report. Five (5) borings were advanced to depths ranging from 6.3 ft. to 110 ft. The following geotechnical considerations were identified:

- Borings utilized for this study encountered mine spoil to a depth of 110 ft. at which point drilling through spoil was no longer achievable due to issues encountered within the mine spoil.
- This area is a reclaimed surface mine. This area has been reclaimed as a grassland area with trees/shrub vegetation spread intermittently.
- The bearing capacity of the mine spoil is estimated at **1500 psf** with the recommended remediation.
- The 2006 International Building Code seismic site classification for this site is "D".
- Close monitoring of the construction operations discussed herein will be critical in achieving the design subgrade support. We therefore recommend that ERMC² be 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, recommendation and all other concerns.



1. INTRODUCTION

Environmental Resources Management Consultant Company (ERMC²) was retained by Mr. Marty Thacker of Appalachian Wireless to prepare a geotechnical engineering report for the proposed tower site located on the Middlesboro Site. A site location map is shown in Figure No. 1.

Five (5) borings were advanced to depths ranging from 6.3ft. to 110ft. 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 relative to subsurface conditions, earthwork, seismic considerations, groundwater conditions and foundation design.

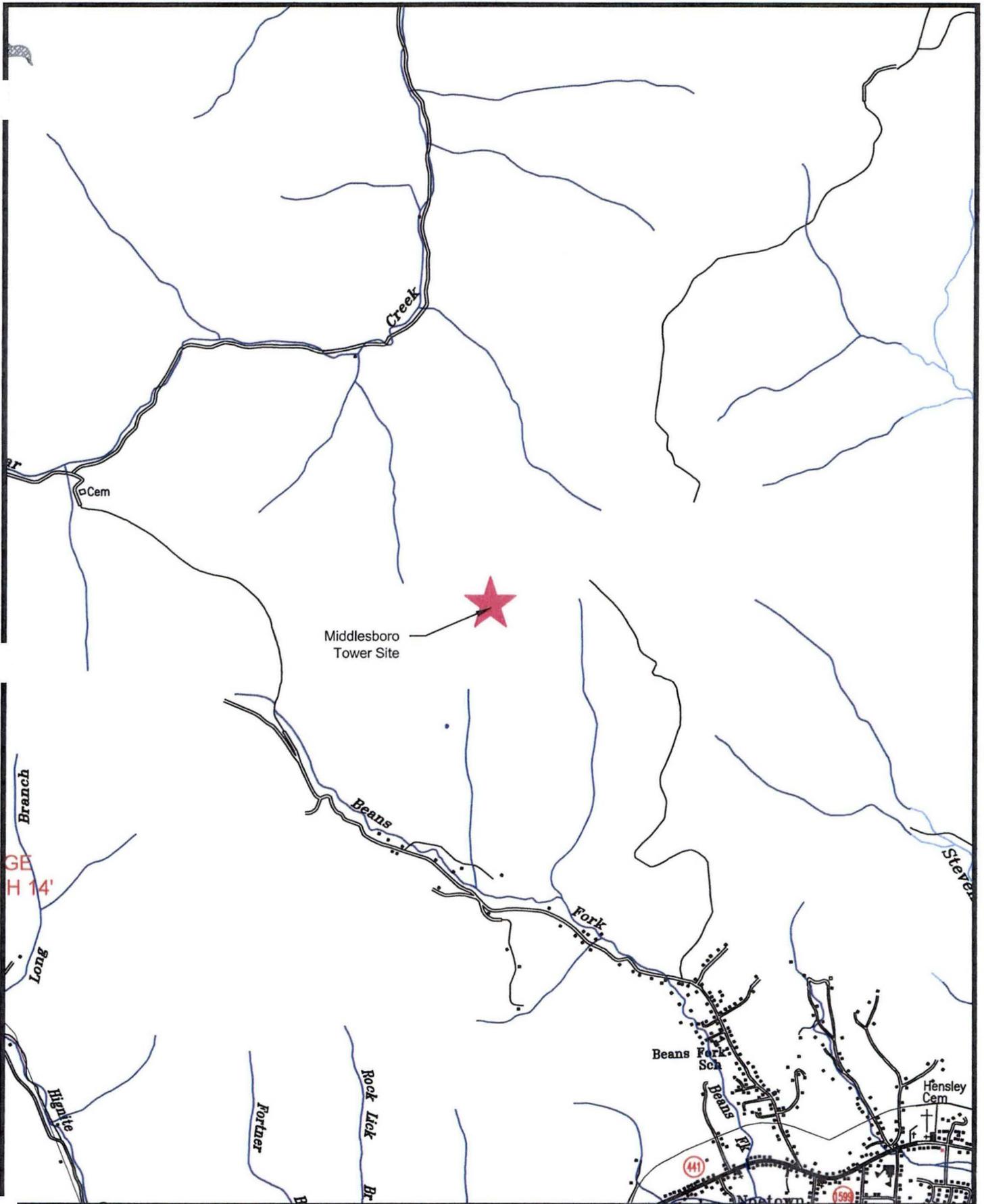
2.0 PROJECT DESCRIPTION

The proposed communication facility will consist of a self-supporting tower of undetermined height and ancillary support areas. We estimate the foundation area to be approximately 24 ft. x 24 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

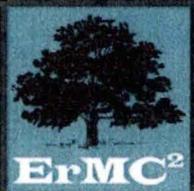
We anticipate that overturning will govern the structural design. If the loadings are significantly different than these expected values, ERMC² should be notified to reevaluate the recommendations provided in this report.



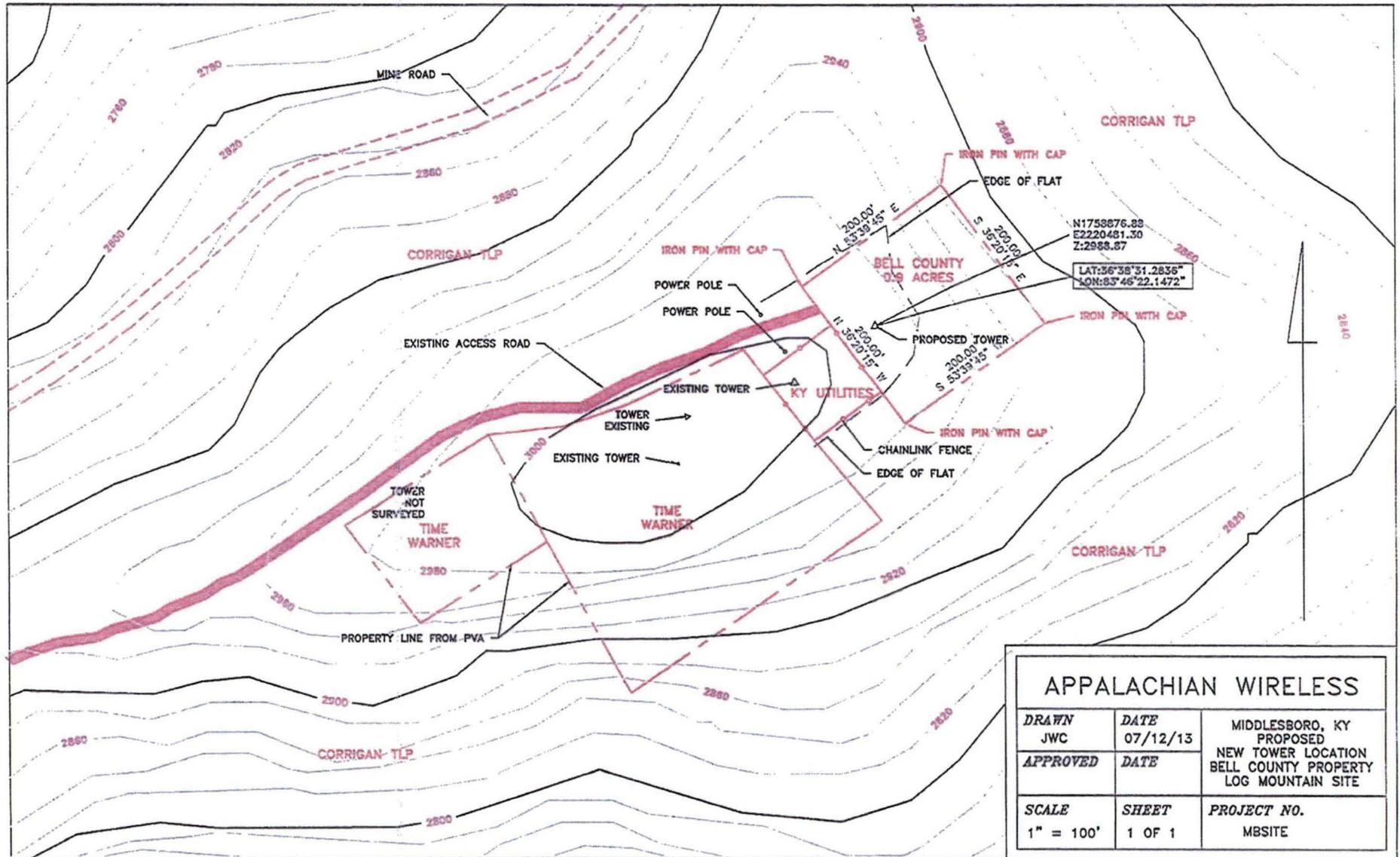


Drawn:	Date: 4/31/2015
Job:	Scale: 1"=2000'
Drawing: BORING LOCATION MAP	

Appalachian Wireless
 Figure 1
 Location Map
 Middlesboro Tower Site Map



230 Swartz Drive
 Hazard, KY 41701
 (859) 436-1111
 engineering@ermc2.us



APPALACHIAN WIRELESS		
DRAWN JWC	DATE 07/12/13	MIDDLESBORO, KY PROPOSED
APPROVED	DATE	NEW TOWER LOCATION BELL COUNTY PROPERTY LOG MOUNTAIN SITE
SCALE 1" = 100'	SHEET 1 OF 1	PROJECT NO. MBSITE

3.0 SITE DESCRIPTION & HISTORICAL MINING

3.1 GENERAL INFORMATION

The site location is in relative flat existing surface mined area. The current surface elevation is approximately 2990 ft. in elevation. The mine spoil is estimated to be 190 ft. deep. This is based upon mine mapping and site survey information below the point of refusal.

Research on the historical mining was conducted by obtaining previous mine license maps from the "Kentucky Mine Mapping Information System" (KMMIS). Other sources such as interviews with former mine personnel and historic photographs were also used to try to better determine what to extents and which seams were taken.

3.2 SURFACE MINING

The site was contoured and area mined by Appolo Fuels, Inc. Based upon mine maps obtained from Kentucky Mine Mapping Information System (KMMIS), the Red Springs coal seam was mined at an approximate elevation of $\pm 2800'$.

The Hignite B ($\pm 2400'$ elevation), Hignite A ($\pm 2350'$), Lower Hignite ($\pm 2300'$), Stray 1B ($\pm 2260'$), Stray B ($\pm 2200'$), Stray 1A ($\pm 2160'$), and Stray A ($\pm 2150'$) seams were mined by Strata Mining, Inc. using contour and auger mining methods. This mining was conducted adjacent to the proposed tower site. No mining records were found that showed contouring or augering beneath the proposed site.

Mining activities were proposed at the site under Permit No. 1152-67. This information was obtained from the KY DMP Series Overlay Maps. However, the seam(s) mined and the elevation are not known by KY Division of Mine Permits, or whether the proposed operation was ever active.

3.3 UNDERGROUND MINING

Underground mining activities have occurred beneath this proposed tower site. The Buckeye Springs Seam ($\pm 1880'$ elevation) was mined by Bell County Coal Corp. using standard room and pillar mining techniques. Based upon the



information available, no secondary mining occurred (therefore, the pillars remain).

The Hignite #4 seam (+2420' elevation) was mined by Bell County Coal Corp. using standard room and pillar mining techniques. No secondary mining was indicated on the final mine map.

The Poplar Lick seam (+2060' elevation) was mined by Del Rio, Inc. This seam was mined using standard room and pillar mining techniques. No secondary mining was indicated on the final mine map.

4.0 FIELD EXPLORATION

4.1 SITE INFORMATION

The proposed site is located on a previously surface mined area in Bell County, Kentucky. The proposed site lies within the Kayjay Quad and is located near an unnamed tributary of Beans Fork and northwest of Middlesboro. The area is relatively flat due to the previous surface mining activities and is characterized by grassy areas, along with some gravelled areas. Other towers are also constructed near the site. An estimated pad location was determined and boring locations were placed at the corners of the proposed concrete pad for the tower's support. A fifth borehole was placed between two of the corners as well.

