COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF	)	
NEW CINGULAR WIRELESS PCS, LLC	)	
AND AMERICAN TOWERS LLC	)	
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC	)	CASE NO.: 2015-00404
CONVENIENCE AND NECESSITY TO CONSTRUCT	)	
A WIRELESS COMMUNICATIONS FACILITY	)	
IN THE COMMONWEALTH OF KENTUCKY	)	
IN THE COUNTY OF WOLFE	)	

SITE NAME: PEA RIDGE

* * * * * * *

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

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

Applicants state that the within Application is substantially similar to the Application filed by Applicants previously in Case Number 2014-00108, which

Application was accepted for filing and found to meet minimum filing requirements by the PSC on April 4, 2014. Said Application was withdrawn by Applicants prior to the issuance of a CPCN based upon intervening changes to Applicants' deployment schedule for the subject facility, and the PSC ordered dismissal of Case Number 2014-00108 on June 20, 2014. Applicant AT&T Mobility now requires for the subject facility to be constructed presently to address an existing service need, as discussed further herein.

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

1. The complete name and address of the Applicants: New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility, having a local address of 601 West Chestnut Street, Louisville, Kentucky 40203; American Towers LLC, a Delaware limited liability company, having a mailing address of 10 Presidential Way, Woburn, MA 01801.

2. Applicants propose construction of an antenna tower for communications services, which is to be located in an area outside the jurisdiction of a planning commission, and Applicants submit this application to the PSC for a certificate of public convenience and necessity pursuant to KRS §§ 278.020(1), 278.040, 278.650, 278.665, and other statutory authority.

3. The Certificate of Authority filed with the Kentucky Secretary of State for AT&T Mobility was attached to a prior application and is part of the case record for PSC case number 2011-00473 and is hereby incorporated by reference. AT&T Mobility is in

good standing in the state in which it is organized and is authorized to transact business in Kentucky.

4. A certificate of formation for American Towers LLC was attached to a prior application and is part of the case record for PSC case number 2013-00435 and is hereby incorporated by reference. American Towers LLC is in good standing in the state in which it is organized and is authorized to transact business in Kentucky.

5. AT&T Mobility operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of the AT&T Mobility's FCC license to provide wireless services is attached to this Application or described as part of **Exhibit A**, and the facility will be constructed and operated in accordance with applicable FCC regulations. American Towers LLC will build, own and manage the tower and tower compound where AT&T Mobility will place its equipment building, antennas, radio electronics equipment and appurtenances.

6. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve AT&T Mobility's services to an area currently not served or not adequately served by increasing coverage and/or capacity and thereby enhancing the public's access to innovative and competitive wireless communications services. The WCF will provide a necessary link in the AT&T Mobility communications network that is designed to meet the increasing demands for wireless services in Kentucky's wireless communications service area. The WCF is an integral link in AT&T Mobility's network design that must be in place to provide adequate coverage to the service area.

7. To address the above-described service needs, Applicants propose to construct a WCF at 395 Miller Ridge Road, Pine Ridge, Kentucky 41360 (37°46'24.18" North latitude, 83°38'08.92" West longitude), on a parcel of land located entirely within the county referenced in the caption of this application. The property on which the WCF will be located is owned by Ronald and Elaine Halsey pursuant to a Deed recorded in the office of the Wolfe County Clerk. The proposed WCF will consist of a 255-foot tall tower, with an approximately 10-foot tall lightning arrestor attached at the top, for a total height of 265-feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of the AT&T Mobility's radio electronics equipment and appurtenant equipment. The WCF equipment cabinet or shelter will be approved for use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound will be fenced and all access gate(s) will be secured. A description of the manner in which the proposed WCF will be constructed is attached as **Exhibit B** and **Exhibit C**.

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

9. The site development plan and a vertical profile sketch of the WCF signed and sealed by a professional engineer registered in Kentucky depicting the tower height, as well as a proposed configuration for the antennas has also been included as part of **Exhibit B**.

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

11. Applicants have considered the likely effects of the installation of the proposed WCF on nearby land uses and values and have concluded that there is no more suitable location reasonably available from which adequate services can be provided, and that there are no reasonably available opportunities to co-locate the necessary antennas on an existing structure. When suitable towers or structures exist, AT&T Mobility attempts to co-locate on existing structures such as communications towers or other structures capable of supporting its facilities; however, no other suitable or available co-location site was found to be located in the vicinity of the site.

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

13. A copy of the Application for Kentucky Airport Zoning Commission ("KAZC") Approval to construct the tower is attached as **Exhibit F**.

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

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

16. Applicants, pursuant to a written agreement, have acquired the right to use the WCF site and associated property rights. A copy of the agreement or an abbreviated agreement recorded with the County Clerk is attached as **Exhibit I**.

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

18. The Construction Manager for the proposed facility is Ron Rohr, and the identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained **Exhibits B & C**.

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

20. **Exhibit B** includes a map drawn to a scale of no less than 1 inch equals 200 feet that shows the location of the proposed tower and identifies every owner of real estate within 500 feet of the proposed tower (according to the records maintained by the County Property Valuation Administrator). Every structure and every easement within 500 feet of the proposed tower or within 200 feet of the access road including intersection with the public street system is illustrated in **Exhibit B**.

21. Applicants have notified every person who, according to the records of the County Property Valuation Administrator, owns property which is within 500 feet of the proposed tower or contiguous to the site property, by certified mail, return receipt

requested, of the proposed construction. Each notified property owner has been provided with a map of the location of the proposed construction, the telephone number and address of the PSC, and has been informed of his or her right to request intervention. A list of the notified property owners and a copy of the form of the notice sent by certified mail to each landowner are attached as **Exhibit J** and **Exhibit K**, respectively.

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

23. Notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2) that measure at least 2 feet in height and 4 feet in width and that contain all required language in letters of required height, have been posted, one in a visible location on the proposed site and one on the nearest public road. Such signs shall remain posted for at least two weeks after filing of the Application, and a copy of the posted text is attached as **Exhibit M.** Notice of the location of the proposed facility has been published in a newspaper of general circulation in the county in which the WCF is proposed to be located.

24. The general area where the proposed facility is to be located is rural residential.

25. The process that was used by the AT&T Mobility radio frequency engineers in selecting the site for the proposed WCF was consistent with the general process used for selecting all other existing and proposed WCF facilities within the proposed network design

area. AT&T Mobility's radio frequency engineers have conducted studies and tests in order to develop a highly efficient network that is designed to handle voice and data traffic in the service area. The engineers determined an optimum area for the placement of the proposed facility in terms of elevation and location to provide the best quality service to customers in the service area. A radio frequency design search area prepared in reference to these radio frequency studies was considered when searching for sites for antennas that would provide the coverage deemed necessary by AT&T Mobility. A map of the area in which the tower is proposed to be located which is drawn to scale and clearly depicts the necessary search area within which the site should be located pursuant to radio frequency requirements is attached as **Exhibit N**.

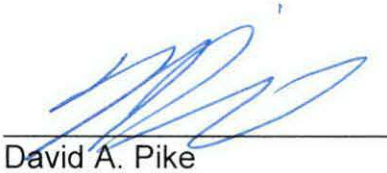
26. All Exhibits to this Application are hereby incorporated by reference as if fully set out as part of the Application.

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

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

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

Respectfully submitted,



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

LIST OF EXHIBITS

A - FCC License Documentation

B - Site Development Plan:

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

C - Tower and Foundation Design

D - Competing Utilities, Corporations, or Persons List

E - FAA

F - Kentucky Airport Zoning Commission

G - Geotechnical Report

H - Directions to WCF Site

I - Copy of Real Estate Agreement

J - Notification Listing

K - Copy of Property Owner Notification

L - Copy of County Judge/Executive Notice

M - Copy of Posted Notices

N - Copy of Radio Frequency Design Search Area

EXHIBIT A
FCC LICENSE DOCUMENTATION

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGA823 - New Cingular Wireless PCS, LLC

Call Sign	WQGA823	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

Market

Market	CMA452 - Kentucky 10 - Powell	Channel Block	A
Submarket	0	Associated Frequencies (MHz)	001710.00000000-001720.00000000 002110.00000000-002120.00000000

Dates

Grant	11/29/2006	Expiration	11/29/2021
Effective	02/12/2014	Cancellation	

Buildout Deadlines

1st	2nd

Notification Dates

1st	2nd

Licensee

FRN	0003291192	Type	Limited Liability Company

Licensee

New Cingular Wireless PCS, LLC
3300 E. Renner Road, B3132
Richardson, TX 75082
ATTN Reginald Youngblood

P:(855)699-7073
F:(972)907-1131
E:FCCMW@att.com

Contact

AT&T Mobility LLC
Michael P Goggin
1120 20th Street, NW - Suite 1000
Washington, DC 20036
ATTN Michael P. Goggin

P:(202)457-2055
F:(202)457-3073
E:michael.p.goggin@att.com

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

ULS License

PCS Broadband License - WPOI255 - NEW CINGULAR WIRELESS PCS, LLC

Call Sign	WPOI255	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Market

Market	MTA026 - Louisville-Lexington-Evansvill	Channel Block	A
Submarket	19	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	06/23/2000	2nd	06/23/2005

Notification Dates

1st	07/07/2000	2nd	02/17/2005

Licensee

FRN	0003291192	Type	Limited Liability Company

Licensee

NEW CINGULAR WIRELESS PCS, LLC
3300 E. Renner Road, B3132
Richardson, TX 75082
ATTN Reginald Youngblood

P:(855)699-7073
F:(972)907-1131
E:FCCMW@att.com

Contact

AT&T MOBILITY LLC
Michael P Goggin
1120 20th Street, NW - Suite 1000
Washington, DC 20036
ATTN Michael P. Goggin

P:(202)457-2055
F:(202)457-3073
E:michael.p.goggin@att.com

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

ULS License

Cellular License - KNKN841 - NEW CINGULAR WIRELESS PCS, LLC

Call Sign	KNKN841	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

Market

Market	CMA452 - Kentucky 10 - Powell	Channel Block	A
Submarket	0	Phase	2

Dates

Grant	08/30/2011	Expiration	10/01/2021
Effective	02/14/2014	Cancellation	

Five Year Buildout Date

02/05/1997

Control Points

1 1650 Lyndon Farms Court, LOUISVILLE, KY
P: (502)329-4700

Licensee

FRN	0003291192	Type	Limited Liability Company

Licensee

NEW CINGULAR WIRELESS PCS, LLC
3300 E. Renner Road, B3132
Richardson, TX 75082
ATTN Reginald Youngblood

P:(855)699-7073
F:(972)907-1131
E:FCCMW@att.com

Contact

AT&T MOBILITY LLC
Michael P Goggin
1120 20th Street, NW - Suite 1000
Washington, DC 20036
ATTN Michael P. Goggin

P:(202)457-2055
F:(202)457-3073
E:michael.p.goggin@att.com

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.

Demographics

Race

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGD755 - New Cingular Wireless PCS, LLC

Call Sign	WQGD755	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

Market

Market	BEA047 - Lexington, KY-TN-VA-WV	Channel Block	C
Submarket	0	Associated Frequencies (MHz)	001730.00000000-001735.00000000 002130.00000000-002135.00000000

Dates

Grant	12/18/2006	Expiration	12/18/2021
Effective	12/05/2014	Cancellation	

Buildout Deadlines

1st	2nd

Notification Dates

1st	2nd

Licensee

FRN	0003291192	Type	Limited Liability Company

Licensee

New Cingular Wireless PCS, LLC
3300 E. Renner Road, B3132
Richardson, TX 75082
ATTN Reginald Youngblood

P:(855)699-7073
F:(972)907-1131
E:FCCMW@att.com

Contact

AT&T Mobility LLC

1120 20th Street, NW - Suite 1000
Washington, DC 20036
ATTN Michael P. Goggin

P:(202)457-2055
F:(202)457-3073
E:michael.p.goggin@att.com

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 B

SITE DEVELOPMENT PLAN:

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

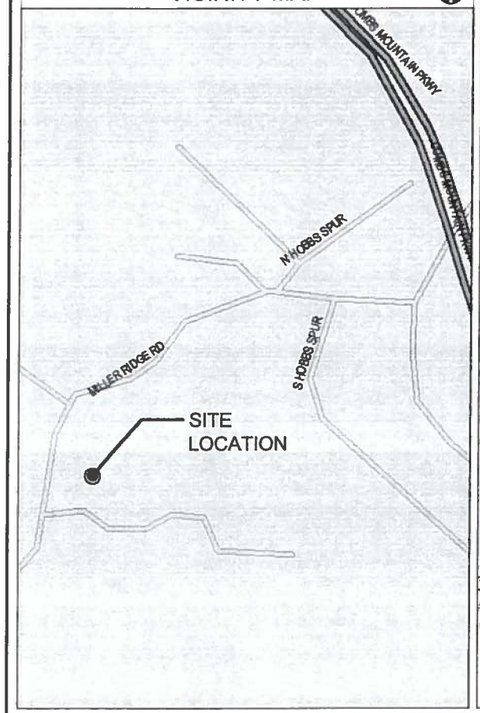
AT&T SITE # 143436 / ATC SITE #: 281378
ATC SITE NAME: PEA RIDGE

PROPOSED AT&T ANTENNAS MOUNTED ON A NEW 255' SELF-SUPPORT TOWER
WITH AT&T CENTERLINE OF 250'
(NOT TO EXCEED 265' IN OVERALL STRUCTURE HEIGHT)
WITH PROPOSED COMMUNICATIONS EQUIPMENT ON GROUND.

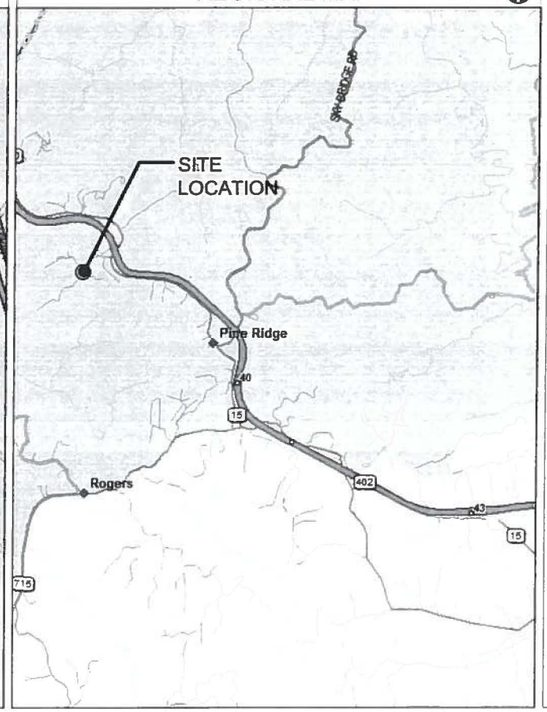
CONSULTANT TEAM

PROJECT CONSULTANT:	TERRA CONSULTING GROUP, LTD. 600 BUSSE HIGHWAY PARK RIDGE, IL 60068 (847) 698-6400
SURVEYOR:	ROLLING & HOCEVAR 257 SOUTH COURT ST. SUITE 6 MEDINA, OHIO (330) 723-1828

VICINITY MAP N.T.S.



REGIONAL MAP N.T.S.



PROJECT INFORMATION

ATC SITE #:	281378
ATC SITE NAME:	PEA RIDGE
P.I.N. #:	-
SITE ADDRESS:	395 MILLER RIDGE ROAD, PINE RIDGE, KENTUCKY, 41360
JURISDICTION:	WOLFE COUNTY
LATITUDE:	N 37° 46' 24.18" (FROM 1-A)
LONGITUDE:	W 83° 38' 08.92" (FROM 1-A)
TELCO COMPANY:	MOUNTAIN RURAL TELEPHONE 606-668-7313
POWER COMPANY:	LICKING VALLEY RECC 606-743-3179
CONSTRUCTION TYPE:	RAW LAND
APPLICANT:	AMERICAN TOWER CORPORATION 116 HUNTINGTON AVE BOSTON, MA 02116 (617) 375-7500 AT&T 601 WEST CHESTNUT STREET LOUISVILLE, KY 40203
CONTACT PERSON:	KATHIE TAYLOR PROJECT MANAGER SITE DEVELOPMENT (740) 603-5159
PROPERTY OWNER:	RONALD PAUL AND ELAINE MARIE HALSEY 67 MILLER RIDGE PINE RIDGE KY., 41360

SHEET INDEX

SHEET	DESCRIPTION	REVISION
T-1	TITLE SHEET	A,0,1,2,3
S1	ENLARGED COMPOUND PLAN	3
S2	EASEMENT DETAIL	3
S3	OVERALL SITE	3
S4	LEGAL DESCRIPTION	3
S5	LEGAL DESCRIPTION	3
Z-1	LOCATION PLAN	A,0,1,2,3
Z-2	SITE PLAN	A,0,1,2
Z-3	ENLARGED SITE PLAN	A,0,1,2
Z-4	SITE ELEVATION	A,0,1,2

STATE OF KENTUCKY
JOHN ZIMMERMANN
20166
LICENSED PROFESSIONAL ENGINEER
12/9/2015

Kentucky 811
Know what's below. Call before you dig.

CALL BEFORE YOU
DIG - DRILL - BLAST
CALL 811 OR 1-800-752-6007
REQUIRES NOTIFICATION TO ONE CALL SYSTEM 2 WORKING DAYS FOR CONSTRUCTION PHASE AND 10 WORKING DAYS FOR DESIGN PHASE BEFORE YOU EXCAVATE.