4.2 BORING DATA

Five (5) borings were made in the relative positions shown on the Boring Location Map in Appendix A. The boring logs and resulting data are also included in Appendix A. The 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 ERMC² 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	0-1.5	3.9%
B1	3.5-5	4.3%
B2	0-1.5	11.3%
B2	8.5-10	3.1%
B2	13.5-15	6.4%
B2	18.5-20	7.2%
B2	23.5-25	7.2%
B2	28.5-30	13.6%
B2	33.5-35	12.0%
B2	38.5-40	16.6%
B2	43.5-45	11.2%
B3	0-1.5	10.2%
B3	4-5.5	5.5%
B3	9-10.5	8.9%
B3	19-20.5	7.6%
B3	14-15.5	9.9%
B4	0-1.5	3.1%
B4	4-5.5	3.0%
B5	9.5-11	8.5%
B5	19.5-21.0	21.3%



4.3 GROUNDWATER

Groundwater observations were made during the drilling operations (by noting the depth to water on the drilling tools) and in the open boreholes following withdrawal of the drilling augers. No groundwater levels were noted during drilling activities.

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 Kentucky Building Code. In addition, a S_{DS} coefficient of 0.398g was calculated, and a S_{D1} coefficient of 0.167g 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 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 attempt 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.

Approximately 190 feet of mine spoil is present at this proposed location. It consists of mixture of shale, sandstones and clay material. Standard penetrations test we conducted on five foot interval on this material. If shallow



footings are used the expected depth of excavations will not exceed 20 ft. in depth.

The approximate elevations of the surface of the site are 2990 ft. The first four feet of material consisted primarily of gravel to an elevation of 2986 ft. The standard penetration test we conducted on five foot intervals below this level. The blow counts (N) ranged from 6 to greater than 30 to the depth of 25 feet.

5.3 SUBSIDENCE

Based upon our research there has been considerable historical underground mining in the Buckeye Springs, Hignite #4, and the Poplar Lick seams. These mines range in a depth from 570 ft. to 1100 ft. under the footprint of the site. The reviewed mine records demonstrate no secondary mining. Due the overall depth and that no retreat mining was conducted, subsidence should not be an issue at this site.

There has also been historical surface mining in the Red Springs and Hignite B seams. Based upon the available mapping and boring results, the Red Springs Seam has been surfaced mine leaving a mine pit floor approximately 190 ft. below the proposed foundation's area. The Hignite B Seam was mined in the adjacent areas but not below the foundation's area. Evidence of augering was found adjacent to the tower site in the Hignite Seam, however the area within the footprint of the proposed tower appear to have been outside the mining area.

5.4 SHALLOW FOUNDATIONS

Typically we do not recommend shallow foundations on sites consisting of mine spoil. Due to the depth of spoil, significant 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. When conducting the boring, boulders were encountered directly beneath the proposed tower site. Based upon the laboratory and field testing, visual inspection of the materials and



practical experience we have estimated that the bearing capacity of the soils to be at **1,500 psf** with the recommended remediations.

If shallow foundations are used we recommend that site be over excavated to a minimum of 10 ft. below the footing subgrade and 10 ft. outside the footing area. If large rocks are encountered at this depth, it is recommended that excavation should be conducted down an additional 10 feet to reduce the potential for differential settlement of the foundation. 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 in accordance with the standard Proctor dry unit weight (ASTM D-968) and within +2% and -2% of the optimum moisture content. This will not eliminate the potential for settlement but should assist in limiting differential settlement under the proposed foundation.

5.5 DEEP FOUNDATIONS

The estimated depth of the mine spoil at this site is approximately 190 feet. This estimate was determined by drilling to a depth of 110 feet, reviewing all available mine mapping information, and interviewing local mining personnel. Due to the depth of the mine spoil, deep foundations will not be economically feasible.

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 ERMC² 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.

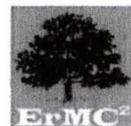
The boring log includes sampling information, description of the materials recovered, approximate depth of boundaries between soil and rock strata and groundwater data. The boring log represents conditions specifically at the location and time the boring was made. The boundaries between different soil 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 for the measured water level to coincide with the groundwater table.

6.2 LABORATORY AND FIELD TESTS

Laboratory and field tests are performed in accordance with specific ASTM standards unless otherwise indicated. All determinations included in a given ASTM standard are not always required and performed. Each test report indicates the measurements and determinations actually 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 on 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.

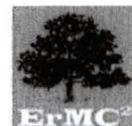
The geotechnical engineering report states our understanding as to the location, dimensions and structural features proposed for the site. Any significant changes in the nature, design, or location of the site improvements **MUST** be communicated to the geotechnical engineer such that the geotechnical 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 Middlesboro Property in Bell 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 own conclusions regarding specific construction techniques and methods chosen. ERMC² 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 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

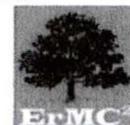
Prior to bidding the work, the Contractor shall examine, investigate and inspect the construction site as to the nature and location of the work, and the general and local conditions at the construction site, including without limitation, the character of surface or subsurface conditions and obstacles 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 on the basis of 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 at this time. 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

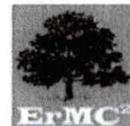
Fills shall be formed of satisfactory materials placed in successive horizontal layers of not more than eight (8) inches in loose depth for the full width of the cross-section. The depth of lift may be increased if the Contractor can demonstrate the ability to compact a larger lift. If compaction is 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 at all times.

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 at all times during benching and filling of the benches, to insure 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 with regard to 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 (at all times 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.

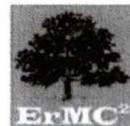
Contractor shall coordinate the work specified in this section with that specified in other sections so that all anchors, pipes and other embedded items are properly installed before concrete is placed.

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 handles 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 effect 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 ASTH 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, waterstops, 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 so as 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 insure 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 so as 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 so as to be free from voids, pockets or honeycombing. Particular care shall be taken to provide impermeability.

- E. Vibration Equipment: Vibration equipment shall be of the appropriate type and shall, at all times, 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 in order 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.

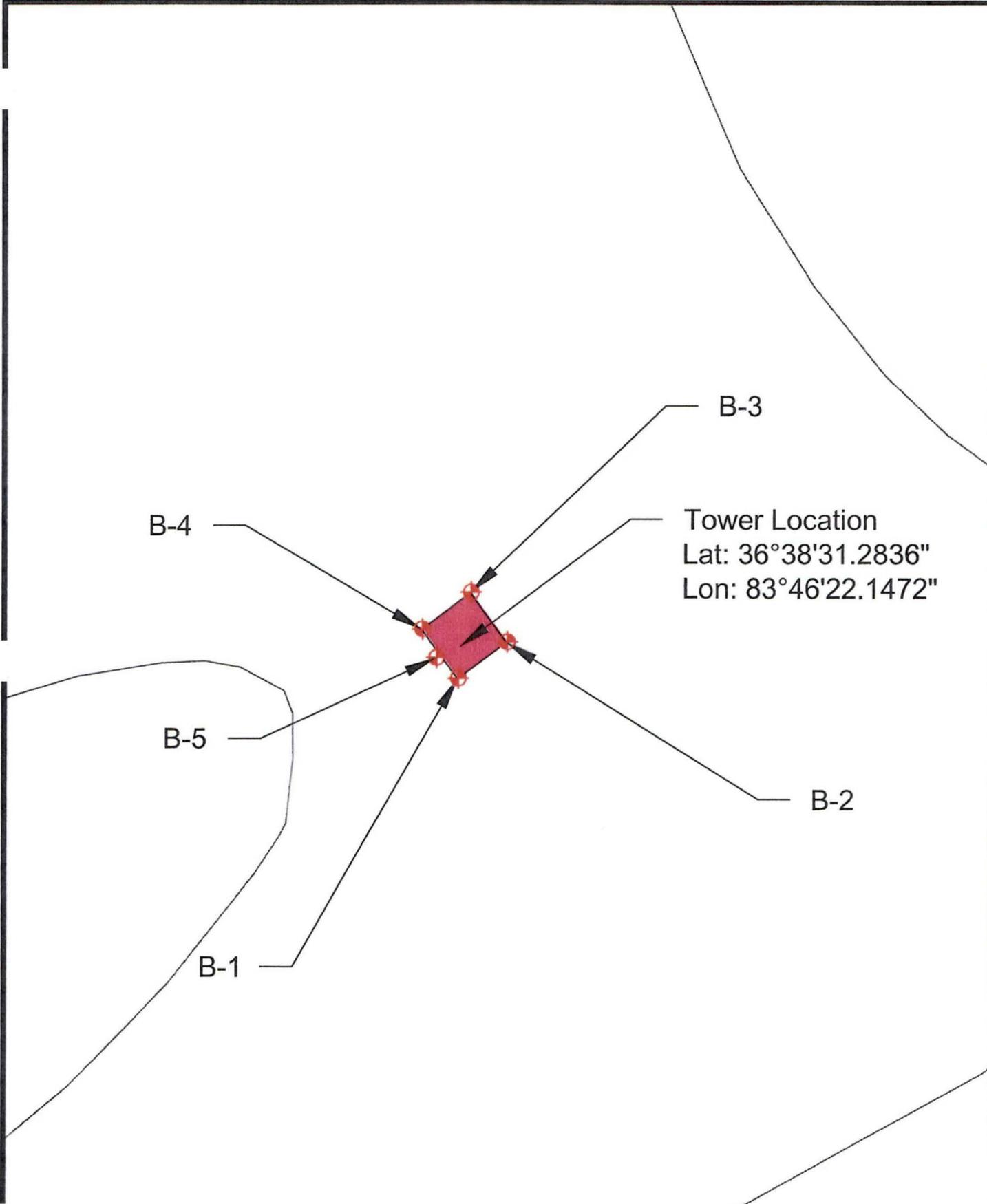
Finished work shall be level and plumb, true to lines, and dimensions. Finished plane surfaces shall be smooth, and as nearly perfect as practical; however deviations from a true plane shall not exceed 1/8 inch when measured from a 6-foot straight edge placed against the surface to any point on the surface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

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



APPENDIX A BORING DATA AND TESTING





Drawn:	Date: 6/23/2015
Job: 165-000-0003	Scale: 1"=50'
Drawing: BORING LOCATION MAP	

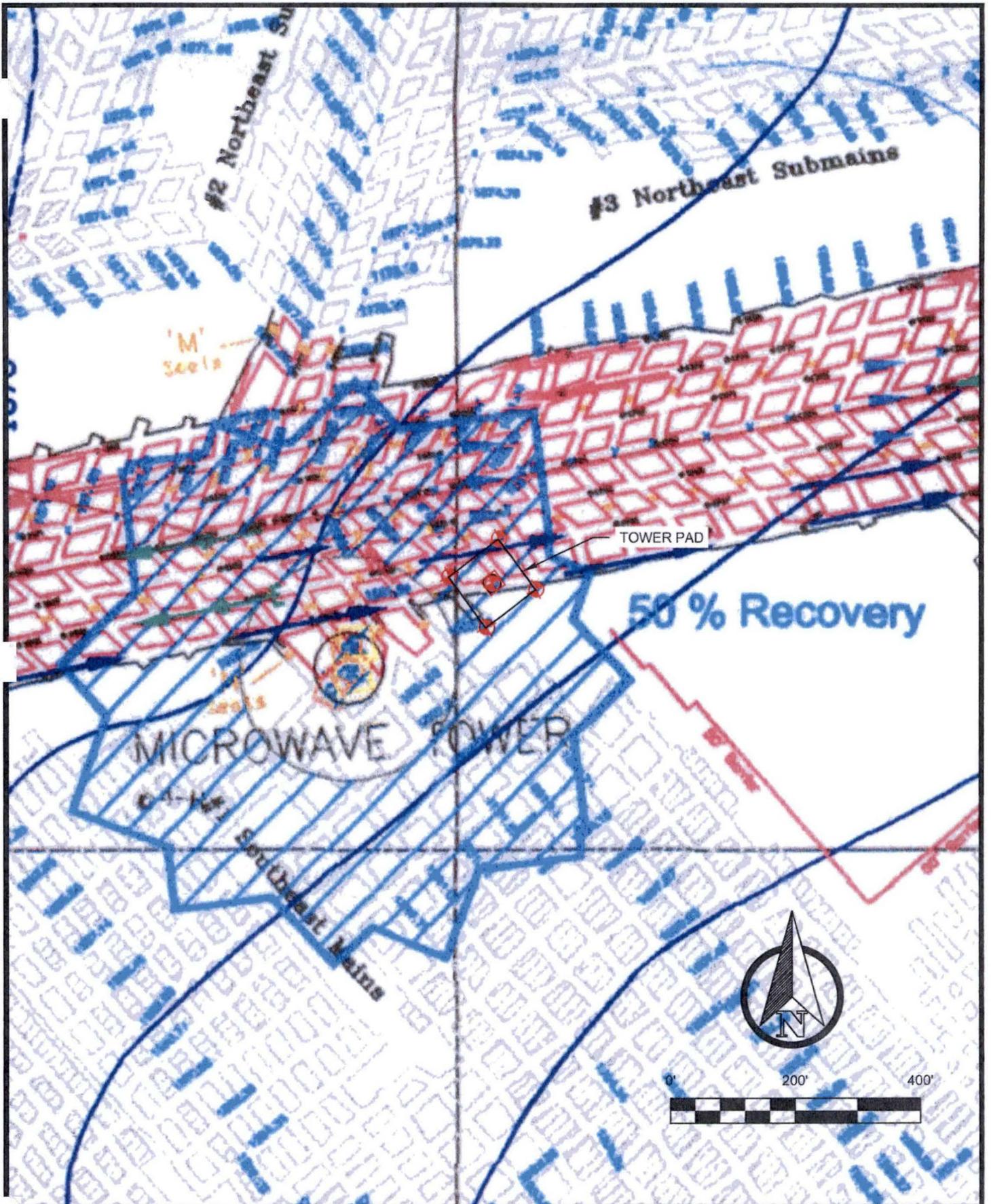
Appalachian Wireless
 Middlesboro Tower Site
 Boring Locations Map



230 Swartz Drive
 Hazard, KY 41701
 (859) 436-1111
 engineering@ermc2.us

APPENDIX B MAPS





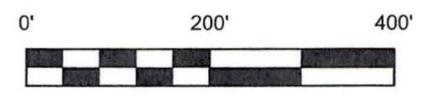
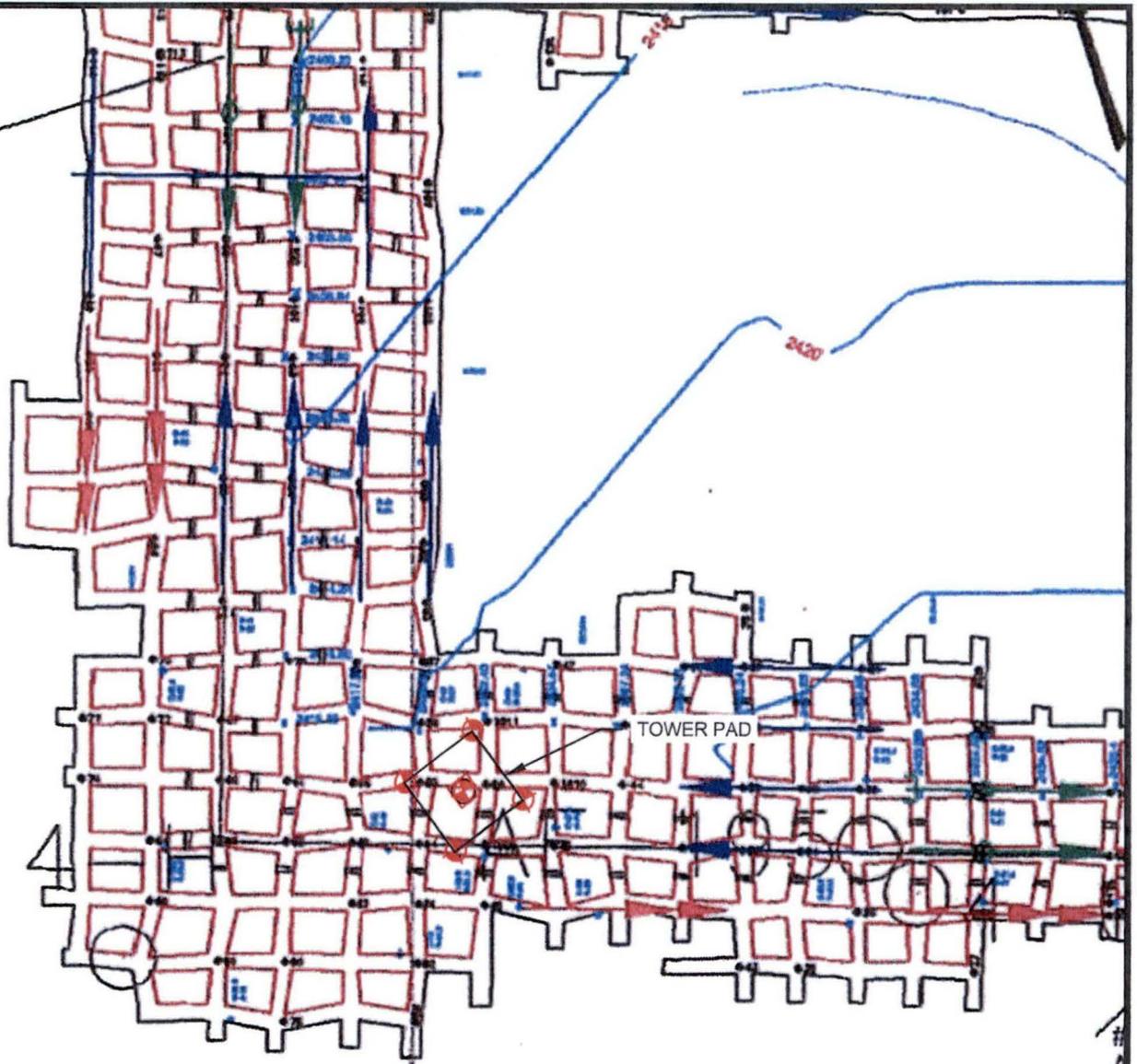
Drawn:	Date: 6/30/15
Job:	Scale: 1"=200'
Drawing: PREVIOUS MINING	

Appalachian Wireless
 Previous mining by Bell County Coal Corp.
 Seam Mined & Elev.: Buckeye Springs ~1880'
 Middlesboro Tower Site



230 Swartz Drive
 Hazard, KY 41701
 (859) 436-1111
 engineering@ermc2.us

LT
HT. 70'
CITY: 76 FPM

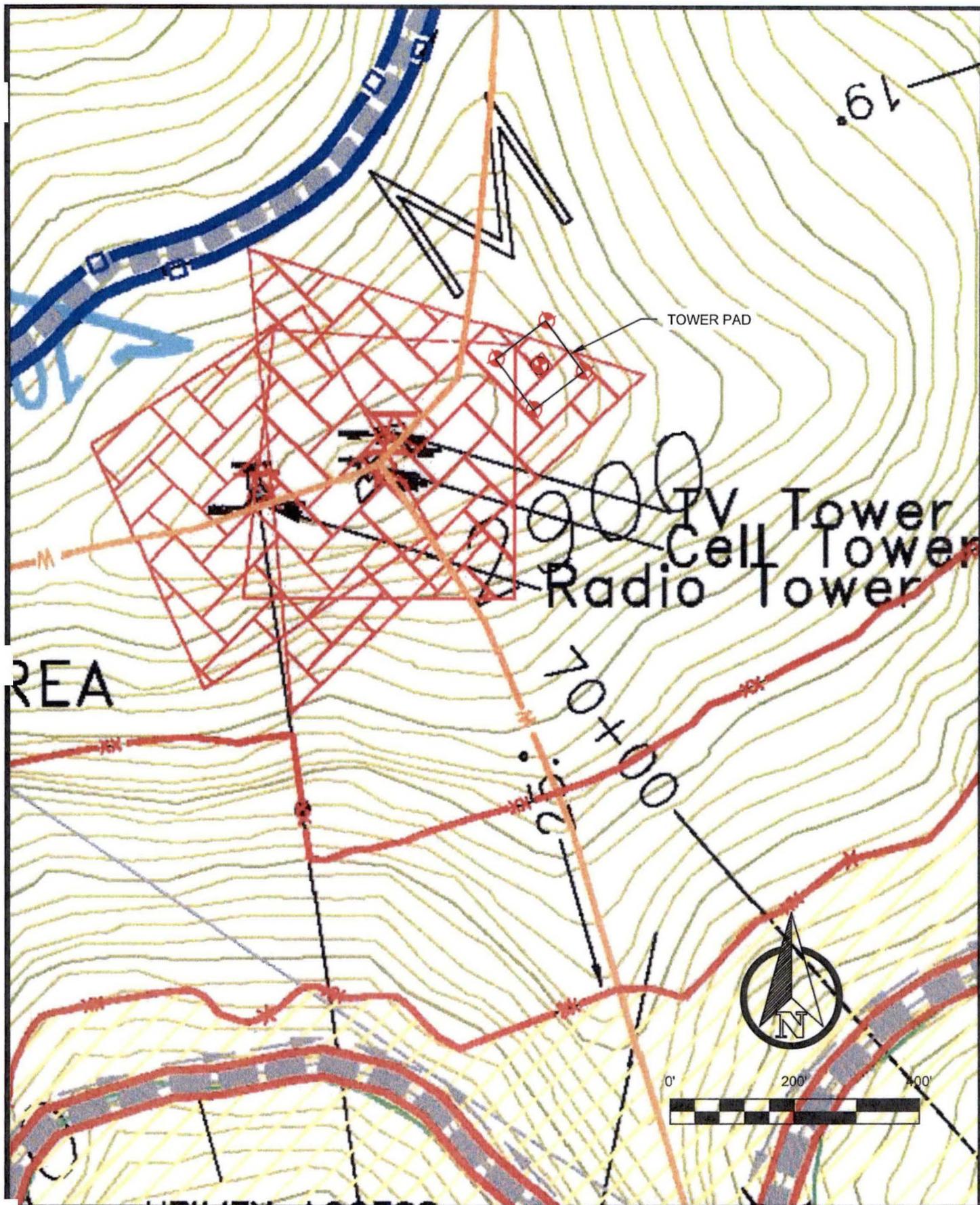


Drawn by:	Date: 6/30/15
Job:	Scale: 1"=200'
Drawing: PREVIOUS MINING	

Appalachian Wireless
Previous mining by Bell County Coal Corp.
Seam Mined & Elev.: Hignite #4 ~2420'
Middlesboro Tower Site



230 Swartz Drive
Hazard, KY 41701
(859) 436-1111
engineering@ermc2.us

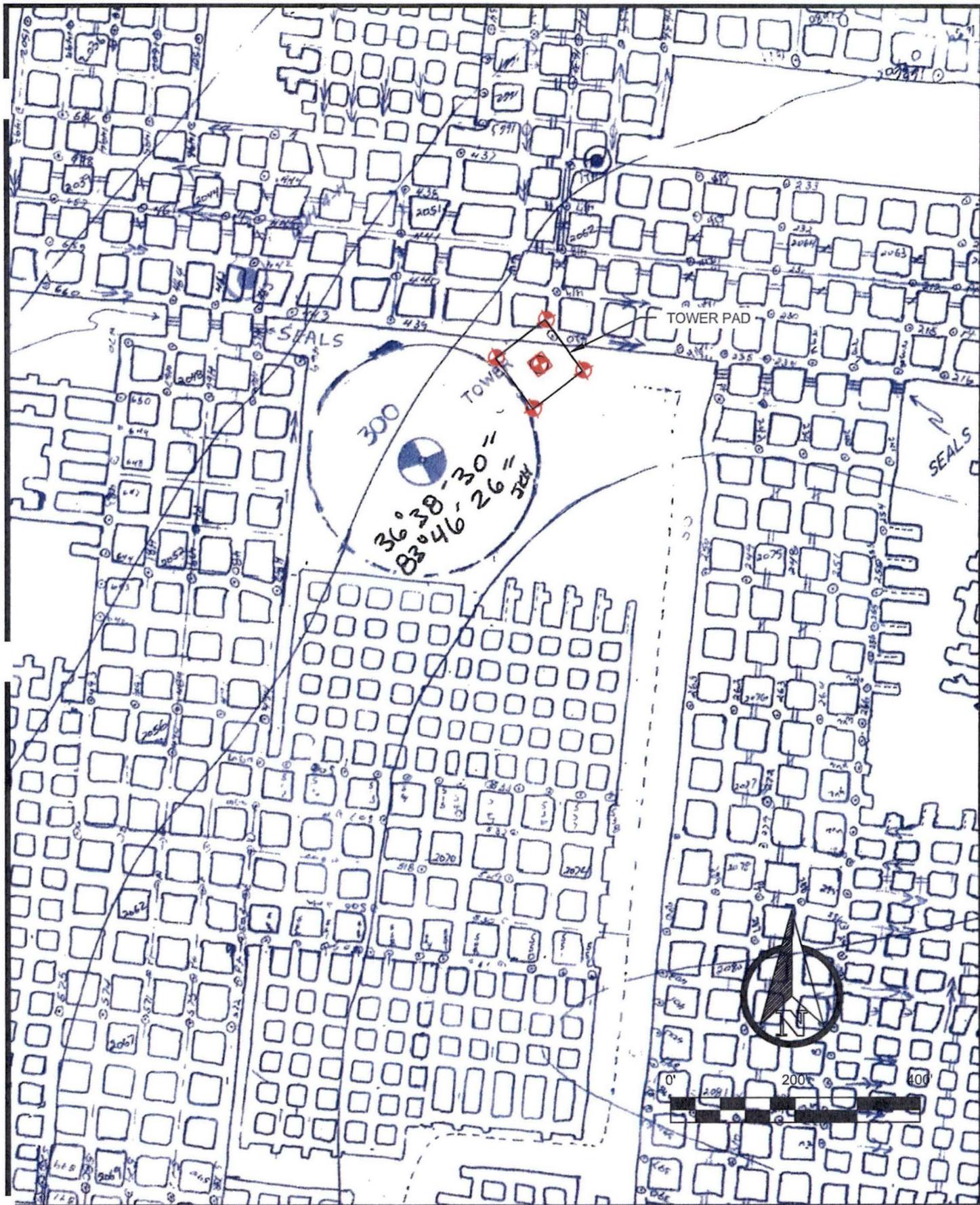


Drawn:	Date: 6/30/15
Job:	Scale: 1"=200'
Drawing: PREVIOUS MINING	

Appalachian Wireless
 Previous mining by Strata Mining, Inc.
 Seam Mined & Elev.: Hignite B ~2400'
 Middlesboro Tower Site