DRIVING DIRECTIONS

FROM CAMPTON COUNTY CLERK
(10 COURT ST, CAMPTON, KY 41301):

TURN RIGHT ONTO HAZARD SPUR. STAY STRAIGHT TO GO ONTO KY-402 W/MOUNTAIN PKWY W. TAKE THE KY-15 EXIT, EXIT 40, TOWARD KY-715/BEATTYVILLE. TURN LEFT ONTO KY-15/OLD KENTUCKY 15. TURN LEFT ONTO MILLER RIDGE RD.

SPECIAL NOTES

HANDICAPPED REQUIREMENTS :
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION HANDICAPPED ACCESS REQUIREMENTS NOT REQUIRED

PLUMBING REQUIREMENTS :
FACILITY HAS NO PLUMBING OR REFRIGERANTS

FAA AND FCC REQUIREMENTS :
THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REQUIREMENTS

CONSTRUCTION REQUIREMENTS :
ALL WORK MUST CONFORM TO AMERICAN TOWER CORPORATION & AT&T CONSTRUCTION INSTALLATION STANDARDS & ALL APPLICABLE CODES AND ORDINANCES.

APROVALS

LANDLORD	OPERATIONS	TELCO APPROVAL
SIGNATURE DATE	SIGNATURE DATE	SIGNATURE DATE
RF ENGINEER	CONSTRUCTION FIELD MGR.	ELEC. APPROVAL
SIGNATURE DATE	SIGNATURE DATE	SIGNATURE DATE
ZONING	SITE ACQUISITION	LESSOR APPROVAL
SIGNATURE DATE	SIGNATURE DATE	SIGNATURE DATE

AMERICAN TOWER CORPORATION

TERRA CONSULTING GROUP, LTD.
600 Busse Highway
Park Ridge, IL 60068
Ph: 847/698-6400
Fax: 847/698-6401

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	10/23/13	JLR
0	REVISED PER COMMENTS	11/5/13	JLR
1	ISSUED FOR FINAL	3/24/14	JLR
2	CLIENT COMMENTS	4/1/14	JAY
3	UPDATE ADJOINERS LIST	12/4/15	JAY

AT&T # 143436
ATC# 281378

PEA RIDGE

395 MILLER RIDGE ROAD
PINE RIDGE, KY 41360

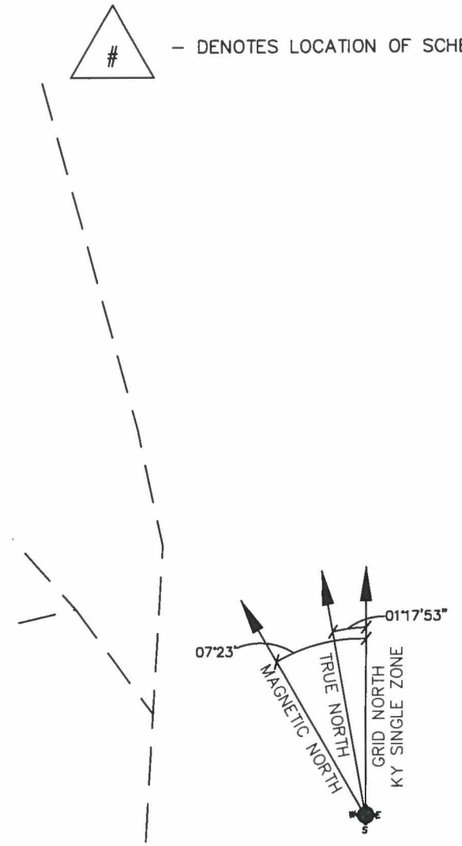
DRAWN BY	JLR
CHECKED BY	TAZ
DATE	07/24/13
PROJECT #:	70-007

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

SITUATED IN WOLFE COUNTY, KENTUCKY, ON PINE RIDGE

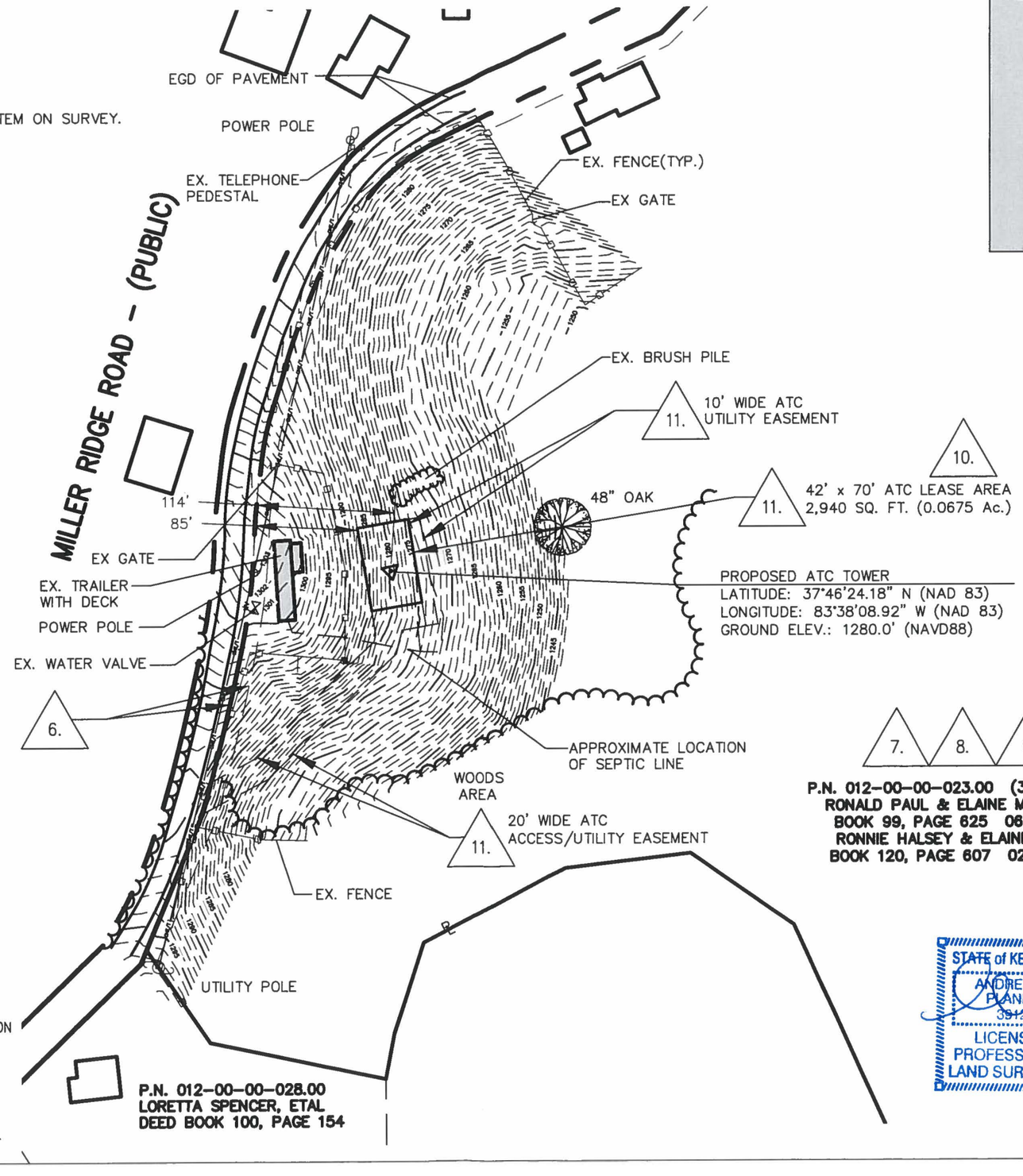
– DENOTES LOCATION OF SCHEDULE B ITEM ON SURVEY.

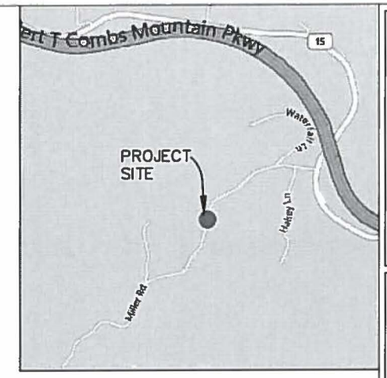


TRUE NORTH (NAD 83) AND ELEVATIONS WERE ESTABLISHED FROM EXISTING GEODETIC CONTROL MONUMENTATION USING G.P.S.

0 100 200

SCALE: 1" = 100'





(NOT TO SCALE)
VICINITY MAP

7. 8. 9.

P.N. 012-00-00-023.00 (38.8 ACRES ±)
RONALD PAUL & ELAINE MARIE HALSEY
BOOK 99, PAGE 625 06/02/1997
RONNIE HALSEY & ELAINE HALSEY
BOOK 120, PAGE 607 02/06/2006

THIS SURVEY PLAN IS NOT THE RESULT OF A FULL BOUNDARY SURVEY. IT IS THE RESULT OF COMPILATION OF RECORD INFORMATION AND LOCATION OF AVAILABLE MONUMENTATION.

12-10-2015

ANDREW G. PLANET, PLS #3912 DATE

STATE of KENTUCKY
ANDREW G PLANET
3912
LICENSED PROFESSIONAL LAND SURVEYOR

ROLLING & HOCEVAR, INC.
CIVIL ENGINEERING SURVEYING
257 SOUTH COURT ST. SUITE 6
MEDINA, OHIO (330)723-1828
FAX (330)723-8637

AMERICAN TOWER CORPORATION
1101 PERIMETER DRIVE, SUITE 225
SCHAUMBURG, IL 60173

TERRA CONSULTING GROUP, LTD.
600 Busse Highway
Park Ridge, IL 60068
Ph: 847/698-6400
Fax: 847/698-6401

REVISIONS

NO.	DESCRIPTION	DATE	BY
0.	FINAL SURVEY	12-19-13	AGP
1.	REVISE FLOOD STATEMENT - UPDATE OWNERSHIP	01-28-14	AGP
2.	REVIEW TITLE	11-18-15	AGP
3.	OWNERSHIP LABELS	12-04-15	AGP
4.	FINAL SURVEY	12-10-15	AGP
5.			
6.			

AT&T SITE # 143436
ATC SITE # 281378

PEA RIDGE

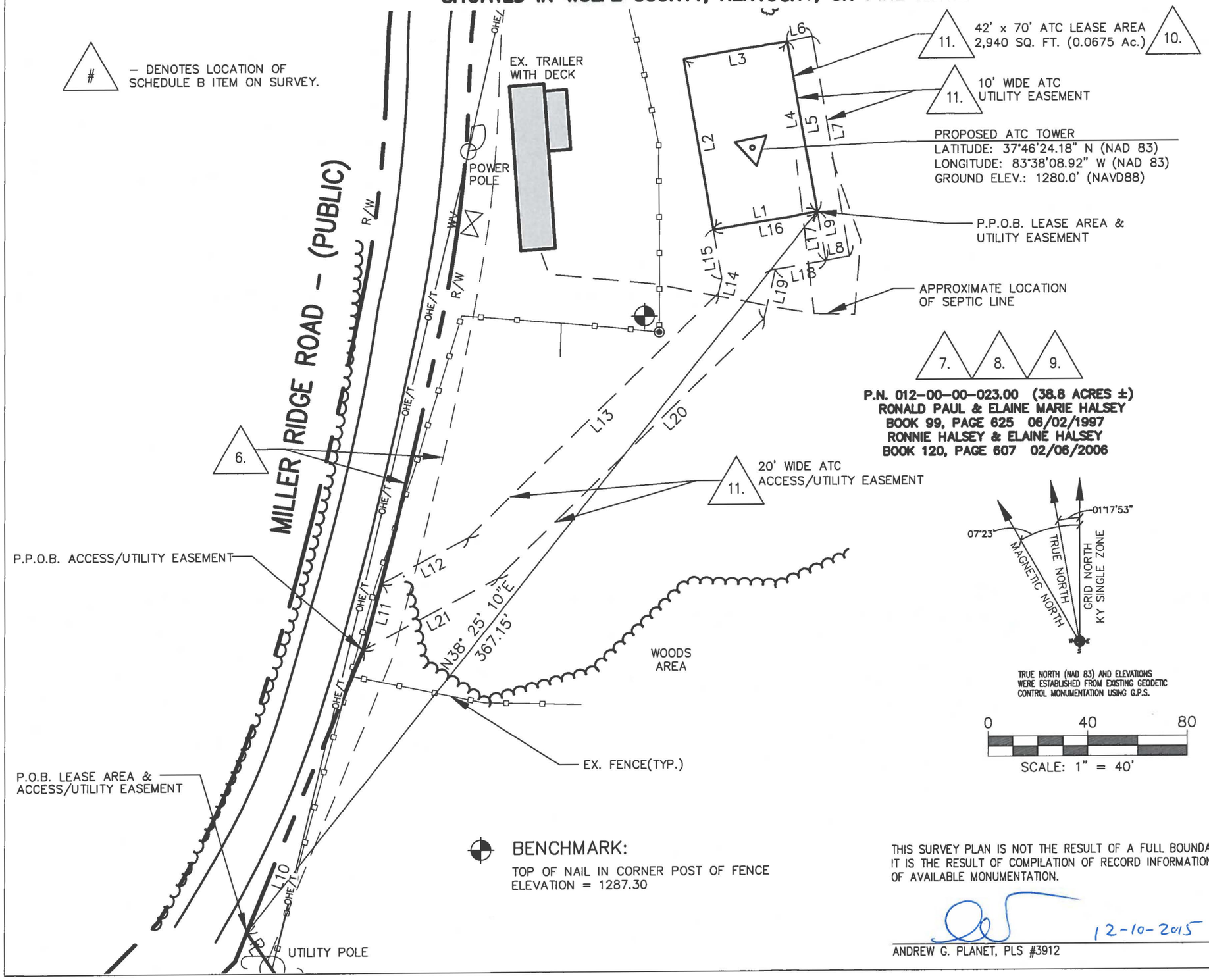
395 MILLER RIDGE ROAD
PINE RIDGE,
KENTUCKY 41360

DRAWN BY:	PRE
CHECKED BY:	AGP
DATE:	10/18/2013
PROJECT #:	1008-471

SHEET TITLE
ENLARGED COMPOUND PLN

SHEET NUMBER
S1

SITUATED IN WOLFE COUNTY, KENTUCKY, ON PINE RIDGE



Parcel Line Table		
Line #	Length	Direction
L1	42.00	S80° 15' 19"W
L2	70.00	N9° 44' 41"W
L3	42.00	N80° 15' 19"E
L4	70.00	S9° 44' 41"E
L5	70.00	N9° 44' 41"W
L6	10.00	N80° 15' 19"E
L7	90.00	S9° 44' 41"E
L8	10.00	S80° 15' 19"W
L9	20.00	N9° 44' 41"W
L10	121.55	N22° 20' 13"E
L11	27.45	N15° 20' 01"E
L12	39.41	N62° 06' 34"E
L13	140.14	N45° 48' 33"E
L14	5.98	N13° 17' 13"E
L15	20.00	N9° 44' 41"W
L16	42.00	N80° 15' 19"E
L17	20.00	S9° 44' 41"E
L18	20.27	S80° 15' 19"W
L19	20.31	S13° 17' 13"W
L20	148.84	S45° 48' 33"W
L21	61.07	S62° 06' 34"W

THIS SURVEY PLAN IS NOT THE RESULT OF A FULL BOUNDARY SURVEY. IT IS THE RESULT OF COMPILATION OF RECORD INFORMATION AND LOCATION OF AVAILABLE MONUMENTATION.