230 Swartz Drive
 Hazard, KY 41701
 (859) 436-1111
 engineering@ermc2.us

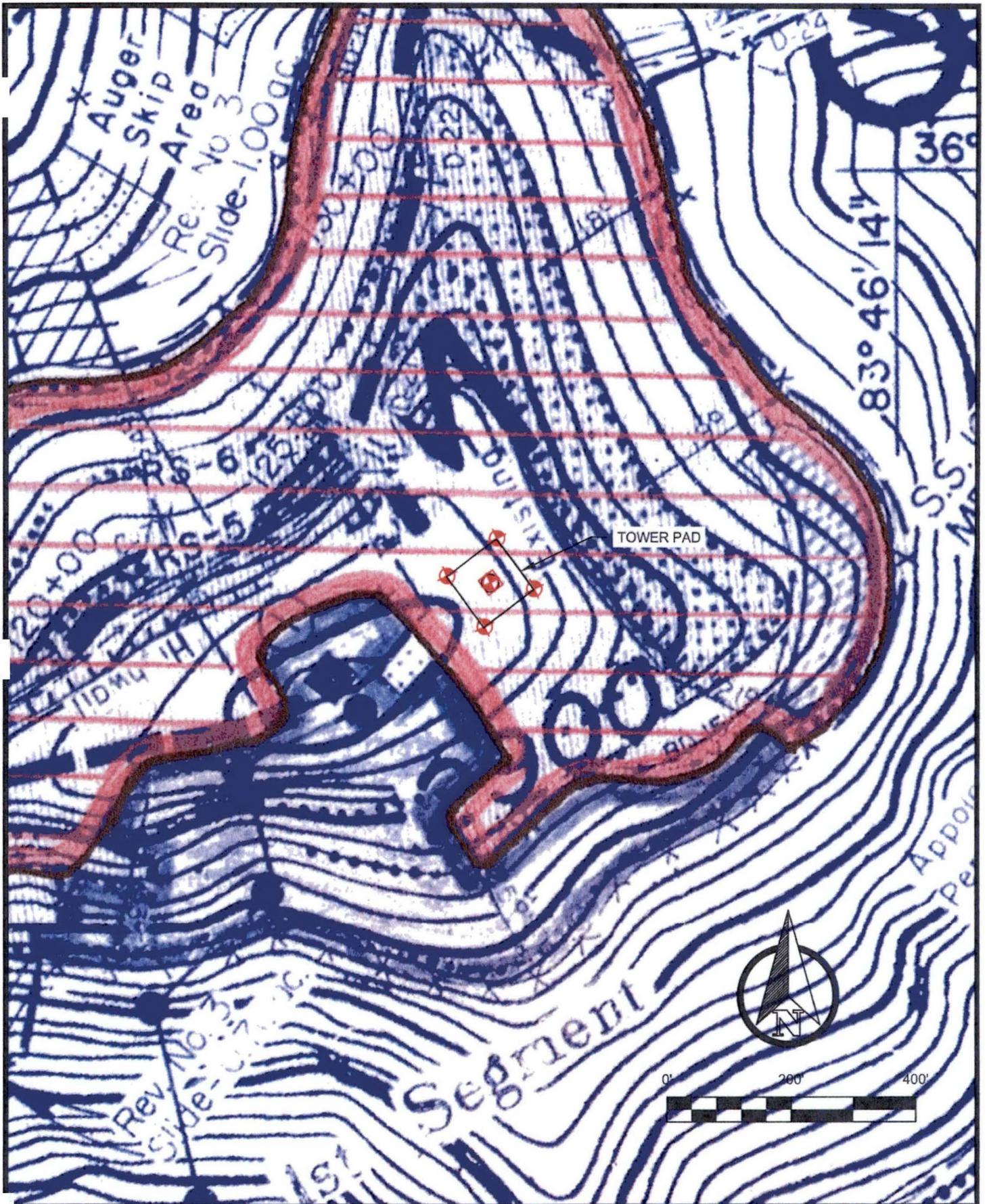


Drawn:	Date: 6/30/15
Job:	Scale: 1"=200'
Drawing: PREVIOUS MINING	

Appalachian Wireless
 Previous mining by DEL RIO, INC.
 Seam Mined & Elev.: Poplar Lick ~2060'
 Middlesboro Tower Site

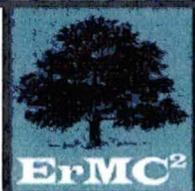


230 Swartz Drive
 Hazard, KY 41701
 (859) 436-1111
 engineering@ermc2.us

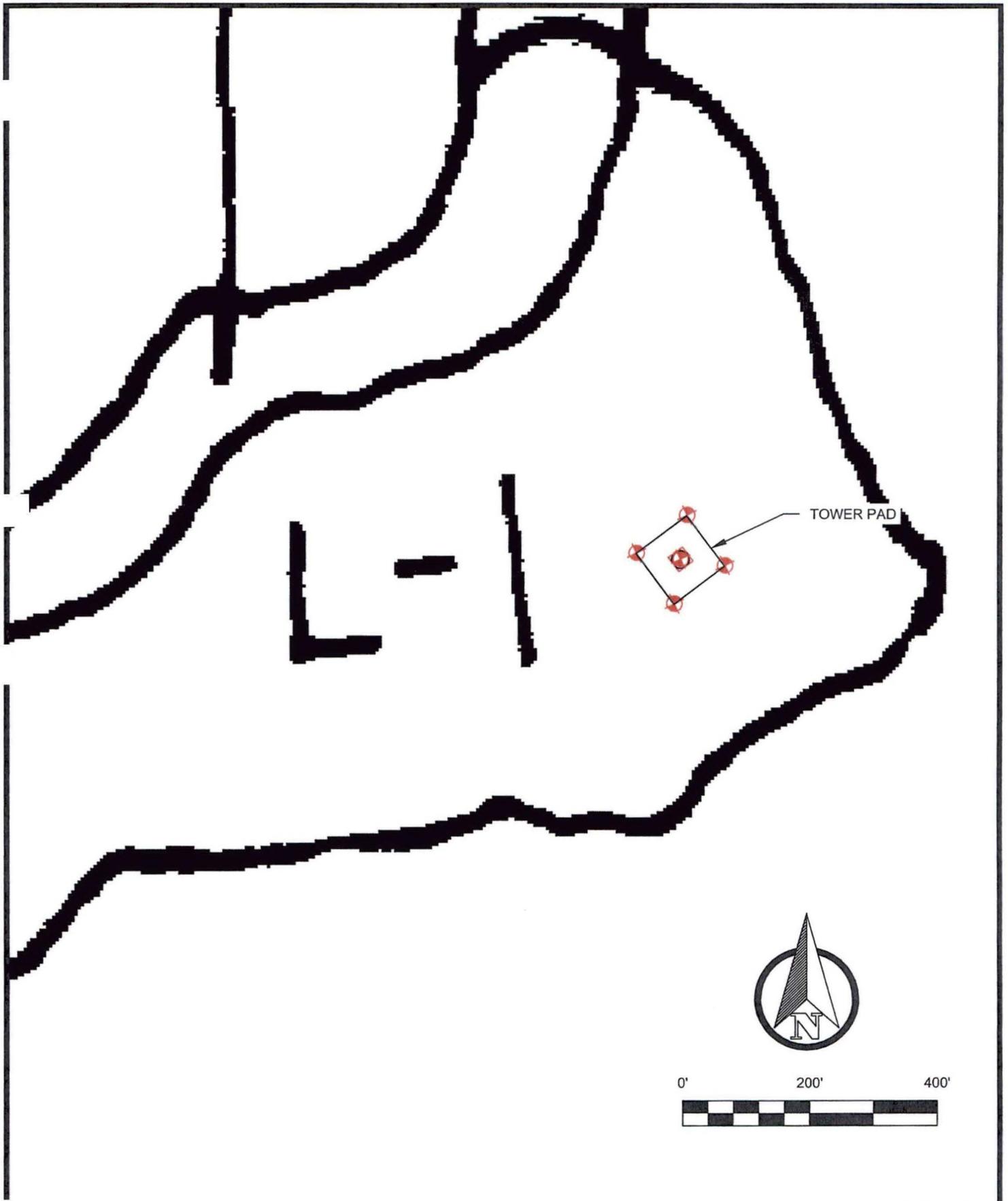


Drawn:	Date: 6/30/15
Job:	Scale: 1"=200'
Drawing: PREVIOUS MINING	

Appalachian Wireless
 Previous mining by Appolo Fuels Inc.
 Seam Mined & Elev.: Red Springs ~2800'+/-
 Middlesboro Tower Site



230 Swartz Drive
 Hazard, KY 41701
 (859) 436-1111
 engineering@ermc2.us

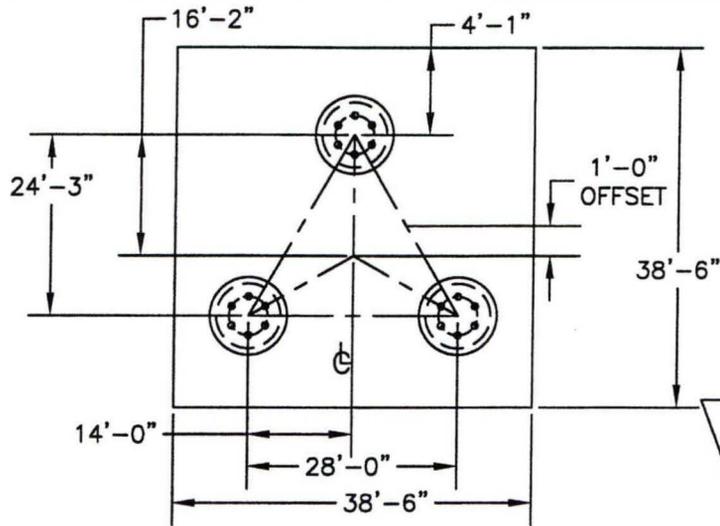


Drawn:	Date: 6/18/15
Job:	Scale: 1"=200'
Drawing: PREVIOUS MINING	

Appalachian Wireless
 Previous permit boundary lines as shown on the
 KY DMP Series Overlay Maps.
 L= Permit No. 1152-67
 Seam Mined and Elev. not known by KY DMP
 Middlesboro Tower Site

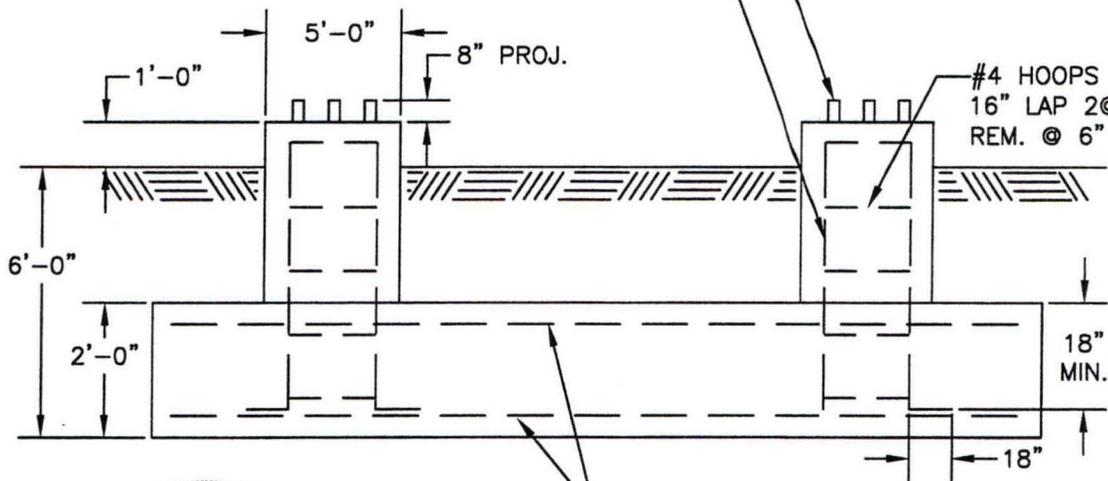


230 Swartz Drive
 Hazard, KY 41701
 (859) 436-1111
 engineering@ermc2.us



120.7 CU. YDS.
CONCRETE REQ'D.

BASE REACTIONS	
OTM:	12545.0 FT. KIPS
COMP.	547.0 KIPS
UPLIFT	471.0 KIPS
SHEAR (3 LEGS)	82.0 KIPS
WT. NO ICE	91.0 KIPS
WT. 3/4" ICE	277.0 KIPS



20 #8 VERT. REBARS
WITH 90° A.C.I. BEND
AT BOTTOM

ANCHOR BOLTS
EMBEDDED PLATE AT BOTTOM

#4 HOOPS WITH
16" LAP 2@3",
REM. @ 6"

39-#10 REBARS
EACH WAY TOP AND BOTTOM
(156 TOTAL)



GENERAL NOTES

1. CONCRETE TO HAVE 4000 PSI MIN. COMPRESSIVE STRENGTH AFTER 28 DAYS.
2. ALL REINFORCMENT STEEL IS DEFORMED AND MEETS THE STRENGTH REQUIRMENTS OF ASTM A615 GRADE 60.
3. EMBEDDED STEEL TO HAVE 3" MIN. CONCRETE COVER.
4. FOUNDATION IS BASED UPON CUSTOMER SUPPLIED SOILS BY ErMC2. PROJECT NUMBER 165-000-0003 DATED JULY 9, 2015.