12-10-2015

ANDREW G. PLANET, PLS #3912 DATE

STATE of KENTUCKY
ANDREW G PLANET
3912
LICENSED PROFESSIONAL LAND SURVEYOR

ROLLING & HOCKMAN, INC.
A Geo Logic Group Company
CIVIL ENGINEERING SURVEYING
257 SOUTH COURT ST. SUITE 6
MEDINA, OHIO (330)723-1828
FAX (330)723-8637

AMERICAN TOWER CORPORATION
1101 PERIMETER DRIVE, SUITE 225
SCHAUMBURG, IL 60173

TERRA CONSULTING, LTD.
600 Busse Highway
Park Ridge, IL 60068
Ph: 847/698-6400
Fax: 847/698-6401

REVISIONS

NO.	DESCRIPTION	DATE	BY
0			
1	FINAL SURVEY	12-19-13	AGP
2.	REVISE FLOOD STATEMENT - UPDATE OWNERSHIP	01-28-14	AGP
3	REVIEW TITLE	11-18-15	AGP
4	OWNERSHIP LABELS	12-04-15	AGP
5	FINAL SURVEY	12-10-15	AGP
6			

AT&T SITE # 143436
ATC SITE # 281378

PEA RIDGE

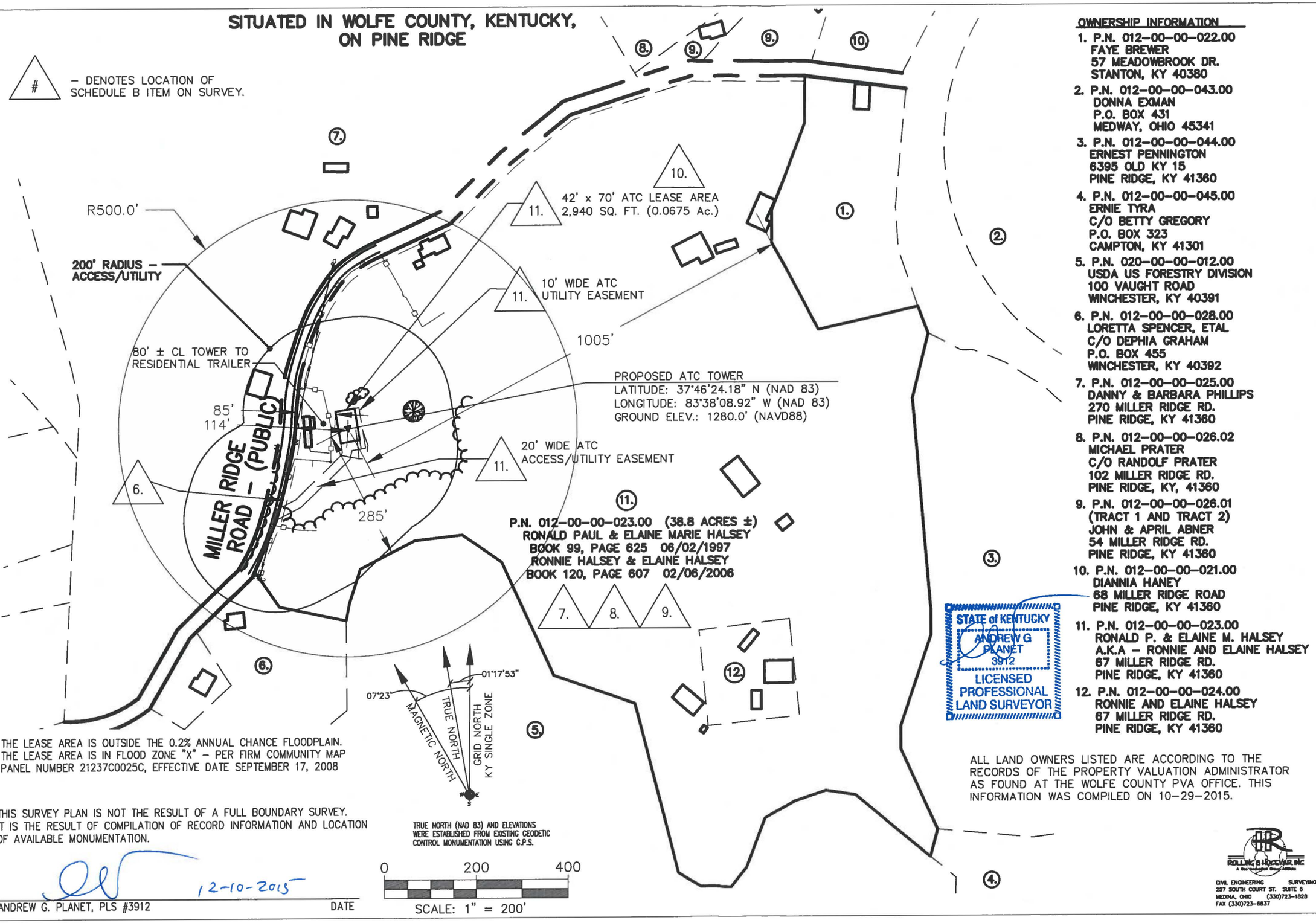
395 MILLER RIDGE ROAD
PINE RIDGE,
KENTUCKY 41360

DRAWN BY:	PRE
CHECKED BY	AGP
DATE	10/18/2013
PROJECT #:	1008-471

SHEET TITLE
EASEMENT DETAIL

SHEET NUMBER
S2

SITUATED IN WOLFE COUNTY, KENTUCKY, ON PINE RIDGE



THE LEASE AREA IS OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
THE LEASE AREA IS IN FLOOD ZONE "X" – PER FIRM COMMUNITY MAP PANEL NUMBER 21237C0025C, EFFECTIVE DATE SEPTEMBER 17, 2008

THIS SURVEY PLAN IS NOT THE RESULT OF A FULL BOUNDARY SURVEY. IT IS THE RESULT OF COMPILATION OF RECORD INFORMATION AND LOCATION OF AVAILABLE MONUMENTATION.

12-10-2015

ANDREW G. PLANET, PLS #3912 DATE

TRUE NORTH (NAD 83) AND ELEVATIONS WERE ESTABLISHED FROM EXISTING GEODETIC CONTROL MONUMENTATION USING G.P.S.

OWNERSHIP INFORMATION

1. P.N. 012-00-00-022.00
   FAYE BREWER
   57 MEADOWBROOK DR.
   STANTON, KY 40380
2. P.N. 012-00-00-043.00
   DONNA EXMAN
   P.O. BOX 431
   MEDWAY, OHIO 45341
3. P.N. 012-00-00-044.00
   ERNEST PENNINGTON
   6395 OLD KY 15
   PINE RIDGE, KY 41360
4. P.N. 012-00-00-045.00
   ERNIE TYRA
   C/O BETTY GREGORY
   P.O. BOX 323
   CAMPTON, KY 41301
5. P.N. 020-00-00-012.00
   USDA US FORESTRY DIVISION
   100 VAUGHT ROAD
   WINCHESTER, KY 40391
6. P.N. 012-00-00-028.00
   LORETTA SPENCER, ETAL
   C/O DEPHIA GRAHAM
   P.O. BOX 455
   WINCHESTER, KY 40392
7. P.N. 012-00-00-025.00
   DANNY & BARBARA PHILLIPS
   270 MILLER RIDGE RD.
   PINE RIDGE, KY 41360
8. P.N. 012-00-00-026.02
   MICHAEL PRATER
   C/O RANDOLF PRATER
   102 MILLER RIDGE RD.
   PINE RIDGE, KY, 41360
9. P.N. 012-00-00-026.01
   (TRACT 1 AND TRACT 2)
   JOHN & APRIL ABNER
   54 MILLER RIDGE RD.
   PINE RIDGE, KY 41360
10. P.N. 012-00-00-021.00
    DIANNIA HANEY
    68 MILLER RIDGE ROAD
    PINE RIDGE, KY 41360
11. P.N. 012-00-00-023.00
    RONALD P. & ELAINE M. HALSEY
    A.K.A – RONNIE AND ELAINE HALSEY
    67 MILLER RIDGE RD.
    PINE RIDGE, KY 41360
12. P.N. 012-00-00-024.00
    RONNIE AND ELAINE HALSEY
    67 MILLER RIDGE RD.
    PINE RIDGE, KY 41360

STATE of KENTUCKY
ANDREW G PLANET
3912
LICENSED PROFESSIONAL LAND SURVEYOR

ALL LAND OWNERS LISTED ARE ACCORDING TO THE RECORDS OF THE PROPERTY VALUATION ADMINISTRATOR AS FOUND AT THE WOLFE COUNTY PVA OFFICE. THIS INFORMATION WAS COMPILED ON 10-29-2015.

ROLLING & HOCHWALT, INC
CIVIL ENGINEERING SURVEYING
257 SOUTH COURT ST. SUITE 6
MEDINA, OHIO (330)723-1828
FAX (330)723-8837

AMERICAN TOWER CORPORATION
1101 PERIMETER DRIVE, SUITE 225
SCHAUMBURG, IL 60173

TERRA CONSULTING, LTD.
600 Busse Highway
Park Ridge, IL 60068
Ph: 847/698-6400
Fax: 847/698-6401

REVISIONS

NO	DESCRIPTION	DATE	BY
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4	FINAL SURVEY	12-10-15	AGP
5			
6			

AT&T SITE # 143436
ATC SITE # 281378

PEA RIDGE

395 MILLER RIDGE ROAD
PINE RIDGE,
KENTUCKY 41360

DRAWN BY	PRE
CHECKED BY	AGP
DATE	10/15/2013
PROJECT #	1008-471

SHEET TITLE
OVERALL SITE

SHEET NUMBER
S3

Parent Parcel:

THREE CERTAIN TRACTS OR PARCELS OF LAND LOCATED IN WOLFE COUNTY, KENTUCKY AT PINE RIDGE AND BOUNDED AS FOLLOWS:

PARCEL NO. 1

BEGINNING AT A SET STONE AT A WIRE FENCE ON THE SOUTH SIDE OF THE MILLER RIDGE ROAD, THENCE RUNNING WITH THE SAID WIRE FENCE A SOUTHWARD COURSE TO THE ROBERT TACKETT LINE; THENCE WITH THE SAID ROBERT TACKETT LINE AN EASTWARD COURSE TO THE MELVIN MOTHS LINE; THENCE A NORTHEAST COURSE WITH THE MELVIN MORRIS LINE TO THE MILL RIDGE ROAD; THENCE WITH THE MILLER RIDGE ROAD TO A SET STONE THE PLACE OF BEGINNING. CONTAINING 20 ACRES MORE OR LESS.

PARCEL NO. 2

BEGINNING AT A SMALL MAPLE ON TOP OF THE CLIFF ON THE EAST SIDE OF A BRANCH OF TIGHT HOLLOW IN THE LINE OF MYRTLE ATKINS; THENCE WITH HER LINE AND THE TOP OF THE CLIFF TO A CORNER OF THE U. S. GOVERNMENT LINE; THENCE CONTINUING WITH THE TOP OF THE CLIFF AND THE GOVERNMENT LINE TO A CROSS CUT IN THE CLIFF; THENCE LEAVING THE CLIFF AND RUNNING UP THE HILL NORTH 18 WEST 340 FEET TO A TWELVE INCH PINE IN A LINE OF A TRACT OF LAND CONVEYED TO MAE TERRY BY SHELBY SPENCER ET AL; THENCE WITH SAID LINE AND THE FENCE NORTH 72 E 166 FEET TO A STONE; THENCE DOWN THE HILL WITH THE FENCE N 77 E TO A STONE ON THE WEST SIDE OF THE BRANCH; THENCE DOWN SAID BRANCH TO A WHITE OAK ON THE LEFT SIDE OF SAID BRANCH; THENCE DOWN THE BRANCH TO A HEMLOCK ON THE RIGHT SIDE OF THE BRANCH; THENCE CONTINUING DOWN THE BRANCH TO A DOUBLE POPLAR ON THE RIGHT OF THE BRANCH AND CONTINUING DOWN THE BRANCH TO A BLACK PINE ON THE LEFT OF THE BRANCH; THENCE AND CONTINUING TO THE BEGINNING.

PARCEL NO. 3

BEGINNING AT A HEMLOCK ON THE WEST SIDE OF THE BRANCH, A CORNER BETWEEN THE PARTIES HERETO AN EDGAR SPENCER; THENCE CROSSING THE BRANCH AND AROUND THE SIDE OF THE HILL TO A STONE; THENCE TO A BLACK GUM CONTINUING AROUND THE HILL TO A STONE; CONTINUING AROUND THE HILL TO A STONE; THENCE TO A STONE ON TOP OF THE POINT; THENCE ALONG SAID POINT TO ANOTHER STONE; THENCE CONTINUING ALONG THE SIDE OF POINT TO A STONE; THENCE CONTINUING AROUND THE SIDE OF THE POINT TO A STONE; THENCE RUNNING AROUND PARALLEL WITH EDGAR SPENCER ROAD TO A STONE AT HIGHWAY 15; SAID STONE BEING 19 FEET SOUTH OF A TELEPHONE POST; THENCE TO THE BEGINNING.

THERE IS EXCLUDED FROM THE FOREGOING PARCELS THE LAND CONVEYED BY MILDRED HALSEY ET AL TO ARNOLD HALSEY BY DEED DATED SEPTEMBER 14, 1962 AND OF RECORD IN DEED BOOK NO. 63 PAGE 366 WOLFE COUNTY CLERK'S OFFICE. THERE IS FURTHER EXCLUDED ALL THE LAND CONVEYED BY MILDRED HALSEY ET AL TO THE COMMONWEALTH OF KENTUCKY, DEPT OF HIGHWAYS.

FOR INFORMATIONAL PURPOSES ONLY:

PARCEL 012-00-00-023.00 LOCATED ON MILLER RIDGE ROAD PINE RIDGE, KENTUCKY 41360

TAX PARCEL ID #: 012-00-00-023.00

Surveyors Title Comments:

SITE NAME: PEA RIDGE
ATC SITE NUMBER: 281378
STEWART TITLE GUARANTY COMPANY FILE NUMBER: 15100513KY
EFFECTIVE DATE: OCTOBER 15, 2015

SCHEDULE B SECTION 2 EXCEPTIONS:

ITEMS 1 – 5, ARE NOT SURVEY RELATED.

6. PERPETUAL EASEMENT GIVEN BY ARNOLD HALSEY AND ROSA BELLE HALSEY TO THE CITY OF CAMPTON, DATED JULY 3, 1980 AND RECORDED JULY 24, 1980 IN BOOK 72 AT PAGE 501.
[AFFECTS THE PARENT PARCEL. EASEMENT DOES NOT INCLUDE A DETAILED DESCRIPTION OF THE EASEMENT LOCATION. AN EXISTING WATER VALVE WAS FOUND ALONG THE SOUTHERN SIDE OF MILLER RIDGE ROAD. THE APPROXIMATE LOCATION OF THE 12' WIDE EASEMENT IS PLOTTED ON THE SURVEY BASED ON THE WATER VALVE LOCATION. AFFECTS THE EXISTING ACCESS & UTILITY EASEMENT WHERE THEY OVERLAP NEAR MILLER RIDGE ROAD. DOES NOT AFFECT THE EXISTING LEASE AREA OR THE EXISTING UTILITY EASEMENT.]

7. MORTGAGE GIVEN BY RONALD HALSEY AND ELAINE HALSEY, A MARRIED COUPLE, TO INEZ DEPOSIT BANK, IN THE AMOUNT OF $75,000, DATED JULY 16, 2004 AND RECORDED AUGUST 10, 2004 IN BOOK 63 AT PAGE 268.
[AFFECTS THE PARENT PARCEL.]

8. MORTGAGE GIVEN BY RONALD HALSEY AND ELAINE HALSEY, HUSBAND AND WIFE, TO FARMERS AND TRADERS BANK, IN THE AMOUNT OF $47,584.58, DATED APRIL 16, 2012 AND RECORDED APRIL 30, 2012 IN BOOK 85 AT PAGE 560 AND AS INSTRUMENT NUMBER 222422.
[AFFECTS THE PARENT PARCEL.]

9. EASEMENT GIVEN BY RONALD HALSEY AND ELAINE HALSEY TO BELLSOUTH TELECOMMUNICATIONS, LLC, D/B/A AT&T KENTUCKY, DATED APRIL 3, 2014 AND RECORDED APRIL 7, 2014 IN BOOK 136 AT PAGE 324 AND AS INSTRUMENT NUMBER 225334.
[AFFECTS THE PARENT PARCEL. EASEMENT DOES NOT INCLUDE A DETAILED DESCRIPTION OF THE EASEMENT LOCATION, UNABLE TO PLOT ON SURVEY. 10'-WIDE EASEMENT IS TO BE NEAR MILLER RIDGE ROAD FOR SERVICE TO A CELL SITE.]

10. MEMORANDUM OF LICENSE BETWEEN AMERICAN TOWERS LLC AND NEW CINGULAR WIRELESS PCS, LLC, DATED SEPTEMBER 19, 2014 AND RECORDED OCTOBER 30, 2014 IN BOOK 27 AT PAGE 75 AND AS INSTRUMENT NUMBER 226192.
[AFFECTS THE PARENT PARCEL. MEMORANDUM REFERENCES A 348 SQUARE FOOT PREMISES BEING A PORTION OF THE EXISTING LEASE AREA. NO DETAILED DESCRIPTION OF THE 348 SQUARE FOOT PREMISES TO PLOT.]

11. MEMORANDUM OF LEASE AGREEMENT BETWEEN RONNIE HALSEY AND ELAINE HALSEY, HIS WIFE, WITH RIGHTS OF SURVIVORSHIP, AND AMERICAN TOWERS LLC, DATED NOVEMBER 26, 2013 AND RECORDED DECEMBER 15, 2014 IN BOOK 39 AT PAGE 400 AND AS INSTRUMENT NUMBER 226432.
[AFFECTS THE PARENT PARCEL. THE EXISTING LEASE AREA, ACCESS & UTILITY EASEMENT AND UTILITY EASEMENT ARE PLOTTED ON THE SURVEY.]

(#) – DENOTES LOCATION OF SCHEDULE B ITEM ON SURVEY.

STATE of KENTUCKY
ANDREW G PLANET
3912
LICENSED PROFESSIONAL LAND SURVEYOR

THIS SURVEY PLAN IS NOT THE RESULT OF A FULL BOUNDARY SURVEY. IT IS THE RESULT OF COMPILATION OF RECORD INFORMATION AND LOCATION OF AVAILABLE MONUMENTATION.

ANDREW G. PLANET, PLS #3912 — DATE: 12-10-2015

ROLLING & HOCEVAR, INC.
CIVIL ENGINEERING SURVEYING
257 SOUTH COURT ST. SUITE 6
MEDINA, OHIO (330)723-1826
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AMERICAN TOWER CORPORATION
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REVISIONS

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5.	FINAL SURVEY	12-10-15	AGP
6.			