TITLE: FOUNDATION DETAIL
300' WSST TOWER
FOR: APPALACHIAN WIRELESS
SITE: MIDDLESBORO
BELL COUNTY, KY

WORLD TOWER

SCALE NONE | DWN. LKG | CKD. | DATE 8-7-15
FILE | DWG. NO. Q15575F



Notice of Proposed Construction or Alteration - Off Airport

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

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

Project Name: EAST -000338575-15

Sponsor: East Kentucky Network, LLC

Details for Case : Middlesboro

Show Project Summary

Case Status

ASN:	2015-ASO-13540-OE	Date Accepted:	08/21/2
Status:	Accepted	Date Determined:	
		Letters:	None
		Documents:	08/21/2
Public Comments:	None		
			Project [
			None

Construction / Alteration Information

Notice Of:	Construction
Duration:	Permanent
if Temporary :	Months: Days:
Work Schedule - Start:	09/25/2015
Work Schedule - End:	09/30/2015
<i>*For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.</i>	
State Filing:	Filed with State

Structure Summary

Structure Type:	Tower
Structure Name:	Middlest
FDC NOTAM:	
NOTAM Number:	
FCC Number:	
Prior ASN:	

Structure Details

Latitude:	36° 38' 31.43" N	Common Frequency Bands	
Longitude:	83° 46' 22.20" W	Low Freq	High Freq
Horizontal Datum:	NAD83	698	806
Site Elevation (SE):	2989 (nearest foot)	806	824
Structure Height (AGL):	310 (nearest foot)	824	849
Current Height (AGL):	(nearest foot)	851	866
<i>* For notice of alteration or existing provide the current AGL height of the existing structure. Include details in the Description of Proposal</i>		869	894
		896	901
		901	902
		930	931
		931	932
Minimum Operating Height (AGL):	(nearest foot)	932	932.5
<i>* For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum</i>		935	940
		940	941
		1850	1910

operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.

1930	1990
2305	2310
2345	2360

Specific Frequencies

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

Requested Marking/Lighting: Dual-red and medium intensity

Other :

Recommended Marking/Lighting:

Current Marking/Lighting: N/A Proposed Structure

Other :

Nearest City: Middlesboro

Nearest State: Kentucky

Description of Location: Approx. 3.5 miles NW of
On the Project Summary page upload any certified survey. Middlesboro (Bell), KY

Description of Proposal: A new 300' tower with
top-mounted antennas (overall
height of 310' AGL)

[Previous](#) [Back to Search Result](#) [Next](#)



KENTUCKY AIRPORT ZONING COMMISSION

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 #	
ADDRESS (street) 8300 Greensboro Dr, #1200		CITY McLean		STATE VA	ZIP 22102
APPLICANT'S REPRESENTATIVE (name) Ali Kuzehkanani		PHONE 703-584-8667	FAX 703-584-8692		
ADDRESS (street) 8300 Greensboro Dr, #1200		CITY McLean		STATE VA	ZIP 22102
APPLICATION FOR <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing				WORK SCHEDULE	
DURATION <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days)				Start 09/25/15 End 09/30/15	
TYPE <input type="checkbox"/> Crane <input type="checkbox"/> Building <input checked="" type="checkbox"/> Antenna Tower <input type="checkbox"/> Power Line <input type="checkbox"/> Water Tank <input type="checkbox"/> Landfill <input type="checkbox"/> Other		MARKING/PAINTING/LIGHTING PREFERRED <input type="checkbox"/> Red Lights & Paint <input type="checkbox"/> White- medium intensity <input type="checkbox"/> White- high intensity <input checked="" type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white <input type="checkbox"/> Other			
LATITUDE 36°38'31.43"		LONGITUDE 83°46'22.20"		DATUM <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27 <input type="checkbox"/> Other	
NEAREST KENTUCKY City Middlesboro County Bell		NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT Middlesboro-Bell County Airport			
SITE ELEVATION (AMSL, feet) 989		TOTAL STRUCTURE HEIGHT (AGL, feet) 310		CURRENT (FAA aeronautical study #)	
OVERALL HEIGHT (site elevation plus total structure height, feet) 3299				PREVIOUS (FAA aeronautical study #)	
DISTANCE (from nearest Kentucky public use or Military airport to structure) 3.0 mi				PREVIOUS (KY aeronautical study #)	
DIRECTION (from nearest Kentucky public use or Military airport to structure) NW					
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. 3.5 miles NW of Middlesboro (Bell), 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? 08/21/15					
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 li Kuzehkanani	TITLE Dir of Engineering	SIGNATURE <i>Ali Kuzehkanani</i>		DATE 08/21/15	
COMMISSION ACTION <input type="checkbox"/> Chairperson, KAZC <input type="checkbox"/> Administrator, KAZC					
<input type="checkbox"/> Approved	SIGNATURE		DATE		
<input type="checkbox"/> Disapproved					

Driving Directions for Middlesboro Site

Beginning in front of the Courthouse in Bell County on the corner of Kentucky Ave. and Pine Street go one tenth of a mile and turn right onto 25E. Stay on 25E for 11 and 5/10 miles, and then turn right onto 74W. Go 5.4 miles then turn onto Highnite Hollow Rd (signs posted here). Go 1 mile until road turns into private drive then 4.6 miles and turn right. Go 5/10 of a mile until you reach the site (signs will be posted).

Prepared By:

Daryl Bartley
Appalachian Wireless
(606) 791-0310

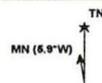
Search Area Map For Middlesboro KY.



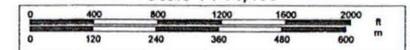
Data use subject to license.

© DeLorme. Topo North America™ 9.

www.delorme.com



Scale 1 : 14,400



1" = 1,200.0 ft

Data Zoom 14-3

LEASE AGREEMENT

THIS LEASE AGREEMENT is made and executed on the 30th day of October, 2014, with a commencement date of November 1, 2014, by and between County of Bell, Kentucky, a political subdivision of the Commonwealth of Kentucky, with a mailing address of P.O. Box 339, Pineville, KY 40977; hereinafter referred to as "Lessor" and East Kentucky Network, LLC d/b/a Appalachian Wireless, 101 Technology Trail, Ivel, Kentucky 41642, hereinafter referred to as "Lessee:"

WITNESSETH:

That for and in consideration of the rents and other considerations hereinafter set forth and subject to the terms and conditions therefore, Lessor does hereby verify that it has the right, title and interest to lease, let and demise unto Lessee, its successors and assigns, to have and to hold for the term hereinafter set out and subject to the Lessee's right to surrender or terminate this Lease provided hereinafter, a portion of that certain tract of real estate located in Middlesboro, Kentucky, more particularly described below and further identified on Exhibits A and B attached hereto and made a part hereof (hereinafter referred to as the "Premises");

Unless otherwise stated, any Iron Pin and Cap set mentioned is a set $\frac{1}{2}$ " Diameter, 24" Long Steel Pin with a 1" Yellow Plastic Cap Stamped "PLS 3454"

Beginning at an Iron Pin and Cap set in the Southwest corner of the tract being severed thence N 27 ° 45' 14" W passing an iron pin found at 45 feet and another found at 145 feet both common corners between Corrigan and a tract that was described to Kentucky Utilities in Deed Book 330, Page 559 for a total distance of 200.00 feet to a point;

Thence N 62° 14' 46" passing an iron pin and cap at 1/50 feet as set as a reference for a total of 200.00 feet to an iron pin and cap set;

Thence N 27° 45' 14" W, 200.00 feet to an Iron Pin and cap set;

Thence S 62° 14' 46" W, 200.00 feet to the point of beginning containing 0.92 acres as surveyed by Dempsey Miracle Jr. PLS 3454.

Together with that certain non-exclusive easement for ingress and egress to the property herein conveyed across the lands of the Lessor by way of the established way or tract located upon the lands of the Lessor.

Being a portion of the same property conveyed to Lessor by Corrigan TLP, LLC in Special Warranty Deed dated December 19, 2012, and recorded in Deed Book 358, Page 340 in the Bell County Clerk's Office.

The Lessor grants unto Lessee full and complete right of ingress, egress and regress over roads located upon this property controlled by Lessor to and from the Premises and the non-exclusive right to use any existing road located on this property. It is understood that either party has the right to, but not the obligation to perform maintenance on said existing access road. In the event the Lessee desires to relocate all or any portion of an existing roadway or to construct another access road to the Premises, the location of such roadway shall be mutually agreed upon by Lessor and Lessee. Lessor further grants to the Lessee a right of way and easement to construct and maintain and operate telephone and power transmission lines over Lessor's property to the Premises for service of the tower and related facilities, said lines to be located where feasible along the access road to the Premises, with Lessor having input as to location of said power transmission lines in the event Lessee changes the location of its access road. Lessee shall have the right to trim or remove trees, limbs or underbrush, which interferes with its access road or power/telephone lines wherever such road and lines are located.

This Lease is made on the following terms and conditions:

1. TERM OF LEASE. The term of this lease shall be for a period of five (5) years from the commencement date of this Lease Agreement (the "Initial Term"), with an allowance of an additional seven (7) automatic renewals of five (5) years each, unless Lessee provides sixty (60) days written notice that it does not wish to renew.

2. CANCELLATION. Lessee shall have the right to terminate this Lease and abandon the Premises at any time under its sole discretion, upon six (6) months written notice to Lessor of its intention to do so. In the event that Premises fail the process for approval as an acceptable cellular tower site by the Federal Communications Commission or any tests or requirements as required for such approval (the "FCC Process") or approval by the Public Service Commission of Kentucky (the "PSC"), then this Lease Agreement may be terminated by Lessee upon thirty (30) days written notice of such intention. In the event that Lessee terminates this Agreement and no longer has a need for the tower, it shall be donated to Lessor, and Lessor shall assume all responsibility for said tower and access road. However, in the event that Lessor no longer desires to utilize Lessee's tower for its 911 equipment, Lessee will begin paying a predetermined monthly amount for use of the land and right of way for the access road as described in Section 3 of this Lease Agreement.

3. CONSIDERATION. In consideration for leasing the Premises to Lessee, Lessor shall have the right to install and maintain equipment on Lessee's tower and space inside Lessee's building for use in connection with Bell County 911 services, at no charge to Lessor. The tower space shall be at 200 feet elevation and 150 feet elevation, and is more particularly described and highlighted in yellow on Exhibit C, attached hereto. Lessee will further provide space in its building for Lessor. This space shall be

approximately 8'x12', with its own entrance and access to Lessee's 30 KW generator.

In the event that Lessor no longer desires to utilize Lessee's tower for its 911 equipment, Lessee will begin paying the predetermined amount of five hundred dollars (\$500.00) per month for the remainder of this Lease Agreement.

4. USE OF PREMISES. Lessee shall have the exclusive rights and privileges of the use of the Premises for the purpose of constructing buildings, towers and other related facilities, including, but not limited to telephone lines, coaxial lines, power lines and installation of any other equipment deemed necessary by Lessee to receive and transmit electronic signals in the service area to be served by the facility. The parties hereto recognize that technology in the communications field is advancing at a rapid rate and that this site may be used for any other purpose deemed necessary to carry out the objectives of Lessee, that being to transmit and receive signals and communications by wire, fiber optics, radio and satellite. Lessee shall not use the Premises for purposes other than maintenance or as a site for communications by the use of methods now or hereafter known.

5. INDEMNITY. The parties agree to indemnify and save harmless each other from any liability by virtue of activities upon the Premises or in the exercise of any rights and privileges granted herein, specifically including but not limited to any claim, loss, fine, penalty and costs (including reasonable attorney's fee) arising out of any violation of any environmental laws or regulations. This provision shall survive the termination of the Lease. Lessee shall maintain and keep in full force and effect public liability and property damage insurance in an amount of at least One Million Dollars (\$1,000,000.00).

6. TAXES. Lessee shall pay all personal property taxes assessed on or any portion of such taxes attributable to the equipment used by Lessee on the Premises. Lessor shall pay when due all real property taxes and all other fines and assessments attributable to the Premises. Lessee shall reimburse the Lessor additional compensation for any increase in real estate taxes levied against the Lessor which are attributable to or arise as a result of the improvements constructed by the Lessee, its successors or assigns.

7. NOTICES. All notices, demands, or other writings in this Lease Agreement provided to be given, made or sent, or which may be given or made or sent, to either party hereto to the other, shall be deemed to have been fully given or made or sent when made in writing and deposited in the United States Mail, certified and postage prepaid as follows:

Lessor:

Bell County Kentucky Judge Executive
P.O. Box 339
Pineville, KY 40977

Lessee:

Appalachian Wireless
Attn: Regulatory Compliance Department
101 Technology Trail
Ivel, KY 41642

Such addresses may be changed by written notice given by such party as above provided.

8. MODIFICATION. This Lease may be amended or modified only by a written instrument executed by Lessor and Lessee hereto.

9. GOVERNING LAW. Lessor and Lessee agree that this Lease shall be construed and enforced in accordance with the laws of the Commonwealth of Kentucky.

10. **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.

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

LESSOR:

COUNTY OF BELL, KY

By Albery Brock
Its Judge Executive

COMMONWEALTH OF KENTUCKY
COUNTY OF Bell

The foregoing instrument was acknowledged before me on this 30th day of October, 2014, by Albery Brock, Judge Executive, for County of Bell, Kentucky, Lessor.

Ramin J. Bradley
Notary Public

My Commission Expires July 3, 2016

LESSEE:

EAST KENTUCKY NETWORK, LLC

By WA Gillum

Its CEO/GM

COMMONWEALTH OF KENTUCKY
COUNTY OF Floyd

The foregoing instrument was acknowledged before me on this 22 day of October, 2014, by W.A. Gillum, CEO/General Manager of East Kentucky Network, LLC, d/b/a Appalachian Wireless.

Lynn Haney
Notary Public

My Commission Expires July 14, 2015
This instrument was prepared by:

Bethany Bowersock
Bethany L. Bowersock, Attorney at Law
101 Technology Trail
Ivel, KY 41642

SUB- DIVISION OF LOT DESCRIPTION

Property of
County of Bell, Kentucky
101 Courthouse Square
Pineville, KY 40977
Log Mountain Middlesboro Site in Bell County
September 23, 2014

The property or tract of land lying on the ridge above Beans Fork of Stony Fork in Bell County of Kentucky, near the city of Middlesboro. Being the same land conveyed by deed from Corrigan TLP, LLC c/o Molpus Timberlands Management, LLC, 178 Bonhomie Road, Hattiesburg, Mississippi, 39401 by Deed dated December 18th, 2012 and recorded in Deed Book 358 Page 340 of the Bell county Court Clerk.

Unless stated otherwise, any monument referred to herein as "set iron pin with cap" is a set 1/2" diameter rebar, at least eighteen (18") in length, with a plastic cap stamped "LS-2259". All bearings stated herein are referred to prior survey of this property. This survey preformed by James W. Caudill, LS2259, on September 23, 2014.

Lot 1A

Beginning on a set found iron pin with cap stamped PLS 3454 on South West corner of original lot; thence running with the line of the lot between the property of Corrigan TLP (book 339 page 533) and Bell County (book 358 page 340) North 27 deg 47 min 20 sec West a distance of 45.00 feet to the property of Kentucky Utilities (Book 330 Page 559); thence running with the line of Ky Utilities North 27 deg 47 min 20 sec West, 54.95 to a set iron pin with cap stamped ls2259; thence leaving the line of Ky utilities and severing the property of Bell county into Lots 1A & 1B, North 62 deg 14 min 08 sec East, 88.99 feet to a set iron pin with cap marked ls2259 on the edge of the bench, North 62 deg 14 min 08 sec East, 111.29 feet to the outside line of the Bell County lot and the line of Corrigan TLP; thence running with the Corrigan line South 27 deg 42 min 01 sec East, 99.98 feet to a found iron pin with cap stamped PLS 3454 on the hillside, South 62 deg 14 min 39 sec West, 200.14 feet to the beginning. Containing a calculated area of 20015 sq feet or 0.46 acres.

Lot 1B

Beginning on a the North West corner of original lot; thence running with the line between Corrigan TLP (book 339, page 533) and Bell County (book 358 page 340) North 62 deg 15 min 28 sec East, 1.50 feet to a found iron pin with cap stamped PLS 3454, North 62 deg 15 min 28 sec East, 75.92 feet to a set iron pin with cap stamped ls2259, North 62 deg 15 min 28 sec East, 123.00 feet to a found iron pin with cap stamped PLS 3454, South 27 deg 42 min 01 sec East, 100.02 to the corner of lot 1A; thence leaving the line of Corrigan TLP and running with the line between lots 1A and 1B reversed South 62 deg 14 min 08 sec West, 111.29 feet to a set iron pin with cap stamped ls2259, South 62 deg 14 min 08 sec West, 88.99 feet to a set iron pin with cap stamped ls2259 on the line of Kentucky Utilities (book 330 page 559); thence running with the line of Ky Utilities North 27 deg 47 min 20 sec West, 45.09 feet to the line of Corrigan LTP; thence running with Corrigan line North 27 deg 47 min 20 sec West, 55.00 feet to the beginning. Containing a calculated area of 20046 sq feet or 0.46 acres.

This survey was performed on September 23, 2014 by James W. Caudill, a Kentucky Licensed Professional Land Surveyor.



James W. Caudill
James W. Caudill, PLS #2259

Exhibit B

APPALACHIAN WIRELESS
101 TECHNOLOGY TRAIL
IVEL, KY. 41642
PROPOSED TOWER SITE
LOG MOUNTAIN IN BELL COUNTY



Lot 1B - Beginning at a point NW corner of lot; running with lot line
thence N 62°15'28" E a distance of 1.50' to a found ipc nr ed bench;
thence N 62°15'28" E a distance of 75.92' to a set ipc;
thence N 62°15'28" E a distance of 123.00' to a found ipc hillside;
thence S 27°42'01" E a distance of 100.00' to a point on line;
leaving lot line and severing lot into lots 1A & 1B;
thence S 62°14'08" W a distance of 111.29' to a set ipc ed bench;
thence S 62°14'08" W a distance of 88.99' to a set ipc near fence;
on line of Ky Utilities and running with lot line;
thence N 27°47'20" W a distance of 45.00' to corner Ky Utilities lot;
thence N 27°47'20" W a distance of 55.00';
which is the point of beginning,
having an area of 20046.03 square feet, 0.460 acres

CORRIGAN TLP
LLC
BOOK 339 PAGE 533

FOUND IRON PIN WITH
CAP STAMPED PLS 3454

CORRIGAN TLP
LLC
BOOK 339 PAGE 533

LOT 1B
BELL COUNTY
BOOK 358 PAGE 340

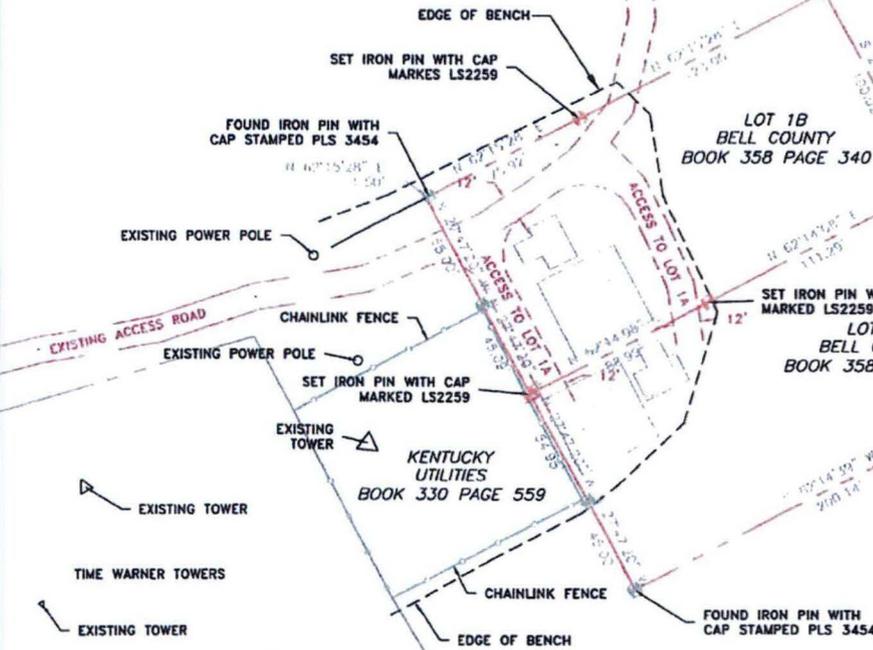
INACCESSIBLE POINT
NOT SET

LOT 1A
BELL COUNTY
BOOK 358 PAGE 340

Lot 1A - Beginning at SW corner of lot and running with lot line;
thence N 27°47'20" W a distance of 45.00' to Ky Utilities Line;
thence N 27°47'20" W a distance of 54.95' to a set ipc near fence;
leaving the lot line and severing the lot into lots 1A & 1B;
thence N 62°14'08" E a distance of 88.99' to a set ipc ed bench;
thence N 62°14'08" E a distance of 111.29' to point on outside line;
then running with the original lot line;
thence S 27°42'01" E a distance of 99.98' to a found ipc hillside;
thence S 62°14'39" W a distance of 200.14';
which is the point of beginning,
having an area of 20015.26 square feet, 0.459 acres

CORRIGAN TLP
LLC
BOOK 339 PAGE 533

ALIGNED TO PRIOR SURVEY NORTH



LEGEND

- SURVEY STA SET FOUND
- IRON PIN WITH CAP (1 1/2" X 3/8" NEBRASKA PLASTIC CAP MARKED LS2259)
- BOUNDARY LINE
- ACCESS ROAD
- PARENT TR LINE

RURAL CLASS SURVEY
I HEREBY CERTIFY THAT THIS PLAT DEPICTS A SURVEY, MADE
BY ME, BY THE METHOD OF RANDOM TRAVERSE. THE
BEARINGS SHOWN HEREON HAVE NOT BEEN ADJUSTED FOR
CLOSURE. THIS SURVEY AND PLAT MEETS OR EXCEEDS
THE MINIMUM STANDARDS OF GOVERNING AUTHORITIES.
THE UNADJUSTED ERROR OF CLOSURE WAS 1 IN 6500

STATE OF KENTUCKY
JAMES W. CAUDILL
LS 2259
LICENSED PROFESSIONAL
LAND SURVEYOR

James W. Caudill 2259 9-23-14
NAME PLS# DATE

PLAT OF SURVEY

DRAWN BY JWC	SURVEY DATE 09/23/2014	SUB DIVISION PROPERTY OF COUNTY OF BELL, KENTUCKY 101 COURTHOUSE SQUARE PINEVILLE, KENTUCKY 40977 LOG MOUNTAIN TOWER SITE DEED BOOK 358 PAGE 340
CHECKED BY JWC	DRAWING DATE 09/23/2014	
SCALE 1" = 50'	SHEET 1 OF 1	DESIGNED BY JAMES W. CAUDILL LS2259 2400 PEPPERIDGE ROAD ANDREWSVILLE, KY 40303 PHONE 606-682-5212