AT&T SITE # 143436
ATC SITE # 281378

PEA RIDGE

395 MILLER RIDGE ROAD
PINE RIDGE,
KENTUCKY 41360

DRAWN BY	PRE
CHECKED BY	AGP
DATE	10/18/2013
PROJECT #	1008-471

SHEET TITLE
LEGAL DESCRIPTION

SHEET NUMBER
S4

LEGAL DESCRIPTION FOR A 42' X 70' LEASE AREA
PROJECT NO. 1008-467
NOVEMBER 18, 2015

SITUATED IN COUNTY OF WOLFE, STATE OF KENTUCKY AND KNOWN AS BEING A PART OF WOLFE COUNTY PARCEL NUMBER: 012-00-00-023.00 AS CONVEYED TO RONALD P. AND ELAINE M. HALSEY BY DEED RECORDED JUNE 2, 1997 IN DEED BOOK 99, PAGE 625 AND MORE RECORDED DEED DOCUMENTS ALL OF WOLFE COUNTY CLERK RECORDS, FURTHER BOUND AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID LANDS CONVEYED TO HALSEY, THE SAME BEING A POINT IN THE EASTERN RIGHT-OF-WAY LINE OF MILLER RIDGE ROAD, AND THE NORTHWEST CORNER OF LANDS CONVEYED TO LORETTA SPENCER, ETAL BY DEED DATED AUGUST 4, 1997 AS RECORDED IN DEED BOOK 100, PAGE 154 OF WOLFE COUNTY CLERK RECORDS;

THENCE LEAVING SAID RIGHT-OF-WAY LINE, BEARING NORTH 38°25'10" EAST, A DISTANCE OF 367.15 FEET TO AN IRON PIN SET AND BEING THE TRUE PLACE OF BEGINNING OF THE LEASE AREA HEREIN DESCRIBED;

THENCE, BEARING SOUTH 80°15'19" WEST, A DISTANCE OF 42.00 FEET TO AN IRON PIN SET;

THENCE AT A RIGHT ANGLE, BEARING NORTH 09°44'41" WEST, A DISTANCE OF 70.00 FEET TO AN IRON PIN SET:

THENCE AT A RIGHT ANGLE, BEARING NORTH 80°15'19" EAST, A DISTANCE OF 42.00 FEET TO AN IRON PIN SET;

THENCE AT A RIGHT ANGLE, BEARING SOUTH 09°44'41" EAST, A DISTANCE OF 70.00 FEET TO THE TRUE PLACE OF BEGINNING, CONTAINING 0.0675 ACRES OF LAND, MORE OR LESS BUT SUBJECT TO ALL LEGAL HIGHWAYS AND ALL COVENANTS AND AGREEMENTS OF RECORD.

BEARINGS ARE BASED ON GRID NORTH OF KY SINGLE ZONE NAD 83 AND ARE USED HEREIN TO INDICATE ANGLES ONLY.

THIS LEGAL DESCRIPTION WAS PREPARED BASED ON A SURVEY UNDER THE SUPERVISION OF ANDREW G. PLANET, P.L.S. #3912 BY ROLLING & HOCEVAR, INC. IN OCTOBER 2013.

LEGAL DESCRIPTION FOR A 20-FOOT ACCESS/UTILITY EASEMENT
PROJECT NO. 1008-471
NOVEMBER 18, 2015

SITUATED IN COUNTY OF WOLFE, STATE OF KENTUCKY AND KNOWN AS BEING A PART OF WOLFE COUNTY PARCEL NUMBER: 012-00-00-023.00 AS CONVEYED TO RONALD P. AND ELAINE M. HALSEY BY DEED RECORDED JUNE 2, 1997 IN DEED BOOK 99, PAGE 625 AND MORE RECORDED DEED DOCUMENTS ALL OF WOLFE COUNTY CLERK RECORDS, FURTHER BOUND AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID LANDS CONVEYED TO HALSEY, THE SAME BEING A POINT IN THE EASTERN RIGHT-OF-WAY LINE OF MILLER RIDGE ROAD, AND THE NORTHWEST CORNER OF LANDS CONVEYED TO LORETTA SPENCER, ETAL BY DEED DATED AUGUST 4, 1997 AS RECORDED IN DEED BOOK 100, PAGE 154 OF WOLFE COUNTY CLERK RECORDS;

THENCE ALONG SAID RIGHT-OF-WAY LINE, BEARING NORTH 22°20'13" EAST, A DISTANCE OF 121.55 FEET TO A POINT THEREON AND BEING THE TRUE PLACE OF BEGINNING OF THE ACCESS/UTILITY EASEMENT HEREIN DESCRIBED;

THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE, BEARING NORTH 15°20'01" EAST, A DISTANCE OF 27.45 FEET TO A POINT THEREON;

THENCE, BEARING NORTH 62°06'34" EAST, A DISTANCE OF 39.41 FEET TO A POINT;

THENCE, BEARING NORTH 45°48'33" EAST, A DISTANCE OF 140.14 FEET TO A POINT;

THENCE, BEARING NORTH 13°17'13" EAST, A DISTANCE OF 5.98 FEET TO A POINT;

THENCE, BEARING NORTH 09°44'41" WEST, A DISTANCE OF 20.00 FEET TO AN IRON PIN SET AT THE SOUTHWESTERN CORNER OF A PROPOSED AMERICAN TOWER CORPORATION LEASE AREA;

THENCE AT A RIGHT ANGLE AND ALONG THE SOUTHERN LINE OF SAID LEASE AREA, BEARING NORTH 80°15'19" EAST, A DISTANCE OF 42.00 FEET TO AN IRON PIN SET AT THE SOUTHEASTERN CORNER THEREOF;

THENCE LEAVING SAID LEASE AREA LINE AT A RIGHT ANGLE, BEARING SOUTH 09°44'41" EAST, A DISTANCE OF 20.00 FEET TO A POINT;

THENCE AT A RIGHT ANGLE, BEARING SOUTH 80°15'19" WEST, A DISTANCE OF 20.27 FEET TO A POINT;

THENCE, BEARING SOUTH 13°17'13" WEST, A DISTANCE OF 20.31 FEET TO A POINT;

THENCE, BEARING SOUTH 45°48'33" WEST, A DISTANCE OF 148.84 FEET TO A POINT;

THENCE, BEARING SOUTH 62°06'34" WEST, A DISTANCE OF 61.07 FEET TO THE TRUE PLACE OF BEGINNING, CONTAINING 0.1147 ACRES OF LAND, INTENDING TO BE A 20-FOOT WIDE STRIP OF LAND, MORE OR LESS BUT SUBJECT TO ALL LEGAL HIGHWAYS AND ALL COVENANTS AND AGREEMENTS OF RECORD.

BEARINGS ARE BASED ON GRID NORTH OF KY SINGLE ZONE NAD 83 AND ARE USED HEREIN TO INDICATE ANGLES ONLY.

THIS LEGAL DESCRIPTION WAS PREPARED BASED ON A SURVEY UNDER THE SUPERVISION OF ANDREW G. PLANET, P.L.S. #3912 BY ROLLING & HOCEVAR, INC. IN OCTOBER 2013.

LEGAL DESCRIPTION FOR A 10-FOOT UTILITY EASEMENT
PROJECT NO. 1008-471
NOVEMBER 18, 2015

SITUATED IN COUNTY OF WOLFE, STATE OF KENTUCKY AND KNOWN AS BEING A PART OF WOLFE COUNTY PARCEL NUMBER: 012-00-00-023.00 AS CONVEYED TO RONALD P. AND ELAINE M. HALSEY BY DEED RECORDED JUNE 2, 1997 IN DEED BOOK 99, PAGE 625 AND MORE RECORDED DEED DOCUMENTS ALL OF WOLFE COUNTY CLERK RECORDS, FURTHER BOUND AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID LANDS CONVEYED TO HALSEY, THE SAME BEING A POINT IN THE EASTERN RIGHT-OF-WAY LINE OF MILLER RIDGE ROAD, AND THE NORTHWEST CORNER OF LANDS CONVEYED TO LORETTA SPENCER, ETAL BY DEED DATED AUGUST 4, 1997 AS RECORDED IN DEED BOOK 100, PAGE 154 OF WOLFE COUNTY CLERK RECORDS;

THENCE LEAVING SAID RIGHT-OF-WAY LINE, BEARING NORTH 38°25'10" EAST, A DISTANCE OF 367.15 FEET TO AN IRON PIN SET AT THE SOUTHEASTERN CORNER OF A PROPOSED AMERICAN TOWER CORPORATION LEASE AREA AND BEING THE TRUE PLACE OF BEGINNING OF THE UTILITY EASEMENT HEREIN DESCRIBED;

THENCE ALONG THE EASTERN LINE OF SAID LEASE AREA, BEARING NORTH 09°44'41" WEST, A DISTANCE OF 70.00 FEET TO AN IRON PIN SET AT THE NORTHEASTERN CORNER THEREOF;

THENCE LEAVING SAID LEASE AREA LINE AT A RIGHT ANGLE, BEARING NORTH 80°15'19" EAST, A DISTANCE OF 10.00 FEET TO A POINT;

THENCE AT A RIGHT ANGLE, BEARING SOUTH 09°44'41" EAST, A DISTANCE OF 90.00 FEET TO A POINT;

THENCE AT A RIGHT ANGLE, BEARING SOUTH 80°15'19" WEST, A DISTANCE OF 10.00 FEET TO A POINT;

THENCE AT A RIGHT ANGLE, BEARING NORTH 09°44'41" WEST, A DISTANCE OF 20.00 FEET TO THE TRUE PLACE OF BEGINNING, CONTAINING 0.0207 ACRES OF LAND, INTENDING TO BE A 10-FOOT WIDE STRIP OF LAND, MORE OR LESS BUT SUBJECT TO ALL LEGAL HIGHWAYS AND ALL COVENANTS AND AGREEMENTS OF RECORD.

BEARINGS ARE BASED ON GRID NORTH OF KY SINGLE ZONE NAD 83 AND ARE USED HEREIN TO INDICATE ANGLES ONLY.

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ANDREW G. PLANET, PLS #3912 — DATE 12-10-2015

STATE of KENTUCKY
ANDREW G PLANET
3912
LICENSED PROFESSIONAL LAND SURVEYOR

ROLLING & HOCEVAR, INC
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AT&T SITE # 143436
ATC SITE # 281378

PEA RIDGE

395 MILLER RIDGE ROAD
PINE RIDGE,
KENTUCKY 41360

DRAWN BY:	PRE
CHECKED BY:	AGP
DATE:	10/18/2013
PROJECT #:	1008-471

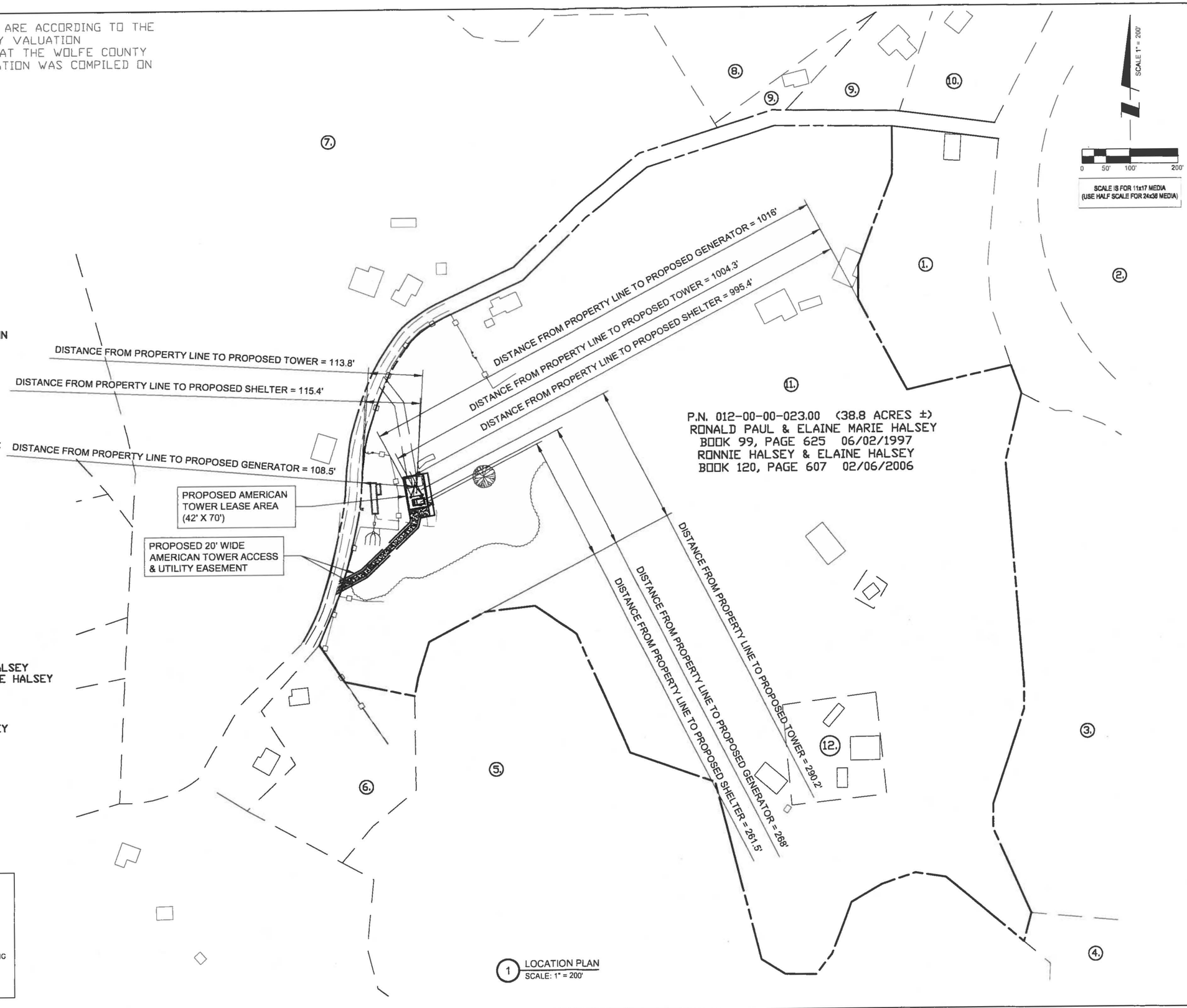
SHEET TITLE
LEGAL DESCRIPTION

SHEET NUMBER
S5

ALL LAND OWNERS LISTED ARE ACCORDING TO THE RECORDS OF THE PROPERTY VALUATION ADMINISTRATOR AS FOUND AT THE WOLFE COUNTY PVA OFFICE. THIS INFORMATION WAS COMPILED ON 10-29-2015.

OWNERSHIP INFORMATION

1. P.N. 012-00-00-022.00
   FAYE BREWER
   57 MEADOWBROOK DR.
   STANTON, KY 40380
2. P.N. 012-00-00-043.00
   DONNA EXMAN
   P.O. BOX 431
   MEDWAY, OHIO 45341
3. P.N. 012-00-00-044.00
   ERNEST PENNINGTON
   6395 OLD KY 15
   PINE RIDGE, KY 41360
4. P.N. 012-00-00-045.00
   ERNIE TYRA
   C/O BETTY GREGORY
   P.O. BOX 323
   CAMPTON, KY 41301
5. P.N. 020-00-00-012.00
   USDA US FORESTRY DIVISION
   100 VAUGHT ROAD
   WINCHESTER, KY 40391
6. P.N. 012-00-00-028.00
   LORETTA SPENCER, ETAL
   C/O DEPHIA GRAHAM
   P.O. BOX 455
   WINCHESTER, KY 40392
7. P.N. 012-00-00-025.00
   DANNY & BARBARA PHILLIPS
   270 MILLER RIDGE RD.
   PINE RIDGE, KY 41360
8. P.N. 012-00-00-026.02
   MICHAEL PRATER
   C/O RANDOLF PRATER
   102 MILLER RIDGE RD.
   PINE RIDGE, KY, 41360
9. P.N. 012-00-00-026.01
   (TRACT 1 AND TRACT 2)
   JOHN & APRIL ABNER
   54 MILLER RIDGE RD.
   PINE RIDGE, KY 41360
10. P.N. 012-00-00-021.00
    DIANNIA HANEY
    68 MILLER RIDGE ROAD
    PINE RIDGE, KY 41360
11. P.N. 012-00-00-023.00
    RONALD P. & ELAINE M. HALSEY
    A.K.A - RONNIE AND ELAINE HALSEY
    67 MILLER RIDGE RD.
    PINE RIDGE, KY 41360
12. P.N. 012-00-00-024.00
    RONNIE AND ELAINE HALSEY
    67 MILLER RIDGE RD.
    PINE RIDGE, KY 41360



1 LOCATION PLAN
SCALE: 1" = 200'

SCALE 1" = 200'
0 50' 100' 200'
SCALE IS FOR 11x17 MEDIA
(USE HALF SCALE FOR 24x36 MEDIA)

SURVEY PREPARED BY
ROLLING & HOCKMAN, INC.
CIVIL ENGINEERING SURVEYING
257 SOUTH COURT ST. SUITE 6
MEDINA, OHIO (330)723-1828
FAX (330)723-6637

AMERICAN TOWER CORPORATION

TERRA CONSULTING GROUP, LTD.
600 Busse Highway
Park Ridge, IL 60068
Ph: 847/698-6400
Fax: 847/698-6401

REVISIONS

NO	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	10/23/13	JLR
0	REVISED PER COMMENTS	11/5/13	JLR
1	ISSUED FOR FINAL	3/24/14	JLR
2	CLIENT COMMENTS	4/1/14	JAY
3	UPDATE ADJOINERS LIST	12/4/15	JAY