EXHIBIT C

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Beacon Lighting	300	Panel 6' x 1' x 6' w/ mnt. pipe*	260
WD13X53 Antenna Mounting Frame	300	(3) RRU	279
WD13X53 Antenna Mounting Frame	300	WD13X53 Antenna Mounting Frame	270
WD13X53 Antenna Mounting Frame	300	WD13X53 Antenna Mounting Frame	270
(2) Panel 4' x 6' x 6' w/ mnt. pipe	300	(2) Panel 4' x 6' x 6' w/ mnt. pipe	270
(2) Panel 4' x 6' x 6' w/ mnt. pipe	300	(2) Panel 4' x 6' x 6' w/ mnt. pipe	270
(2) Panel 4' x 6' x 6' w/ mnt. pipe	300	(2) Panel 4' x 6' x 6' w/ mnt. pipe	270
Panel 6' x 1' x 6' w/ mnt. pipe*	300	Panel 6' x 1' x 6' w/ mnt. pipe*	270
Panel 6' x 1' x 6' w/ mnt. pipe*	300	Panel 6' x 1' x 6' w/ mnt. pipe*	270
Panel 6' x 1' x 6' w/ mnt. pipe*	300	Panel 6' x 1' x 6' w/ mnt. pipe*	270
(3) RRU	299	WD13X53 Antenna Mounting Frame	270
WD13X53 Antenna Mounting Frame	290	(3) RRU	269
WD13X53 Antenna Mounting Frame	290	8 FT DISH	220
WD13X53 Antenna Mounting Frame	290	6' Pipe Side Arm*	200
(2) Panel 4' x 6' x 6' w/ mnt. pipe	290	6' Pipe Side Arm*	200
(2) Panel 4' x 6' x 6' w/ mnt. pipe	290	6' Pipe Side Arm*	200
(2) Panel 4' x 6' x 6' w/ mnt. pipe	290	(2) Omni 13' X 3' Dia.*	200
Panel 6' x 1' x 6' w/ mnt. pipe*	290	(2) Omni 13' X 3' Dia.*	200
Panel 6' x 1' x 6' w/ mnt. pipe*	290	(2) Omni 13' X 3' Dia.*	200
Panel 6' x 1' x 6' w/ mnt. pipe*	290	6 FT DISH	180
(3) RRU	289	6 FT DISH	180
WD13X53 Antenna Mounting Frame	280	(2) Omni 13' X 3' Dia.*	150
WD13X53 Antenna Mounting Frame	280	6' Pipe Side Arm*	150
WD13X53 Antenna Mounting Frame	280	6' Pipe Side Arm*	150
(2) Panel 4' x 6' x 6' w/ mnt. pipe	280	(2) Omni 13' X 3' Dia.*	150
(2) Panel 4' x 6' x 6' w/ mnt. pipe	280	6' Pipe Side Arm*	150
(2) Panel 4' x 6' x 6' w/ mnt. pipe	280	(2) Omni 13' X 3' Dia.*	150
Panel 6' x 1' x 6' w/ mnt. pipe*	280	4 FT DISH	140
Panel 6' x 1' x 6' w/ mnt. pipe*	280	4 FT DISH	140

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	L2 1/2x2 1/2x3/16		

MATERIAL STRENGTH

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

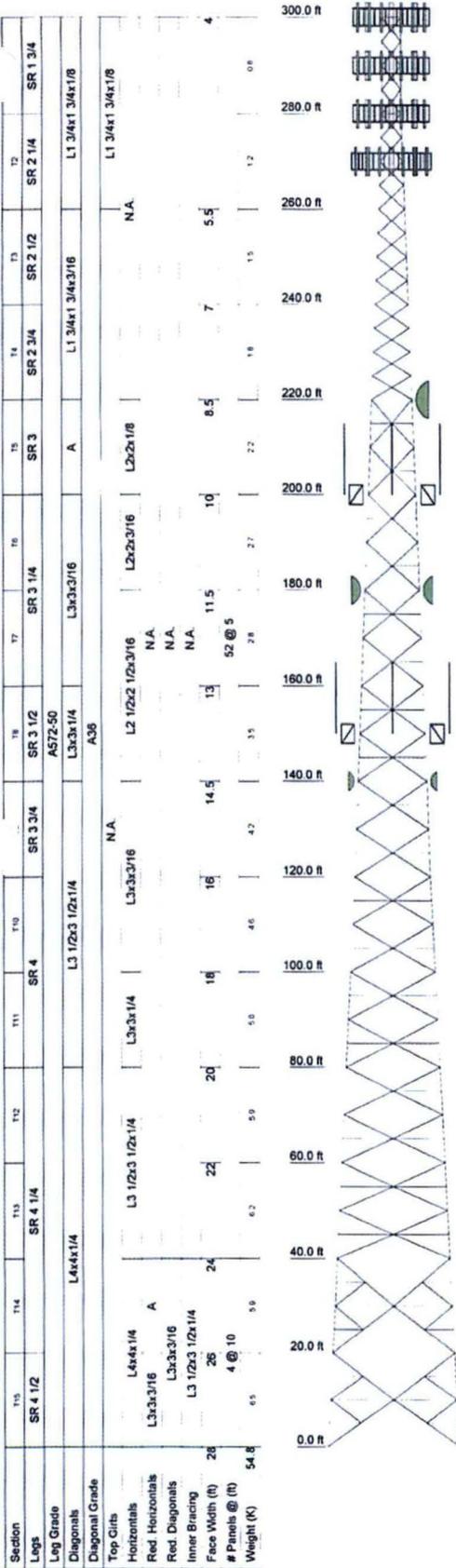
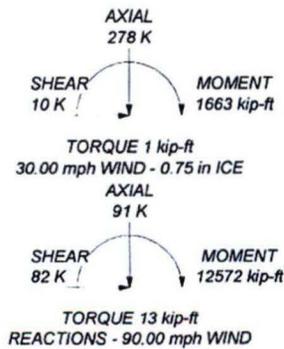
TOWER DESIGN NOTES

1. Tower is located in Bell 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.

ALL REACTIONS ARE FACTORED. Tower Structure Class II.
 7. Topographic Category 1 with Crest Height of 0.00 ft
 MAX. CORNER TOWER RATING: 98.5%

DOWN: 548 K
 SHEAR: 51 K

UPLIFT: -472 K
 SHEAR: 44 K



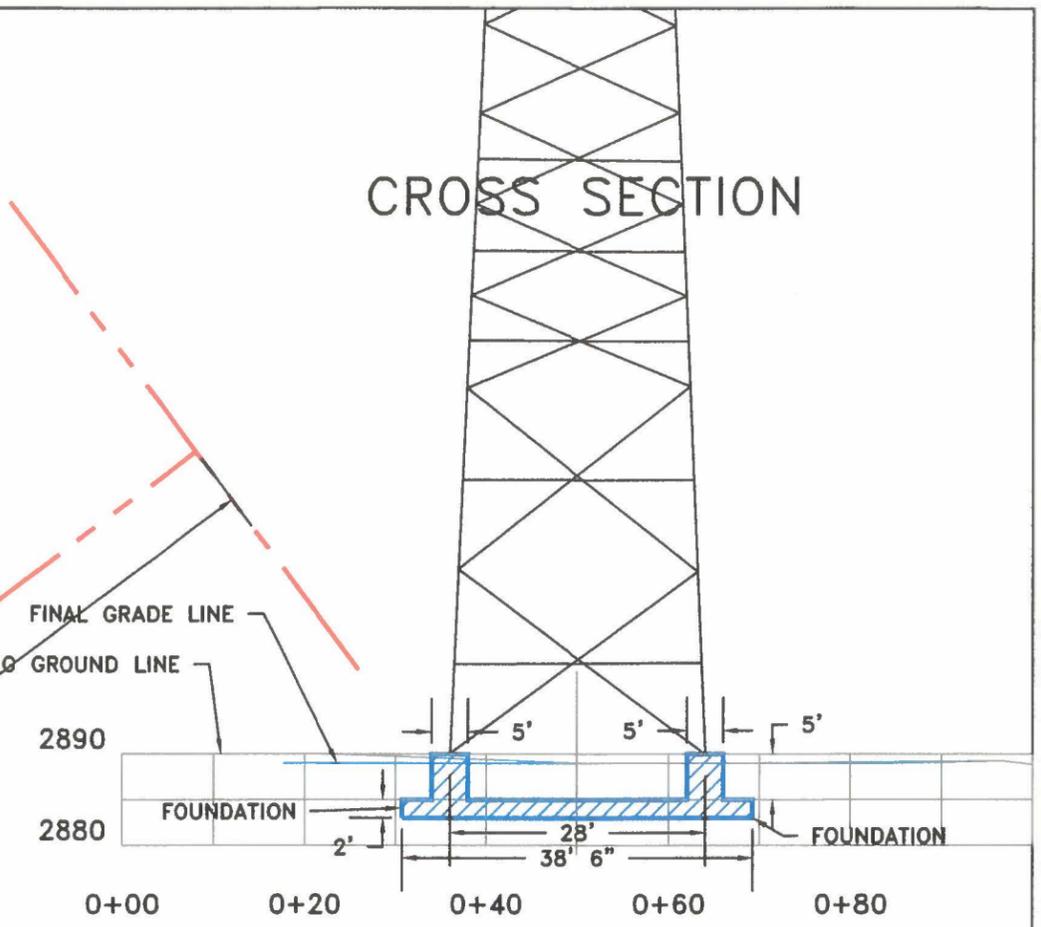
LINE	BEARING	DISTANCE
L1	N 15°10'52" W	68.49'
L2	N 11°48'39" W	59.29'
L3	N 08°30'51" W	72.21'
L4	N 04°13'24" W	63.36'
L5	N 00°36'56" W	57.67'
L6	S 00°52'06" W	126.42'
L7	S 08°54'46" W	66.39'
L8	S 18°40'37" W	78.11'
L9	N 22°53'53" E	52.00'
L10	N 39°28'29" E	26.17'
L11	N 48°02'27" E	64.18'
L12	N 06°45'18" W	51.65'
L13	S 18°11'33" W	63.44'
L14	S 16°00'32" W	53.85'
L15	S 11°33'54" W	69.83'
L16	S 04°59'19" W	43.97'
L17	N 07°56'27" W	107.25'
L18	S 23°52'03" E	57.32'
L19	N 28°47'51" W	95.30'

APPALACHIAN WIRELESS
 101 TECHNOLOGY TRAIL
 IVEL, KY. 41642
PROPOSED NEW TOWER
MIDDLESBORO TOWER IN BELL COUNTY

COUNTY OF BELL
 DEED BOOK: 358
 PAGE: 340
 LEASED TO
 EAST KY NETWORK, LLC
 LEASE BOOK 52 PAGE 340

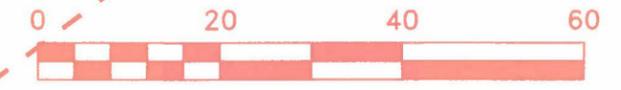
PROPOSED TOWER LOCATION
 LAT:36°38'31.4315"
 LON:83°46'22.2003"
 N:1758891.75
 E:2220476.67
 FOUNDATION EL: 2890'

CROSS SECTION



COUNTY OF BELL
 DEED BOOK: 358
 PAGE: 340

CORRIGAN TLP
 DEED BOOK: 330
 PAGE: 559



CORRIGAN TLP
 DEED BOOK: 330
 PAGE: 559

ACCESS ROAD

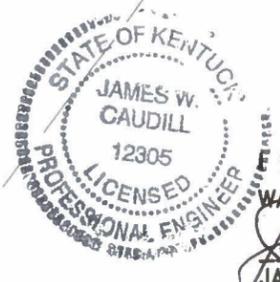
KY UTILITIES TOWER FENCE

N:1758843.85
 E:2220456.33
 Z:2989.68

CORRIGAN TLP
 DEED BOOK: 330
 PAGE: 559

LEGEND

SURVEY STA	SET	FOUND
IRON PIN WITH CAP (1/8" X .5" REBAR PLASTIC CAP MARKED 152250)		
BOUNDARY LINE	---	---
ACCESS ROAD	---	---
PARENT TR LINE	---	---
EXISTING KY UTILITIES TOWER		



NOTE: SEE FOUNDATION DRAWINGS FOR DETAILS

- THE PROPOSED TOWER HAS BEEN LOCATED USING DUAL FREQUENCY GPS UNIT PROCESSED BY "OPUS"
- STATE PLANE COORDINATES NAD 83 KY SOUTH ZONE N:1758891.75 E: 2220476.67 GROUND EL: 2989.0' PLAN-FOUNDATION EL:2990.0'-TOP TOWER EL 3290.0'
- PRECISION: HORIZONTAL=0.30' VERTICAL=0.50'
- THIS SURVEY MEETS OBSTACLE ACCURACY CODE 2C.
- PROPERTY LINE INFORMATION TAKEN FROM DEEDS AND VERIFIED IN THE FIELD.

HEREBY CERTIFY THAT THIS DOCUMENT
 WAS PREPARED BY ME OR UNDER MY DIRECTION.
James W. Caudill 12305 8-19-15
 JAMES W. CAUDILL PE# DATE

PROPOSED SITE PLAN AND STRUCTURE LOCATION MIDDLESBORO TOWER APPALACHIAN WIRELESS		
DRAWN JWC	DATE 08/19/15	MIDDLESBORO TOWER COUNTY OF BELL OFF HWY 74 ON STONY FORK IN BELL COUNTY
APPROVED	DATE	
SCALE 1" = 20'	SHEET 2 OF 3	PROJECT NO. MIDDLESBORO/MB20

The map provided in Exhibit 10 has been reduced in size for convenience and ease of use. A map drawn to the correct scale has been included in the back of this book.