AT&T # 143436
ATC# 281378

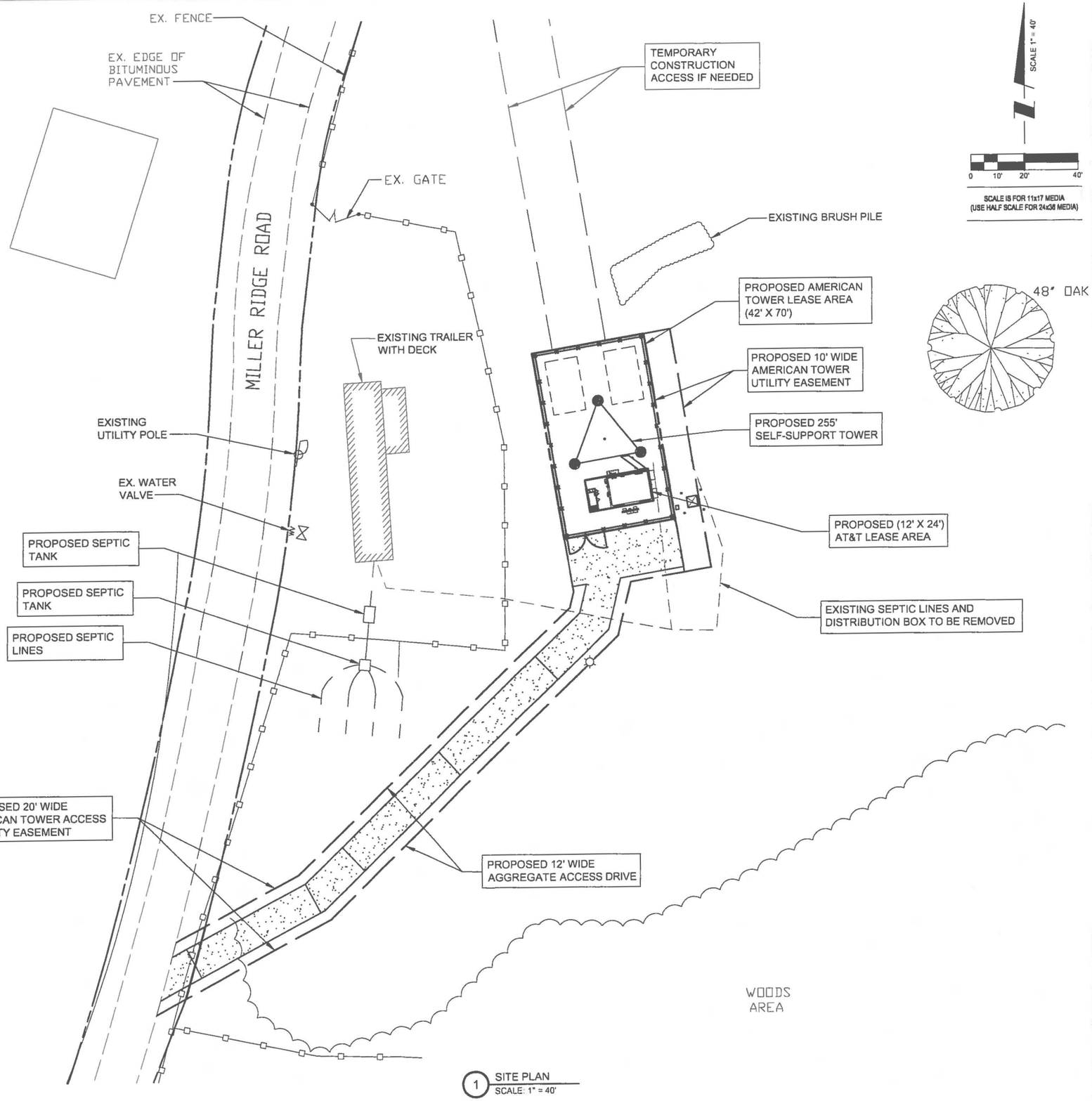
PEA RIDGE

395 MILLER RIDGE ROAD
PINE RIDGE, KY 41360

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	07/24/13
PROJECT #:	70-007

SHEET TITLE
LOCATION PLAN

SHEET NUMBER
Z-1



1 SITE PLAN
SCALE: 1" = 40'

SURVEY PREPARED BY

ROLLING'S HOCKMAN, INC.
A Civil Engineering Group Affiliation

CIVIL ENGINEERING SURVEYING
257 SOUTH COURT ST. SUITE 6
MEDINA, OHIO (330)723-1828
FAX (330)723-6637

LEGEND

- EXISTING TRANSFORMER
- EXISTING TREE
- BENCHMARK
- IRON PIN SET
- IRON PIN FOUND
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING WATER MANHOLE
- EXISTING WATER METER
- EXISTING PARKING METER
- EXISTING STREET SIGN
- EXISTING BILLBOARD & LARGE SIGNS
- EXISTING GUARDRAIL
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING UTILITY POLE WITH STREET LIGHT
- EXISTING GROUND GUY WIRE
- EXISTING GAS VALVE
- EXISTING TRAFFIC SIGNAL POLE
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING ELEC OR TELE MH
- EXISTING INLET
- EXISTING TRENCH DRAIN
- EX STM — EXISTING STORM DRAIN
- EX SAN — EXISTING SANITARY
- WL — WL — EXISTING WATER MAIN
- EXISTING ELECTRIC WIRE
- X — X — EXISTING FENCE
- EXISTING CONCRETE
- EXISTING BUILDING
- (P) PROPOSED
- (E) EXISTING
- XXX PROPOSED ELEVATION MARK
- MONUMENT BOX W/IRON PIN
- IRON PIPE FOUND

AMERICAN TOWER CORPORATION

TERRA CONSULTING GROUP, LTD.
600 Busse Highway
Park Ridge, IL 60068
Ph: 847/698-6400
Fax: 847/698-6401

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AT&T # 143436
ATC# 281378

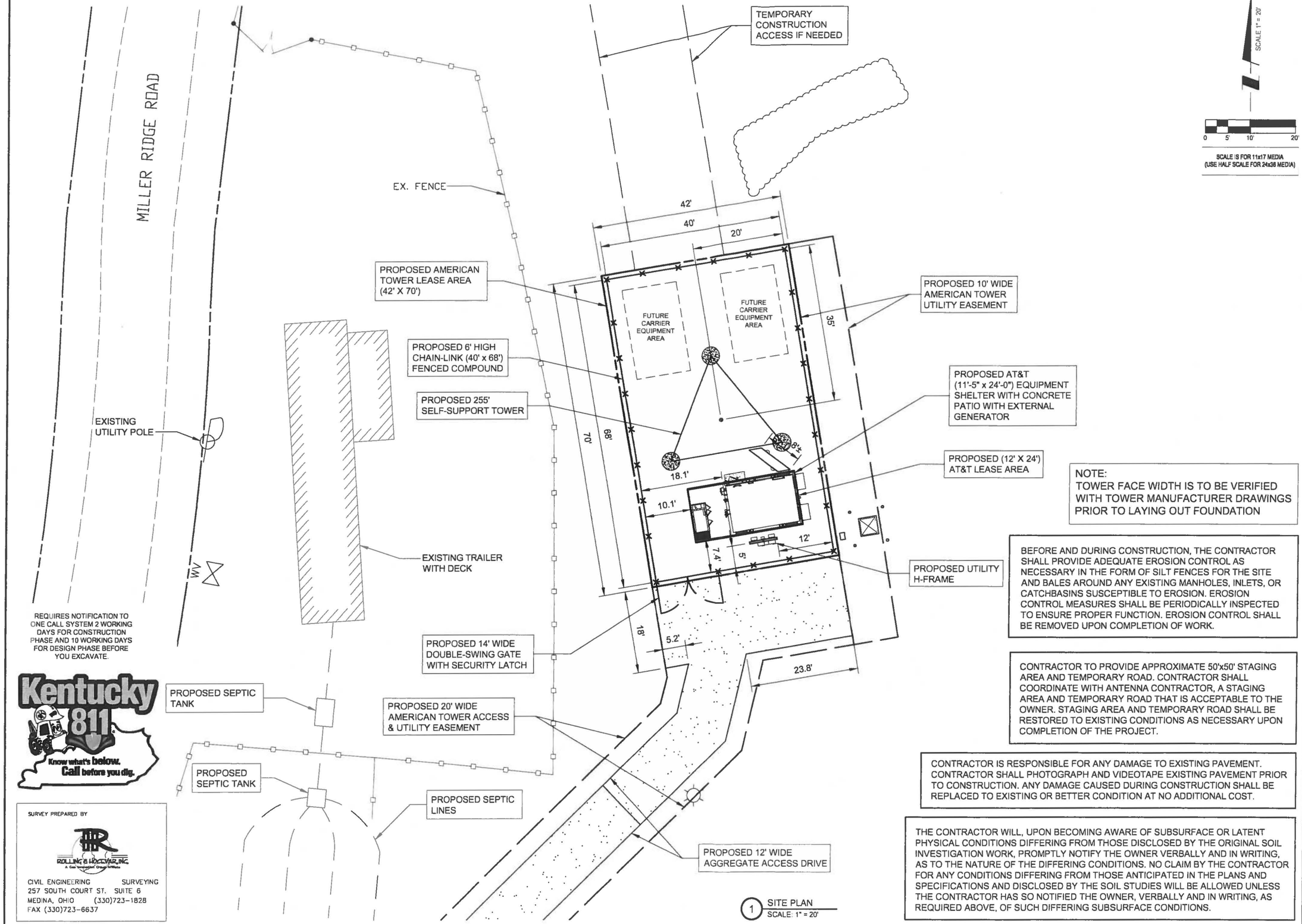
PEA RIDGE

395 MILLER RIDGE ROAD
PINE RIDGE, KY 41360

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	07/24/13
PROJECT #:	70-007

SHEET TITLE
SITE PLAN

SHEET NUMBER
Z-2



1 SITE PLAN
SCALE: 1" = 20'

SCALE 1" = 20'

0 5' 10' 20'

SCALE IS FOR 11x17 MEDIA
(USE HALF SCALE FOR 24x36 MEDIA)

NOTE:
TOWER FACE WIDTH IS TO BE VERIFIED WITH TOWER MANUFACTURER DRAWINGS PRIOR TO LAYING OUT FOUNDATION

BEFORE AND DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL AS NECESSARY IN THE FORM OF SILT FENCES FOR THE SITE AND BALES AROUND ANY EXISTING MANHOLES, INLETS, OR CATCHBASINS SUSCEPTIBLE TO EROSION. EROSION CONTROL MEASURES SHALL BE PERIODICALLY INSPECTED TO ENSURE PROPER FUNCTION. EROSION CONTROL SHALL BE REMOVED UPON COMPLETION OF WORK.

CONTRACTOR TO PROVIDE APPROXIMATE 50'x50' STAGING AREA AND TEMPORARY ROAD. CONTRACTOR SHALL COORDINATE WITH ANTENNA CONTRACTOR, A STAGING AREA AND TEMPORARY ROAD THAT IS ACCEPTABLE TO THE OWNER. STAGING AREA AND TEMPORARY ROAD SHALL BE RESTORED TO EXISTING CONDITIONS AS NECESSARY UPON COMPLETION OF THE PROJECT.

CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVEMENT. CONTRACTOR SHALL PHOTOGRAPH AND VIDEOTAPE EXISTING PAVEMENT PRIOR TO CONSTRUCTION. ANY DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPLACED TO EXISTING OR BETTER CONDITION AT NO ADDITIONAL COST.

THE CONTRACTOR WILL, UPON BECOMING AWARE OF SUBSURFACE OR LATENT PHYSICAL CONDITIONS DIFFERING FROM THOSE DISCLOSED BY THE ORIGINAL SOIL INVESTIGATION WORK, PROMPTLY NOTIFY THE OWNER VERBALLY AND IN WRITING, AS TO THE NATURE OF THE DIFFERING CONDITIONS. NO CLAIM BY THE CONTRACTOR FOR ANY CONDITIONS DIFFERING FROM THOSE ANTICIPATED IN THE PLANS AND SPECIFICATIONS AND DISCLOSED BY THE SOIL STUDIES WILL BE ALLOWED UNLESS THE CONTRACTOR HAS SO NOTIFIED THE OWNER, VERBALLY AND IN WRITING, AS REQUIRED ABOVE, OF SUCH DIFFERING SUBSURFACE CONDITIONS.

SURVEY PREPARED BY
ROLLING & HOCHWALT, INC.
CIVIL ENGINEERING SURVEYING
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MEDINA, OHIO (330)723-1828
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AMERICAN TOWER CORPORATION

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AT&T # 143436
ATC# 281378

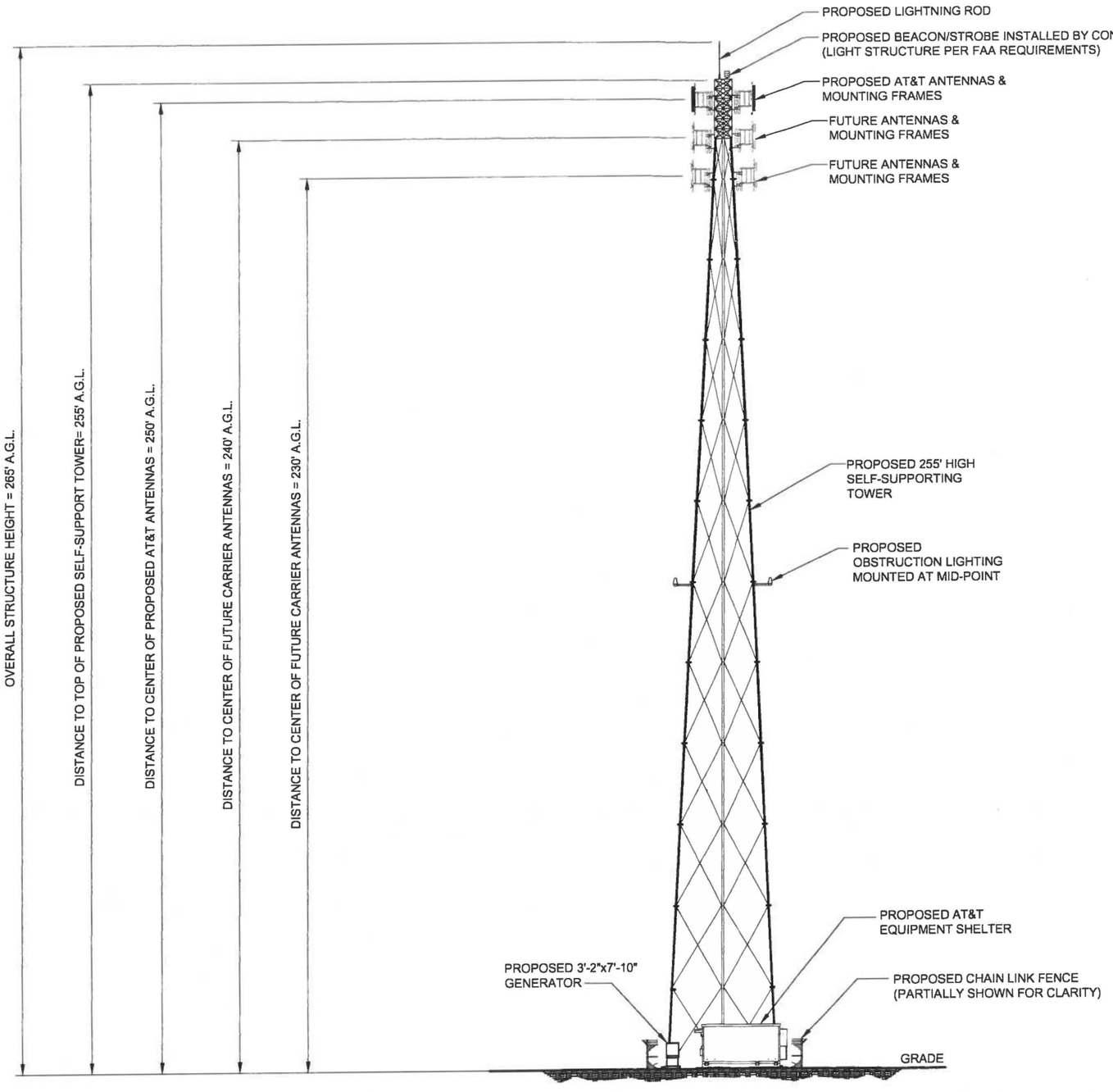
PEA RIDGE

395 MILLER RIDGE ROAD
PINE RIDGE, KY 41360

DRAWN BY	JLR
CHECKED BY	TAZ
DATE:	07/24/13
PROJECT #:	70-007

SHEET TITLE
ENLARGED SITE PLAN

SHEET NUMBER
Z-3



1 SITE ELEVATION
SCALE: 1/32" = 1'-0"

0 1/4" 1/2" 1"

SCALE IS FOR 11x17 MEDIA
(USE HALF SCALE FOR 24x36 MEDIA)

AMERICAN TOWER CORPORATION

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600 Busse Highway
Park Ridge, IL 60068
Ph: 847/698-6400
Fax: 847/698-6401

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AT&T # 143436
ATC# 281378

PEA RIDGE

395 MILLER RIDGE ROAD
PINE RIDGE, KY 41360

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	07/24/13
PROJECT #:	70-007

SHEET TITLE
SITE ELEVATION

SHEET NUMBER
Z-4

EXHIBIT C
TOWER AND FOUNDATION DESIGN

AMERICAN TOWER®
CORPORATION

11/7/13

Dear Commissioners:

The construction manager for the proposed new communications facility will be Ron Rohr. His contact information is 740-438-9710. Ron Rohr has been involved in the construction of communications facilities for over 17 years, and general construction for over 20 years.

Some of the notable and most recent projects are:

2010 - Present
American Tower Corporation – Construction Manager

- Successfully led the construction team on the 140 site, Southern Ohio Launch while maintaining a respectful and professional demeanor under difficult circumstances.
- Played a key part in the collaborating efforts to build the scope of work, pricing matrix, and close out documentation on several projects.
- Have cultivated a pool of responsible, dependable and quality driven GC's to work on ATC projects throughout the Midwest and Northeast Region.

1990 – 2009
Superior Concepts – Owner

- Contract Project and Construction Manager to multiple wireless carriers. Work included, but not limited to, permitting all the way through to final construction close outs. Also managed several DAS projects in shopping malls and residential areas.
- Equipment operator, cell site super intendant, regional foreman, etc...
- Carpentry, Construction and Consulting

Accreditations and Licenses

OSHA Electrical Safety
Vallen Safety Knowledge Systems / Fall Protection
Builders Exchange of Central Ohio / Estimating & Bid Preparation
Amphenol Wireless Cable Connector Training
Commscope Connector Training
Andrew Connector Training
Current OSHA Safety Training
Current Haz Com Training
FAA/FCC Training

Thank you,

Ron Rohr
Construction Manager

ron.rohr@americantower.com • 3084 West Point Road, Lancaster, Ohio 43130 • (740)4389710 • www.americantower.com

TERRA
CONSULTING GROUP, LTD.

Thomas A. Zimmermann, P.E.

Thomas A. Zimmermann has been involved with the practice of land development engineering and civil infrastructure design since 1990. Mr. Zimmermann has over 16 years of experience in telecommunications infrastructure design. He joined Terra Consulting Group in 1995 and is currently the Vice President of Operations.

Before joining Terra Consulting Group in 1995, he worked in the field of environmental engineering with Dames & Moore. At Dames & Moore, he was performing environmental Phase I, Phase II reports and field investigations. He was involved with the environmental remediation of soil and groundwater due to leaking underground storage tanks, landfills, and contaminated industrial waste.

At Terra Consulting Group, Mr. Zimmermann has planned and designed various aspects of residential, commercial and industrial developments. He has been involved with feasibility studies, roadway design, site planning and layout, stormwater management and detention system design, storm sewer design, sanitary sewer design and watermain design.

In addition to traditional land development engineering, Mr. Zimmermann has been involved with over 4,000 wireless and broadcast telecommunication projects. He provides the necessary infrastructure design to zone and permit the telecommunications projects.

Mr. Zimmermann received his Bachelor Degree in Science in 1993 and Master's Degree in 1995 from the University of Illinois Urbana-Champaign. He has been affiliated with the American Society of Civil Engineers for 20 years. He is a registered Professional Engineer in Illinois, Michigan and Wisconsin with a license pending reciprocity review in Pennsylvania.

TERRA
CONSULTING GROUP, LTD.

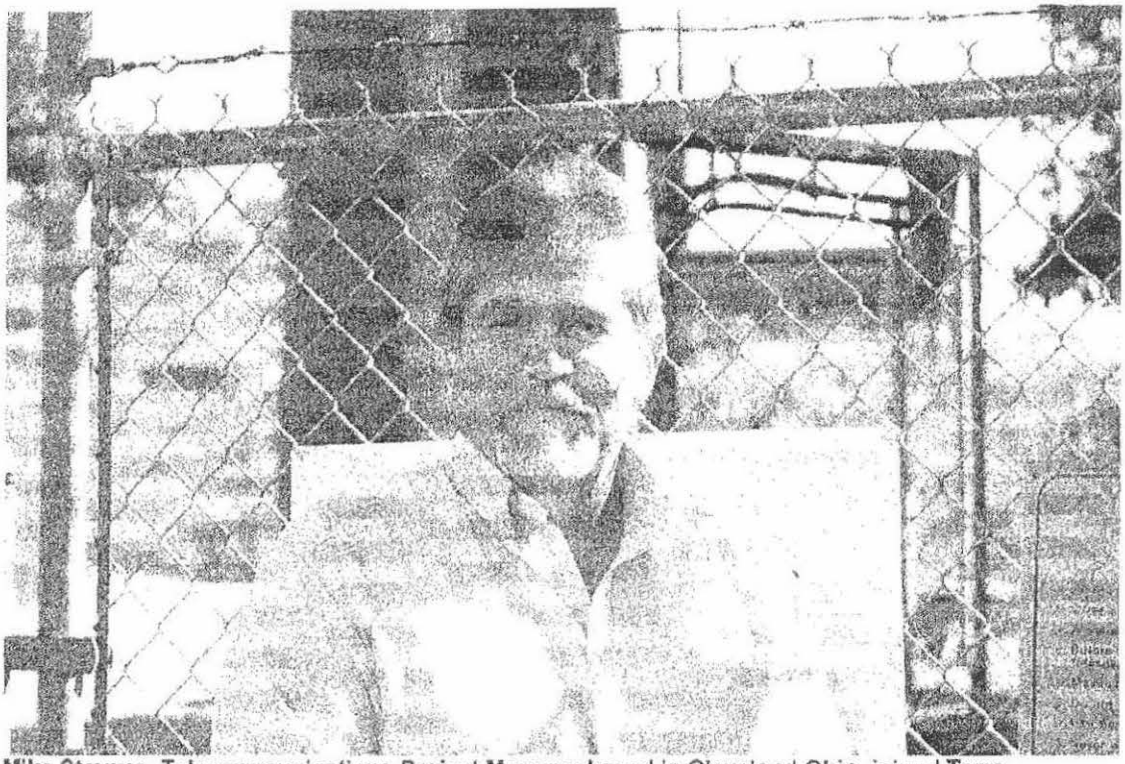
John J. Zimmermann, P.E. – President, Terra Consulting Group, Ltd.

John J. Zimmermann has a 25-year career in the practice of land development engineering and civil infrastructure design. He founded Terra Consulting Group, Ltd. in 1994. Over his career Mr. Zimmermann has been involved with various aspects of land development on numerous engineering projects for the Illinois Department of Transportation, Communications & Utility companies, Municipalities, Park Districts, and the Development community. Mr. Zimmermann specializes in site planning and stormwater management applications as they relate to site development, transportation works and utility extensions.

Mr. Zimmermann is a 1987 graduate of Marquette University graduating with a Bachelor of Science degree. He is a registered Professional Engineer in 26 states.

Mr. Zimmermann has been affiliated with the American Society of Civil Engineers (ASCE) for over 30 years. He has served as President of the Illinois Section of ASCE and past chair of the Urban Planning and Development Group.

TERRA
CONSULTING GROUP, LTD.



Mike Stevens, Telecommunications Project Manager based in Cleveland Ohio, joined Terra Consulting Group in 2009. Mike has a 35 years experience in the Telephony, Wireless & Wireline telecommunications industry. Mike brings Terra valuable experience in facility construction and operation during his tenure at GTE, GTE Mobilnet, Alltel and T-Mobile. Mike's primary responsibility is to manage Terra's operations in Ohio, Western Pennsylvania and Northern Kentucky. Mike will also be involved in site design and layout, sub-consultant operations, and permitting for Terra's telecommunication clients.

GRAVES & GRAVES CONSTRUCTION COMPANY, INC.

General Contractors

POST OFFICE BOX 370 / PARSONS, TENNESSEE 38363
TELEPHONE (731)847-6391

November 6, 2013

RE:

Dear Commissioners:

The General Contractor for the proposed new communications facility will be Graves and Graves Construction Company INC. Graves and Graves contact information is 1267 West Main Street; Parsons, TN 38363, Contact persons would be either Jon Graves or Kent Hamm and they can both be reached at (731)-847-6391. Graves and Graves Construction Company has been involved with construction of communication sites for over 30 years and a listing of recent job experience is attached.

Thank you,

Jon Graves President

Graves and Graves Construction Co., INC			
Construction Experience List			
Name of Project	Owner's Name	Contract Amount	Completion Date
Mt. Jackson VA	Verizon Business	526,008.00	10/19/2011
Carson, MS	Crown Castle	190,795.00	06/30/2011
Gismonda, AR	Verizon Wireless	192,917.00	12/07/2011
Danzler	American Tower	202,185.00	07/09/2012
Lafayette Springs	American Tower	204,536.00	06/29/2012
Kimberlin Heights	American Tower	206,110.00	09/27/2012
Amity AR	Verizon Wireless	192,034.00	08/08/2013
Fisher Rd Paducah Ky	American Tower	154,260.00	09/17/2013
Newman KY	American Tower	137,512.00	08/14/2013
East Tallassee	American Tower	145,791.00	05/23/2013

RAPHAEL I. MOHAMED, MBA, PE, PEng

6921 Palaver Lane
Cary, NC 27519

(919) 244-5207 (Mobile) raphael.mohamed@americantower.com

Profile Summary

Proven telecommunications manager with strong engineering and analytical skills. Certified Professional Engineer who applies top-tier graduate business school education to achieve goals for high-growth organizations. Yellow belt Six Sigma dedicated to continuous learning. Seeking a telecommunications strategic implementation position that will leverage my formal engineering and management education and my extensive wireless industry experience in an S&P 500 company.

Holds American, Canadian and EU passports. Fluent in English and French. Conversational Spanish and Portuguese.

Selected Accomplishments

- Led high-performing engineering team that produced over 17,000 engineering deliverables and achieved departmental revenue of $30M+, operating profit margins in excess of 80%, and industry-leading cycle times for multi-year periods.
- Recruited and hired 15 engineers in 2 year period.
- Recipient of numerous individual and team recognition rewards including the All American, Hire Good People & Empower Them, Engineering Services Employee of the Quarter, Engineer of the Quarter, and Structural Engineering Team and Individual Awards.
- Created a guy anchor inspection business plan that mitigated tower portfolio risk and contributed to having no engineering-related tower collapses in over 12 years.
- Promoted 4 times in 12 years earning increased responsibility with each transition.
- Committee Sub-Chair for TIA-222-H: Plans, Assembly Tolerances, Marking, Maintenance and Condition Assessment

Professional Experience

AMERICAN TOWER CORPORATION (S&P 500 Company), Cary, NC

Engineering Manager, US Tower Division **2005-Present**

- Managed up to 27 structural /electrical engineers responsible for the safety and integrity of a US-based portfolio of ± 24,000 telecommunications towers.
- Attested to quality of engineering work by stamping engineering documents (PE letters, structural analyses, modification designs, jurisdictional letters, A&E drawings).
- Developed new relationships and maintained existing relationships with internal customers, major wireless providers (AT&T, Verizon, T-Mobile, Sprint/Nextel), construction field offices, engineering consultants and governmental municipal agencies.
- Led training initiatives and engineering process recommendations for international offices including Brazil, South Africa, Uganda, Ghana, India and Mexico. Assisted with structural analysis and modification designs for African and Latin American markets.
- Served as company subject matter expert at jurisdictional zoning meetings and industry conferences.

Senior Design Engineer **2004-2005**
Senior Project Engineer **2002-2004**
Project Engineer **2001-2002**
Project Administrator **2000-2001**

MORRISON HERSHFIELD ENGINEERING CONSULTING, Atlanta, GA

Project Consultant, Telecommunications Division **2000-2001**

- Served as an internal consultant for SpectraSite Communications that brought in over $3M of revenue.

MORRISON HERSHFIELD ENGINEERING CONSULTING, Toronto, ON, Canada
Project Engineer, Structural Subdivision of Transportation Department 1998-2000

- Awarded new design proposals for over $15M in construction contracts through prepared proposals to government agencies.
- Prevented budget overages and avoided delay in scheduling for completion of $2M bridge rehabilitation project through on-site supervision of construction.
- Conducted structural site condition surveys including AutoCAD drawings of required remediation.

HUANG & ASSOCIATES GEOTECHNICAL CONSULTING, Markham, ON, Canada
Geotechnical Engineer 1997

- Provided general quality control on residential & commercial sites involving concrete/soils testing.
- Surveyed borehole locations.
- Conducted laboratory testing of soils (e.g. proctor/grading/moisture).

BRISBIN BROOK BEYNON ARCHITECTS, Toronto, ON, Canada
Co-op Student 1993

- Produced AutoCAD drawings for architects.
- Created computer-animated walkthroughs of models using 3D Studio.

Education

DUKE UNIVERSITY, The Fuqua School of Business, Durham, NC
Master of Business Administration. 2008. GPA: 3.83/4.00.
Relevant courses include Strategy, Managerial Effectiveness, Leadership, Managerial Accounting, and Operations.

UNIVERSITY OF TORONTO, Ontario, Canada
Bachelor of Applied Science, Civil Engineering. 1998. Honors.

Certification

PROFESSIONAL ENGINEER DESIGNATION: Active Licensure in 44 States and 1 Canadian Province

Professional Development

Six Sigma Process Excellence Program: Yellow Belt

Leadership Courses: Harvard Mentor Management Program, Center for Creative Leadership, MIT Managing Technical Professionals, American Management Association, Duke Managerial Effectiveness & Leadership and Development

Professional Engineering Development Hours: 15+ Hours Completed Annually

Professional Society Memberships: TIA/EIA Committee, National Council of Examiner for Engineers and Surveyors, American and Canadian Society of Civil Engineers, American Society of Civil Engineers, National Society of Professional Engineers, North Carolina Structural Engineers Association, International Association of Spatial Structures, American Management Association

valmont
STRUCTURES

January 10, 2014

American Tower Corp.

Attn: Mr. Ron Rohr

SUBJECT: Valmont File #237100 Model V-29.0 x 255' Self Supporting Tower
Site: #281378 Pea Ridge, KY

Thank you for your inquiry concerning tower design codes and practices as they relate to your requested tower designs.

Valmont Structures has been designing and building guyed and self-supporting towers and monopoles since the early 1950's. During this time, we have sold thousands of towers ranging in height form as little as 50' high to in excess of 1400'. These towers were individually engineered to accommodate the loading requirements imparted by the design wind speed, ice considerations, antenna loading, and other factors dictated by the national code requirements existing at the time the tower was built.

The present National Tower code, the TIA-222-G, represents the latest refinement of specific minimum requirements for tower engineers and manufacturers to follow to help assure that the tower structure and its foundation are designed to meet the most realistic conditions for local weather while assuring that the tower is designed to stringent factors of safety.

The TIA-222-G code incorporates an escalating wind factor based on tower height. If 90 MPH 3 second gust is the basic design wind speed at the 10 meter height, then per the specification, this speed is then increased in stages up the tower. "Meeting the code" implies that the design will have all of the code requirements for safety factors intact at the wind speed specified. Thus, the ultimate survival speed would be considerably higher.

While failure is extremely rare in any kind of tower, it is especially so for self supported towers and monopoles. In fact, only if a tower or monopole were subjected to a direct hit from a tornado or the severest of hurricanes would failure be predicted, and then usually only if hit by flying debris.

We are aware of only a very few documented instances of a self supporting tower or monopole failure. Self supporting towers and monopoles can be designed such that the most common mode of failure is in the upper middle region of the tower, with the upper portion of the tower remaining connected and "bending and bowing over" against the base of the tower or pole. The fact that the wind is normally greater on the upper portion of the structure contributes to the likelihood of this type of failure.

Communications Division, Valmont Industries, Inc.
1545 Pidco Drive Plymouth, Indiana 46563-4005 USA
574-936-4221 Fax 574-936-6796 www.valmont.com

valmont
STRUCTURES

This particular Tower has a theoretical failure at the tower midpoint or above. The predicted mode of wind induced failure would be a buckling of the tower legs above the tower midpoint with the top sections of the tower folding over on to the intact base sections. This would then affect a "zero fall zone" at ground level.

As Senior Project Engineer of the company and a registered P.E. in 20 states, I oversee all engineering and application of our towers. I am a graduate engineer from Auburn University and work in collaboration with other registered professional engineers on our staff.

Valmont Structures is an AISC approved shop. All Valmont Structures welders are AWS and CWB qualified. Mathematical and physical tests are performed routinely on tower sections and designs as required. Our total design, engineer and build process has been quality audited by our customers including public utilities, telephone companies, government agencies, and of course AISC.

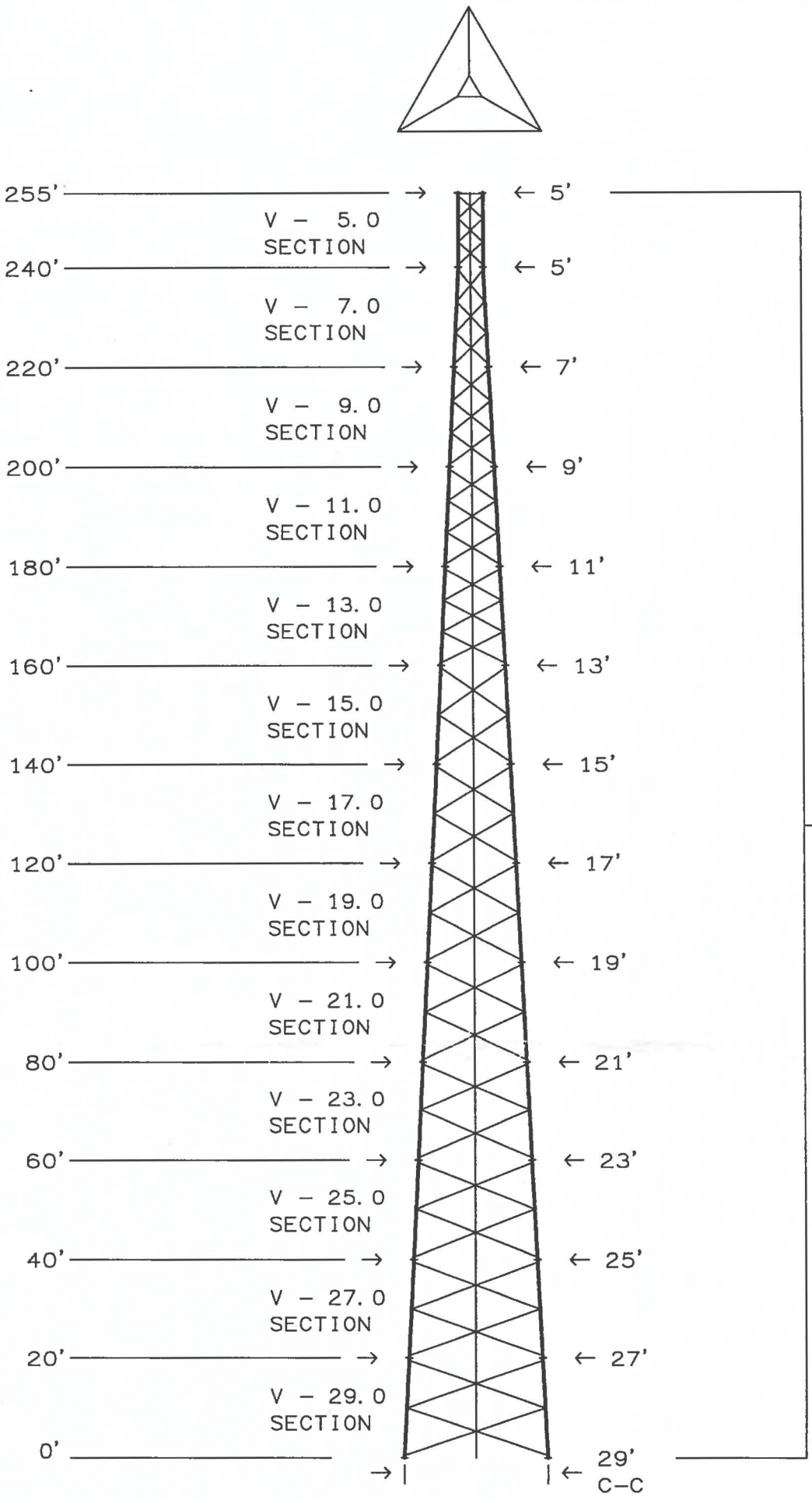
We trust the above and the attached will be helpful to you. If you should need anything else, please let us know at your convenience.