KAYJAY/FORK RIDGE QUADRANGLES

APPALACHIAN WIRELESS

101 TECHNOLOGY TRAIL
IVEL, KY. 41642
PROPOSED TOWER SITE
LOG MOUNTAIN NR MIDDLESBORO IN BELL CO

CORRIGAN TLP
654 N STATE STREET
JACKSON, MISSISSIPPI, 39202

CORRIGAN TLP
654 N STATE STREET
JACKSON, MISSISSIPPI, 39202

CORRIGAN TLP
654 N STATE STREET
JACKSON, MISSISSIPPI, 39202

CORRIGAN TLP
654 N STATE STREET
JACKSON, MISSISSIPPI, 39202

GEORGE GIVENS
MAREITTA GIVENS
P.O. BOX 1948
MIDDELEBORO, KY 40965

BELL COUNTY
P.O. BOX 339
PINEVILLE, KY 40977

PROPOSED TOWER LOCATION
LAT:36°38'31.4315"
LON:83°46'22.2003"

KY UTILITIES
120 S. LIMESTONE ST
LEXINGTON KY 40507

TIME WARNER
P.O. BOX 7467
CHARLOTTE, NC 28241

CORRIGAN TLP
654 N STATE STREET
JACKSON, MISSISSIPPI, 39202

GEORGE GIVENS
MAREITTA GIVENS
P.O. BOX 1948
MIDDELEBORO, KY 40965

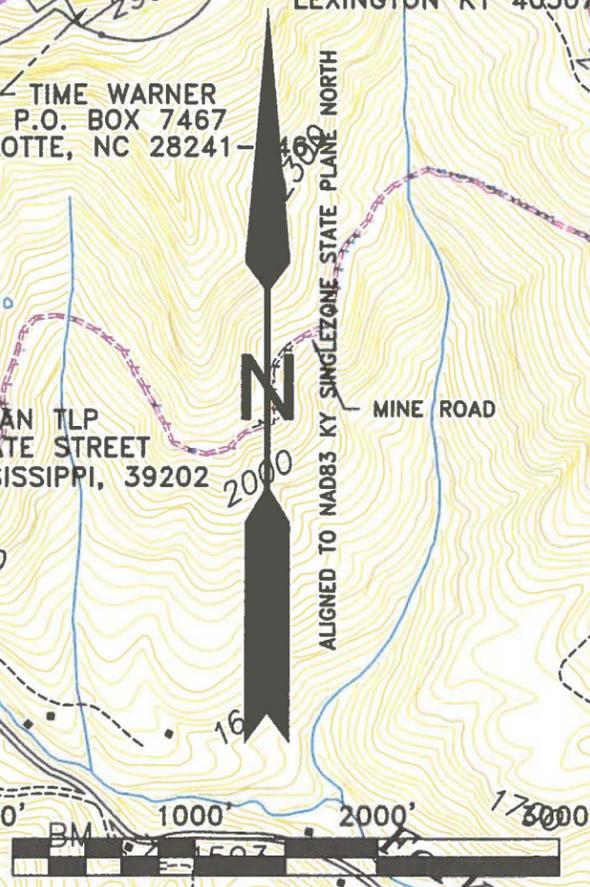
CORRIGAN TLP
654 N STATE STREET
JACKSON, MISSISSIPPI, 39202

BELL COUNTY COAL
6340 WEST CUMBERLAND AVE
MIDDLESBORO, KY 40965

WPP-LLC
P.O. BOX 2035
LONDON, KY 40743

DOROTHY
VANOVER

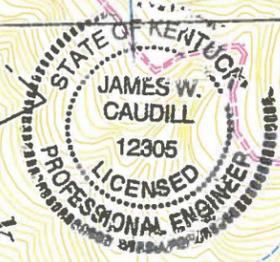
DOROTHY
VANOVER



STRUCTURES & LAND OWNERS WITHIN 500' OF TOWER MIDDLESBORO TOWER APPALACHIAN WIRELESS		
DRAWN JWC	DATE 08/19/15	MIDDLESBORO TOWER COUNTY OF BELL PROP OFF HWY 74 ON STONY FORK BELL COUNTY OF KY
APPROVED	DATE	
SCALE 1" = 1000'	SHEET 1 OF 3	PROJECT NO. MIDDLESBORO/MBPVA1000

LEGEND

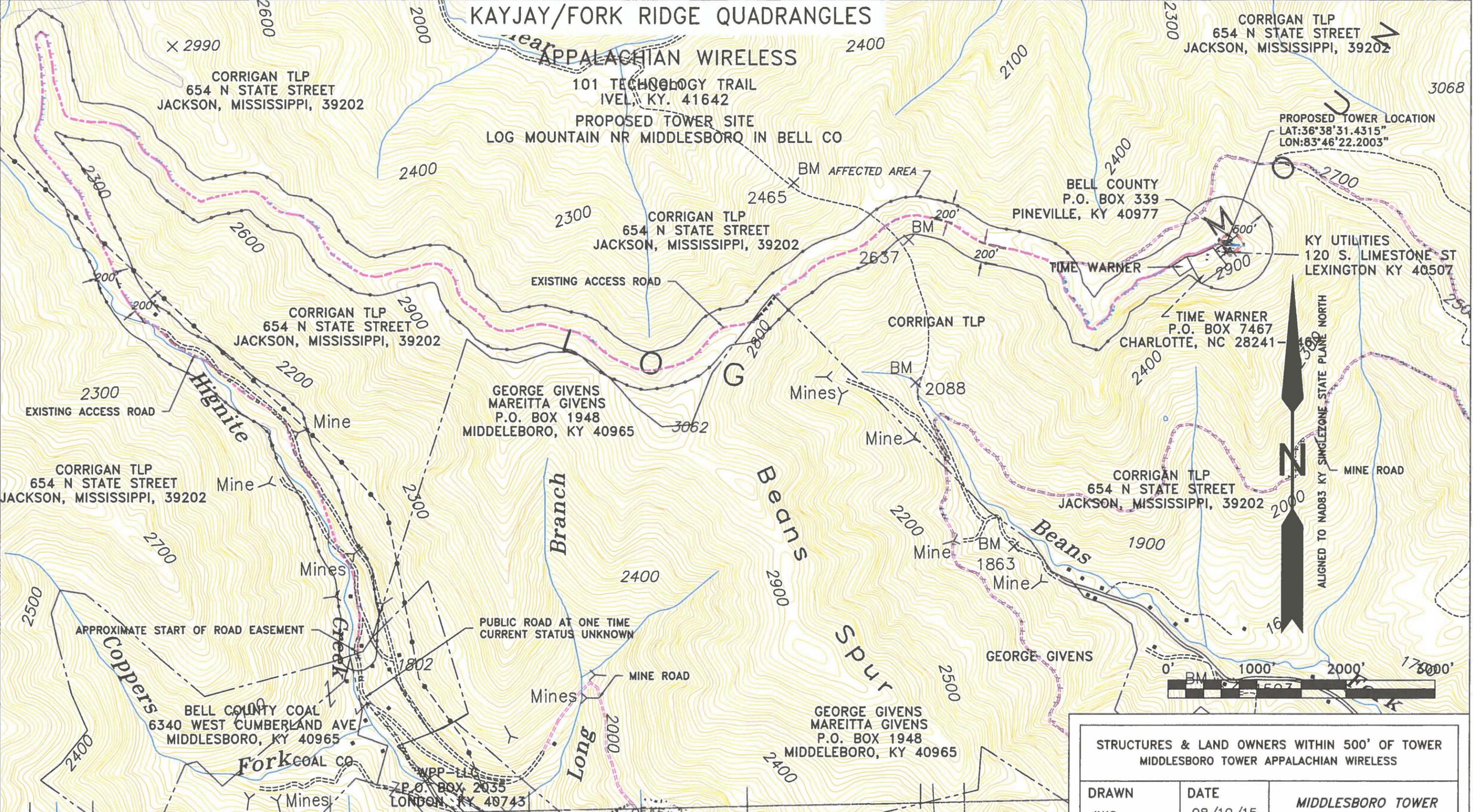
- POWER LINE -----
- PROPERTY LINE - - - - -
- ACCESS ROAD = = = = =
- CREEK - - - - -
- CEMETERY []
- TOWER ▲



J W CAUDILL ENGINEERING
9283 HWY 15 STE. C, ISOM, KY 41824

ENGINEER'S CERTIFICATE: I HEREBY CERTIFY THAT THE INFORMATION SHOWN REFLECTS THE INFORMATION OBTAINED AND PROVIDED BY THE BELL COUNTY PROPERTY VALUATION ADMINISTRATION OFFICE IN PINEVILLE, KY.

James W. Caudill 12305 8-19-15
JAMES W. CAUDILL P.E.# DATE



APPALACHIAN WIRELESS

101 TECHNOLOGY TRAIL
IVEL, KY. 41642

PROPOSED TOWER SITE
MIDDLESBORO IN BELL COUNTY

300'

PROFILE WITH TOWER

THIS IS A VERTICAL PROFILE SKETCH OF THE TOWER INDICATING THE PROPOSED ANTENNA AND DISH ELEVATIONS. NO DESIGN CRITERIA WAS CONSIDERED IN THE PREPARATION OF THIS DRAWING.

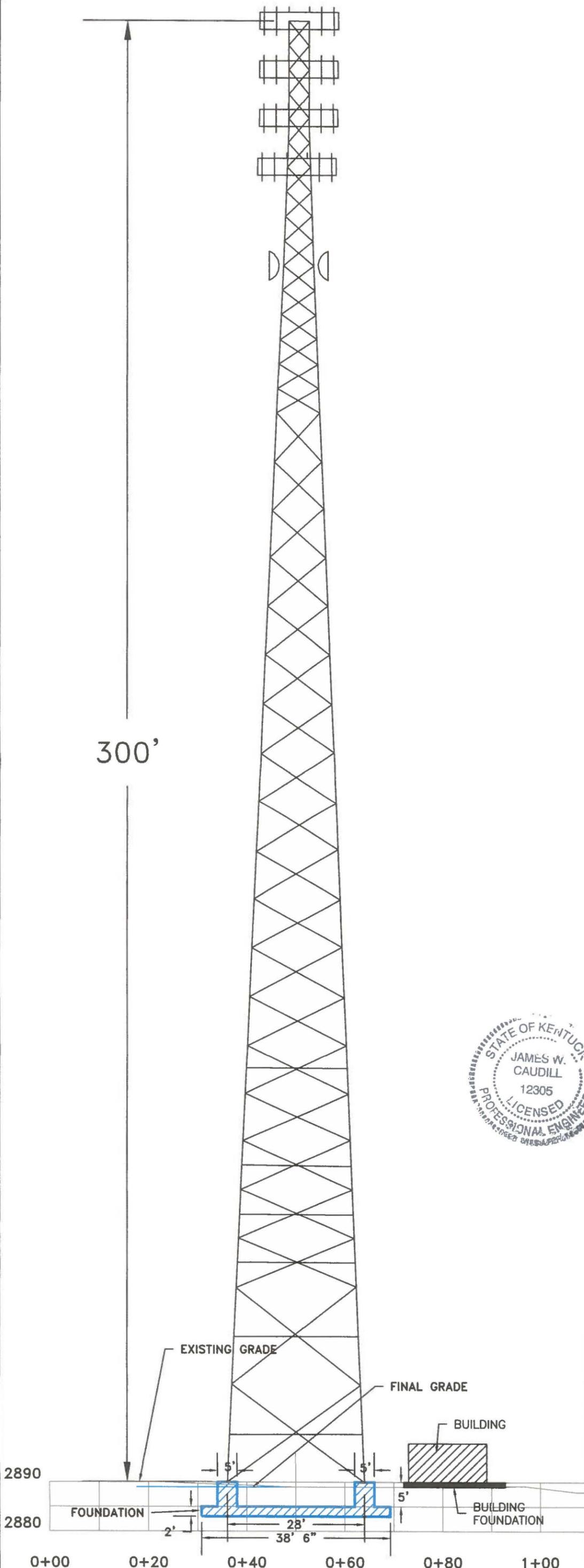


James W. Caudill 12305 8-19-15
JAMES W. CAUDILL PE #. DATE

NOTE: SEE FOUNDATION DRAWINGS FOR DETAILS

08/19/15

SCALE 1" = 20'



PROPOSED SITE PLAN AND STRUCTURE LOCATION MIDDLESBORO TOWER APPALACHIAN WIRELESS

DRAWN JWC	DATE 08/19/15	MIDDLESBORO TOWER COUNTY OF BELL OFF HWY 74 ON STONY FORK IN BELL COUNTY
APPROVED	DATE	
SCALE 1" = 20'	SHEET 3 OF 3	PROJECT NO. MIDDLESBORO/MB20

Filing
CONTAINS
LARGE OR OVERSIZED
MAP(S)

RECEIVED ON:
09/10/2015