Sincerely,

Nitesh Ahuja, P.E.
Senior Project Engineer
Ext. #5257

PiROD
MICROFLECT

Communications Division, Valmont Industries, Inc.
1545 Pidco Drive Plymouth, Indiana 46563-4005 USA
574-936-4221 Fax 574-936-6796 www.valmont.com



V-SERIES
SINGLE ANGLE SECTIONS
SEE PAGE 2

STATE OF KENTUCKY
NITESH AHUJA
28866
LICENSED PROFESSIONAL ENGINEER

MAR 1 9 2014

Nitesh Ahuja, KY Professional Engineer #28866

REV	DESCRIPTION OF REVISIONS	INI	DATE
C	WAS A V-27 NOW A V-29	KWD	03/18/2014
B	ADDED FOUNDATIONS PER SOIL REPORT	MS	03/18/2014
A	UPDATED DESIGN WITH A FALL RADIUS	KWD	10/31/2013

AMERICAN TOWER CORP.
#281378 PEA RIDGE, KY
V-29.0 X 255'

APPROVED/ENG.	M_S	3/18/2014
APPROVED/FOUND.	N/A	
COPYRIGHT 2014		
DRAWN BY	KWD	

valmont STRUCTURES
1-877-467-4763 Plymouth, IN
1-888-880-9191 Salem, OR

From: F1015688.DFT - 10/31/2013 07:45
Printed from 251471_01@C.DWG - 10/31/2013 07:49 @ 03/19/2014 08:09

ENG. FILE NO. A-237100-
ARCHIVE F-1015688

DRAWING NO. 251471
PAGE 1 OF 11

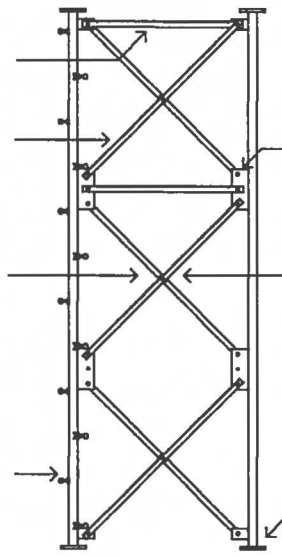
V-SERIES LEG SECTION DATA 0' – 255' ELEVATION

SECTION			LEG									DIAGONAL BRACE								HOR
#	LENGTH	* WEIGHT	NOM SIZE	WALL	GRADE	CLIMBING QTY	CLIMBING PART#	NON-CLIMB QTY	NON-CLIMB PART#	CONNECT BOLT+ DIAM	CONNECT BOLT+ LENGTH	PART NUMBER ** #1	#2	#3	ANGLE FACE	ANGLE THICK	CONNECT BOLT DIAM	CONNECT BOLT LENGTH	CENTER SPACER	QTY
V- 5.0	15'	1002#	4"	0.237	A572-50	1	231042	2	231043	3/4"	3-1/2"	227077	227077	227077	2"	1/8"	3/4"	2-1/4"	116467	1
V- 7.0	20'	1609#	5"	0.258	A572-50	1	226200	2	226201	3/4"	3-1/2"	226190	226189	231342	2"	3/16"	3/4"	2-1/4"	116467	
V- 9.0	20'	1861#	5"	0.258	A572-50	3	226192			3/4"	3-1/2"	225035	225034	231345	2-1/2"	3/16"	3/4"	2-1/4"	116467	
V-11.0	20'	1958#	5"	0.258	A572-50	3	226192			3/4"	3-1/2"	225038	225037	231347	2-1/2"	3/16"	3/4"	2-1/4"	116467	
V-13.0	20'	2572#	6"	0.280	A572-50	3	226224			1"	4-3/4"	225041	225040	231350	3"	3/16"	3/4"	2-1/4"	116467	
V-15.0	20'	3616#	8"	0.322	A572-50	3	226230			1"	4-3/4"	227172	227173		3"	5/16"	1 "	2-3/4"	116467	
V-17.0	20'	3815#	8"	0.322	A572-50	3	226867			1"	4-3/4"	227174	227175		3"	5/16"	1 "	2-3/4"	116467	
V-19.0	20'	4610#	10"	0.365	A572-50	3	226240			1"	4-3/4"	226237	226238		3-1/2"	1/4"	1 "	2-3/4"	116467	
V-21.0	20'	4948#	10"	0.365	A572-50	3	226240			1"	4-3/4"	226567	226568		4"	1/4"	1 "	2-3/4"	116467	
V-23.0	20'	6116#	10"	0.365	A572-50	3	226907			1"	4-3/4"	227176	227177		4"	3/8"	1 "	2-3/4"	116467	
V-25.0	20'	6941#	12"	0.375	A572-50	3	226250			1"	4-3/4"	227178	227179		4"	3/8"	1 "	2-3/4"	116467	
V-27.0	20'	7336#	12"	0.375	A572-50	3	226250			1"	4-3/4"	226480	226281		5"	5/16"	1 "	2-3/4"	116467	
V-29.0	20'	7518#	12"	0.375	A572-50	3	226250					226483	226284		5"	5/16"	1 "	2-3/4"	116467	

\+ AT BOTTOM OF SECTION
* THE WEIGHTS LISTED ARE THEORETICAL. THE ACTUAL WEIGHTS WILL VARY. ALL WEIGHTS SHOULD BE CONFIRMED IN THE FIELD PRIOR TO ERECTION.
** PANELS ARE NUMBERED BEGINNING AT THE TOP OF THE SECTION.

HORIZONTAL DATA		
HORIZ HT	IN SEC#	HORIZ PART#
255	V- 5.0	227584

TYPICAL V-SERIES SECTION ASSEMBLY 0' – 255' ELEVATION



STATE OF KENTUCKY
NITESH AHUJA
28866
LICENSED PROFESSIONAL ENGINEER

MAR 19 2014

Nitesh Ahuja, KY Professional Engineer #28866

REV	DESCRIPTION OF REVISIONS	INI	DATE
C	WAS A V-27 NOW A V-29	KWD	03/18/2014
A	UPDATED DESIGN WITH A FALL RADIUS	KWD	10/31/2013

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AMERICAN TOWER CORP.
#281378 PEA RIDGE, KY
V-29.0 X 255'

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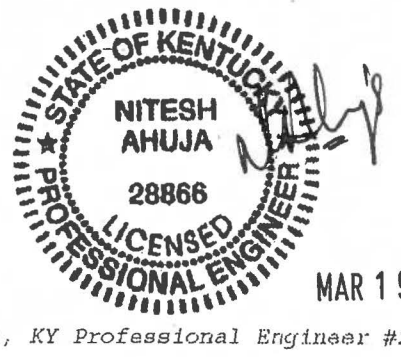
PAGE 2 OF 11

GENERAL NOTES

1. TOWER DESIGN CONFORMS TO STANDARD TIA-222-G UTILIZING AN 90 MPH 3-SEC GUST BASIC WIND SPEED WITH A STRUCTURE CLASS OF II, TOPOGRAPHIC CATEGORY OF 1 AND EXPOSURE C CRITERIA WITH NO ICE.
   TOWER DESIGN CONFORMS TO STANDARD TIA-222-G UTILIZING AN 30 MPH 3-SEC GUST BASIC WIND SPEED WITH A STRUCTURE CLASS OF II, TOPOGRAPHIC CATEGORY OF 1 AND EXPOSURE C CRITERIA WITH .75" RADIAL ICE.
   TOWER MEETS THE REQUIREMENTS OF THE 2013 KENTUCKY BUILDING CODE UTILIZING AN 115 MPH 3-SEC GUST BASIC WIND SPEED WITH A STRUCTURE CLASS OF II, TOPOGRAPHIC CATEGORY OF 1 AND EXPOSURE C CRITERIA WITH NO ICE PER ANSI/TIA-222-G.
2. NO TWIST AND SWAY LIMITATIONS SPECIFIED OR USED FOR THIS TOWER.
3. MATERIAL: (A) SOLID RODS TO ASTM A572 GRADE 50. (B) ANGLES TO ASTM A36. (C) ANTENNA MOUNTING PIPE TO BE ASTM A500 GRADE B. (D) STEEL PLATES TO ASTM A36. (E) CONNECTION BOLTS TO ASTM A325 OR ASTM A449 (Fu=120 KSI AND Fy=92 KSI) AND ANCHOR BOLTS TO ASTM F1554 (Fu=150 KSI AND Fy=105 KSI). (F) TOWER LEG PIPE TO BE ASTM A500 GRADE B/C WITH 50KSI MIN. YIELD STRENGTH
4. BASE REACTIONS PER TIA-222-G FOR 90 MPH BASIC WIND SPEED WITH NO ICE (REACTIONS INCLUDE TIA-222-G LOAD FACTORS): TOTAL WEIGHT = 89.0 KIPS. MAXIMUM COMPRESSION = 617.0 KIPS PER LEG. MOMENT = 14755.0 KIP-FT. MAXIMUM UPLIFT = 546.0 KIPS PER LEG. MAXIMUM SHEAR = 106.0 KIPS TOTAL.
5. BASE REACTIONS PER TIA-222-G FOR 30 MPH BASIC WIND SPEED WITH 0.75" RADIAL ICE (REACTIONS INCLUDE TIA-222-G LOAD FACTORS): TOTAL WEIGHT = 246.0 KIPS. MOMENT = 1647.0 KIP-FT. MAXIMUM SHEAR = 11.0 KIPS TOTAL.
6. FINISH: ALL BOLTS ARE GALVANIZED IN ACCORDANCE WITH ASTMA153 (HOT DIPPED) OR ASTM B695 CLASS 50 (MECHANICAL). ALL OTHER STRUCTURAL MATERIALS ARE GALVANIZED IN ACCORDANCE WITH ASTM123.
7. ANTENNAS: 250' -135 SQ. FT. AREA WITH 3,000# WITH ICE/115 SQ. FT. AREA WITH 2,000# NO ICE AND (18) 1-5/8" LINES
   240' -135 SQ. FT. AREA WITH 3,000# WITH ICE/115 SQ. FT. AREA WITH 2,000# NO ICE AND (18) 1-5/8" LINES
   230' -135 SQ. FT. AREA WITH 3,000# WITH ICE/115 SQ. FT. AREA WITH 2,000# NO ICE AND (18) 1-5/8" LINES
   220' -135 SQ. FT. AREA WITH 3,000# WITH ICE/115 SQ. FT. AREA WITH 2,000# NO ICE AND (18) 1-5/8" LINES
   NOTE: (A) ELEVATIONS ARE TO THE BOTTOM OF THE ANTENNAS EXCEPT FOR MICROWAVE DISHES, WHICH ARE TO THE CENTERLINE. (B) ALL TRANSMISSION LINES MUST BE PLACED ON PIROD SUPPLIED LINE BRACKETS.
8. REMOVE FOUNDATION TEMPLATE PRIOR TO ERECTING TOWER. INSTALL BASE SECTION WITH MAXIMUM OF 2" CLEARANCE ABOVE CONCRETE. SEE BASE SECTION PLACEMENT PAGE FOR MORE INFORMATION.
9. MIN. WELDS 5/16" UNLESS OTHERWISE SPECIFIED. ALL WELDING TO CONFORM TO AWS D1.1 SPECIFICATIONS .
10. THIS DRAWING DOES NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, SEQUENCES AND PROCEDURES.
11. ALL BOLTS AND NUTS MUST BE IN PLACE BEFORE THE ADJOINING SECTIONS ARE INSTALLED.
12. ALL STRUCTURAL BOLTS ARE TO BE TIGHTENED TO A SNUG TIGHT CONDITION AS DEFINED BY AISC SPECIFICATION UNLESS OTHERWISE NOTED.
13. ATTENTION TOWER ERECTOR: COAT ALL BOLT ASSEMBLIESTHAT USE PIN LOCK NUTS WITH ZINC RICH COLD GALVANIZING COMPOUND AFTER FINAL TIGHTNENING.
14. TIA-222-G GROUNDING FOR TOWER.
15. TOWER LIGHTING SUPPLIED BY OTHERS.

FOUNDATION NOTES

1. FOUNDATION DESIGN BY OTHERS.



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Nitesh Ahuja, KY Professional Engineer #28866

REV	DESCRIPTION OF REVISIONS	INI	DATE
C	WAS A V-27 NOW A V-29	KWD	03/18/2014
A	UPDATED DESIGN WITH A FALL RADIUS	KWD	10/31/2013

AMERICAN TOWER CORP.
#281378 PEA RIDGE, KY
V-29.0 X 255'

APPROVED/ENG.	M_S	3/18/2014
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FOUNDATION NOTES

ALTERNATE FOUNDATION #1

1. SOIL AS PER REPORT BY FSTAN, DATED 03/12/14, PROJECT# 13-8782
2. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 (2008) BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR NOT PERMITTED.
3. A COLD JOINT IS PERMISSIBLE UPON CONSULTATION WITH PIROD. ALL COLD JOINTS SHALL BE COATED WITH BONDING AGENTS PRIOR TO SECOND POUR.
4. ALL FILL SHOULD BE PLACED IN LOOSE LEVEL LIFTS OFNO MORE THAN 8" THICK. FILL MATERIALS SHOULD BE CLEAN AND FREE OF ORGANIC AND FROZEN MATERIALS OR ANY OTHER DELETERIOUS MATERIALS. COMPACT FILL TO 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698.
5. BENDING, STRAIGHTENING OR REALIGNING (HOT OR COLD) OF THE ANCHOR BOLTS BY ANY METHOD IS PROHIBITED.
6. CROWN TOP OF FOUNDATION FOR PROPER DRAINAGE.
7. THE ON-SITE GEOTECHNICAL ENGINEER SHALL CONFIRM THAT THE INSITU SOIL STRENGTHS MEET OR EXCEED THOSE PARAMETERS GIVEN IN THE SOIL REPORT.
8. A SUMP PUMP OR OTHER DEWATERING SYSTEM MAY BE REQUIRED TO LOWER THE WATER TABLE TO FACILITATE THE INSTALLATION OF THE FOUNDATION.
9. ANY SOFT OR UNSTABLE SUBGRADE SOILS DETECTED DURING THE EXCAVATION SHOULD BE REMOVED AND REPLACED WITH COMPACTED FILL.
10. DIFFICULTIES DURING EXCAVATION MAY ARISE DUE TO THE PRESENCE OF BOULDERS, COBBLES, AND/OR SHALLOW BEDROCK. THE BOULDERS, COBBLES, AND/OR ROCK MUST BE REMOVED FROM THE EXCAVATION OR DRILLED THROUGH.
11. A CONCRETE MAT MAY BE USED TO LEVEL THE BEARING SURFACE. THE CONCRETE IN THE LEVELING MAT IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS AND CAN NOT EXCEED 12" IN THICKNESS.

STATE OF KENTUCKY
NITESH AHUJA
28866
LICENSED PROFESSIONAL ENGINEER

MAR 1 9 2014

Nitesh Ahuja, KY Professional Engineer #28866

REV	DESCRIPTION OF REVISIONS	INI	DATE
C	WAS A V-27 NOW A V-29	KWD	03/18/2014
B	ADDED FOUNDATIONS PER SOIL REPORT	MS	03/18/2014
A	UPDATED DESIGN WITH A FALL RADIUS	KWD	10/31/2013

AMERICAN TOWER CORP.
#281378 PEA RIDGE, KY
V-29.0 X 255'

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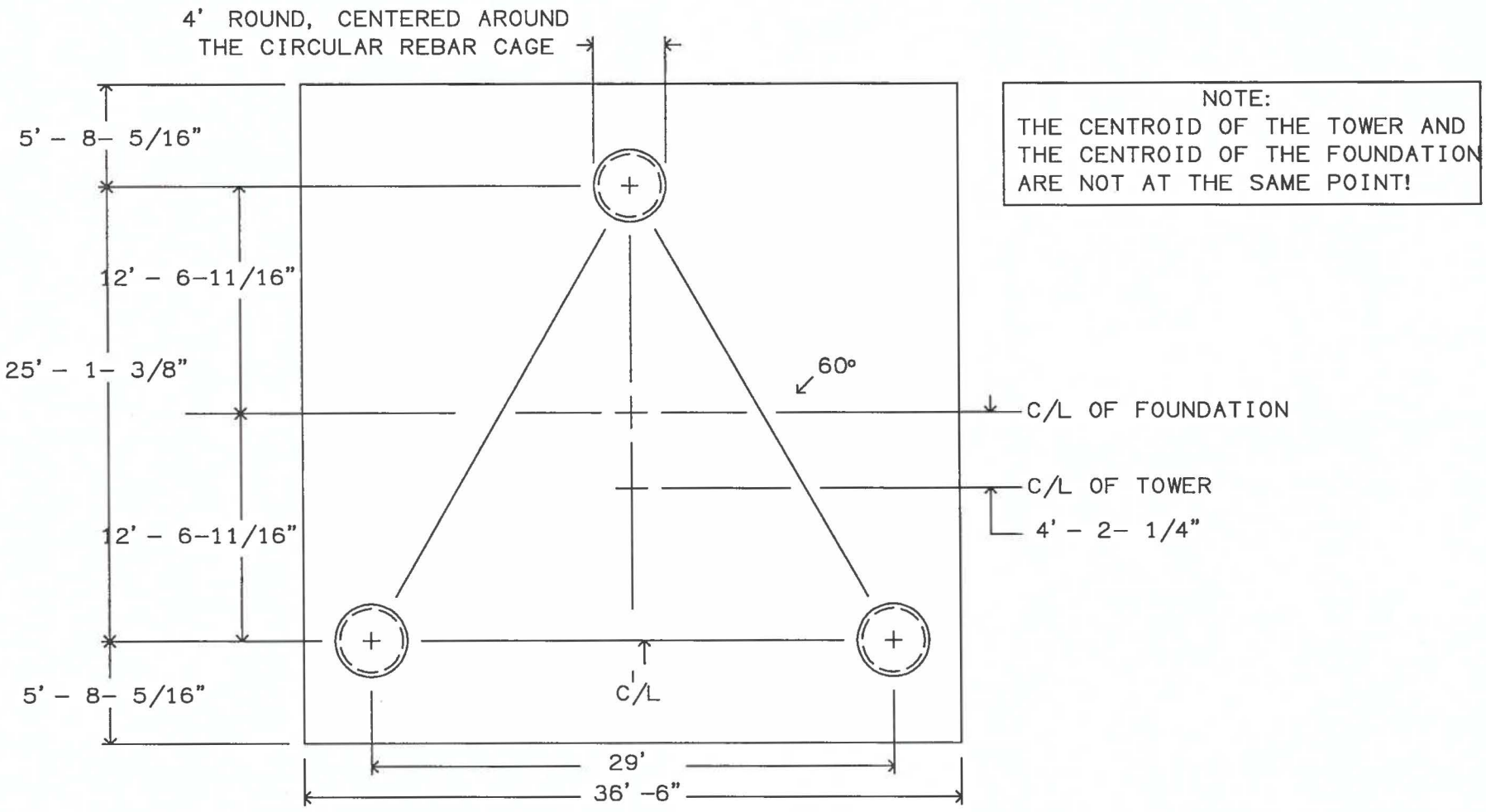
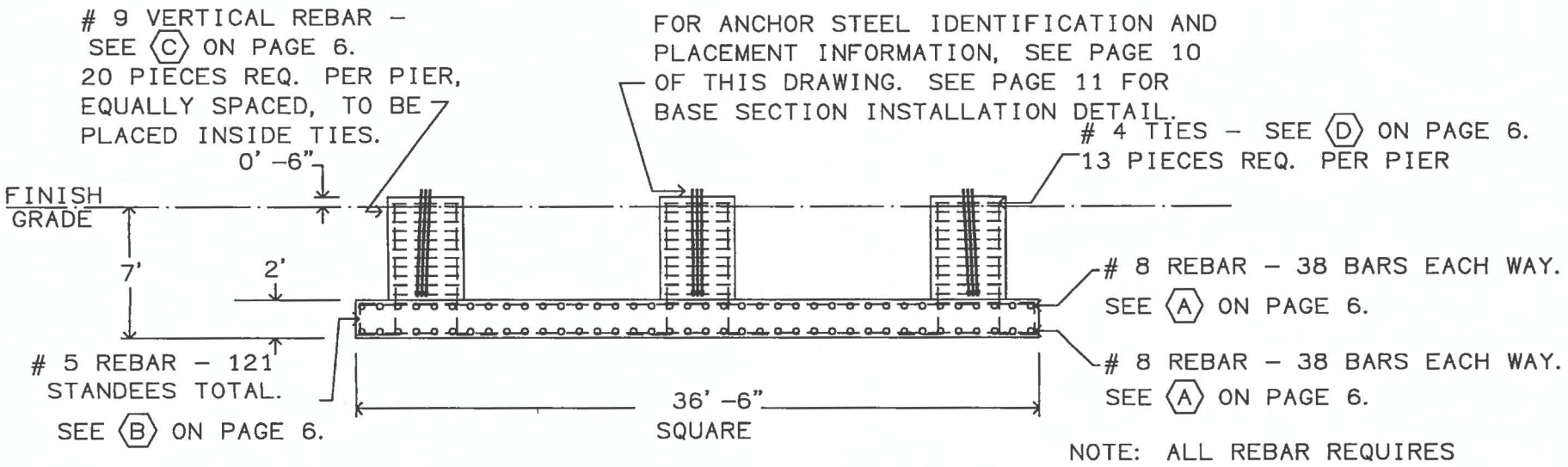


NOTE:
THE CENTROID OF THE TOWER AND THE CENTROID OF THE FOUNDATION ARE NOT AT THE SAME POINT!

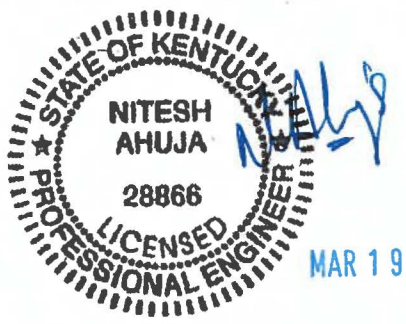


NOTE: ALL REBAR REQUIRES MIN. 3" CONCRETE COVERAGE

ALTERNATE FOUNDATION #1

106.4 CUBIC YARDS CONCRETE REQUIRED

FOR INSTALLATION SPECIFICATIONS AND ADDITIONAL INFORMATION, SEE PAGE 4 OF THIS DRAWING.



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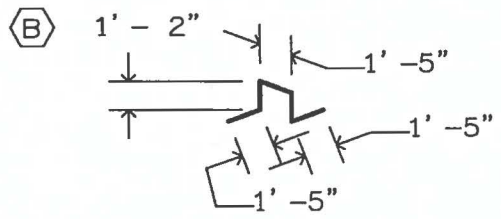
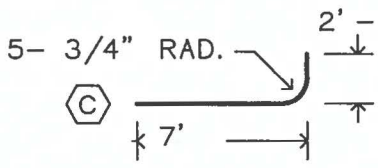
8 REBAR – 152 PIECES REQ. TOTAL
APPROX WT = 96.1# EACH, 14607# TOTAL

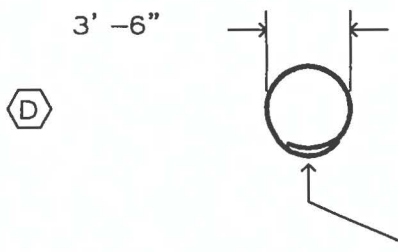
REBAR SUPPORTS MAY CONSIST OF ANY ACCEPTABLE MEANS OF SECURELY SUPPORTING THE TOP REINFORCEMENT GRID ABOVE THE BOTTOM REINFORCEMENT GRID WHILE MAINTAINING A SEPARATION OF 1'-6" (OUTSIDE REBAR TO OUTSIDE REBAR).



5 REBAR – 121 PIECES REQUIRED TOTAL
TYPE 26 STANDEE PLACED BETWEEN REBAR GRIDS ON NOMINAL 4' SPACING THROUGHOUT
APPROX UNBENT LENGTH = 6' – 6– 1/8"
APPROX WT = 6.8# EACH, 823# TOTAL



9 REBAR – 60 PIECES REQUIRED TOTAL
APPROX UNBENT LENGTH = 8' –10– 1/2"
APPROX WT = 30.2# EACH, 1812# TOTAL



4 REBAR – 39 PIECES REQUIRED TOTAL
APPROX UNBENT LENGTH = 12' – 6– 1/2"
APPROX WT = 8.4# EACH, 328# TOTAL

LAP DIMENSION: 1' – 6– 1/2"
PLACE CIRCULAR TIES SO THAT LAPS ON ADJACENT TIES ARE 180 DEGREES APART. PLACE ONE TIE AT TOP OF PAD AND TWO TIES AT TOP OF PIER REBAR. EQUALLY SPACE REMAINING TIES ALONG PIER.

ALTERNATE FOUNDATION #1

REBAR DETAIL

TOTAL APPROX REBAR WEIGHT = 17570#
REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS.

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AMERICAN TOWER CORP.
#281378 PEA RIDGE, KY
V-29.0 X 255'

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FOUNDATION NOTES

ALTERNATE FOUNDATION #2

1. SOIL AS PER REPORT BY FSTAN, DATED 03/12/14, PROJECT# 13-8782
2. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 (2008) BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR NOT PERMITTED.
3. A COLD JOINT IS PERMISSIBLE UPON CONSULTATION WITH PIROD. ALL COLD JOINTS SHALL BE COATED WITH BONDING AGENTS PRIOR TO SECOND POUR.
4. ALL REINFORCING STEEL TO BE FORMED INTO A CAGE PRIOR TO SETTING INTO POSITION IN THE EXCAVATED PIER.
5. PERMANENT STEEL CASING SHALL NOT BE USED WITHOUT CONSENT FROM FOUNDATION DESIGNERS.
6. BENDING, STRAIGHTENING OR REALIGNING (HOT OR COLD) OF THE ANCHOR BOLTS BY ANY METHOD IS PROHIBITED.
7. CROWN TOP OF FOUNDATION FOR PROPER DRAINAGE.
8. FOUNDATION IS TO BEAR ON INSITU WEATHEREED CLAY SHALE AT APPROXIMATELY 28.5' BELOW GRADE. THE BEARING SURFACE IS TO BE FREE OF ANY LOOSE MATERIAL & SUBSEQUENTLY INSPECTED BY A QUALIFIED ON-SITE GEOTECHNICAL ENGINEER.
9. A TEMPORARY, FULL LENGTH STEEL CASING MAY BE REQUIRED DURING INSTALLATION.
10. IF MORE THAN 3" OF WATER IS PRESENT AT THE BOTTOM OF THE DRILLED SHAFT, EITHER WATER SHALL BE REMOVED OR CONCRETE SHALL BE PLACED USING THE TREMIE METHODS.
11. DIFFICULTIES DURING EXCAVATION MAY ARISE DUE TO THE PRESENCE OF BOULDERS, COBBLES, AND/OR SHALLOW BEDROCK. THE BOULDERS, COBBLES, AND/OR ROCK MUST BE REMOVED FROM THE EXCAVATION OR DRILLED THROUGH.
12. THE CAISSON MUST EXTEND A MINIMUM OF 20.5' INTO THE WEATHERED CLAY SHALE LAYER ENCOUNTERED AT APPROXIMATELY 8' BELOW GRADE.

STATE OF KENTUCKY
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28866
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AMERICAN TOWER CORP.
#281378 PEA RIDGE, KY
V-29.0 X 255'

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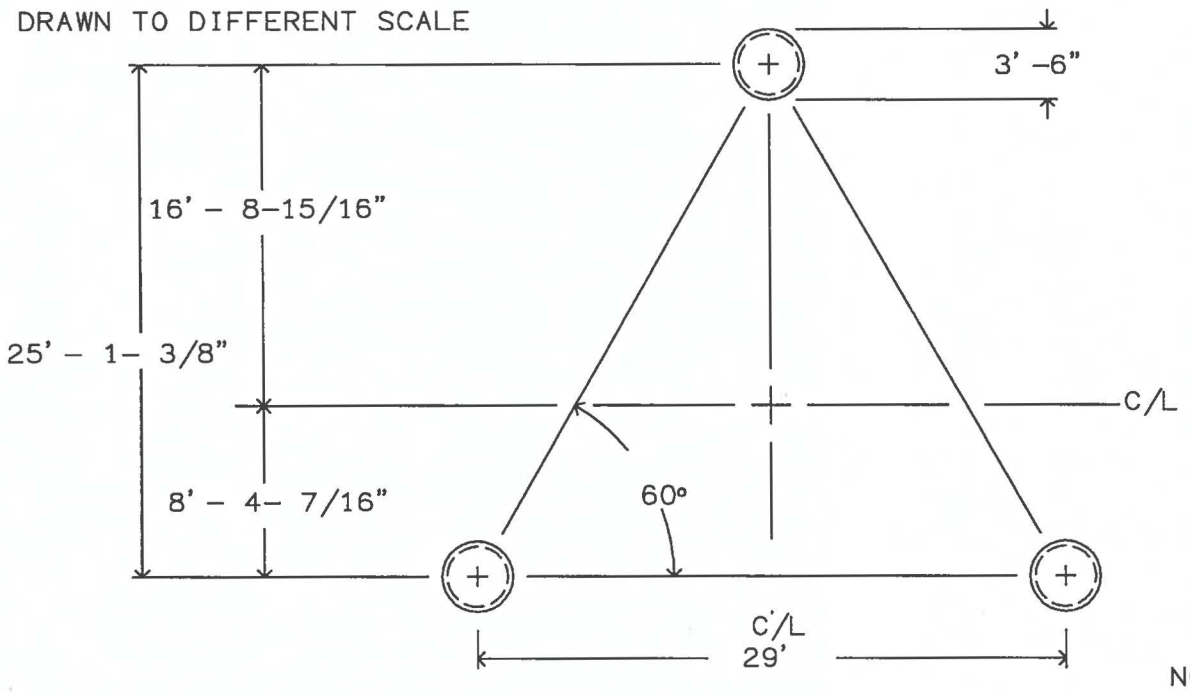
TOP VIEW

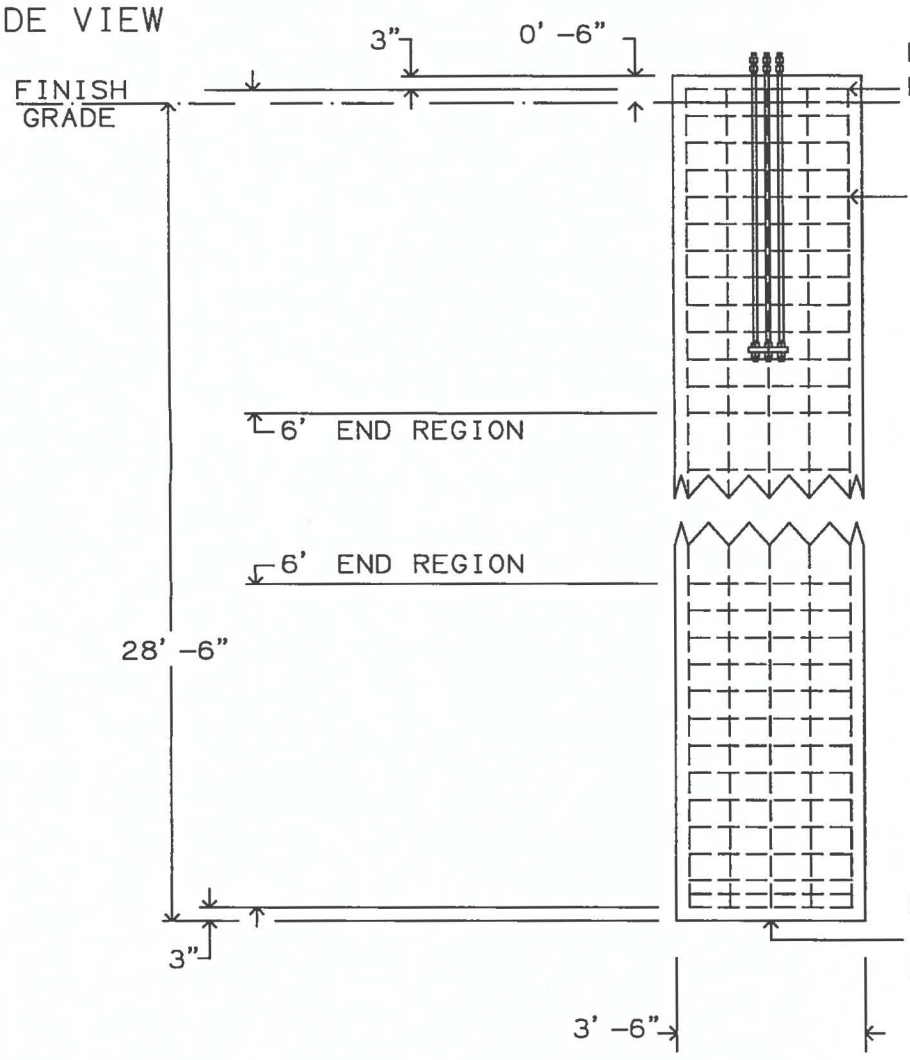
TOP AND SIDE VIEWS ARE DRAWN TO DIFFERENT SCALE



NOTE: ALL REBAR REQUIRES MINIMUM 3" CONCRETE COVERAGE

FOR ANCHOR STEEL IDENTIFICATION AND PLACEMENT INFORMATION, SEE PAGE 10. SEE PAGE 11 FOR BASE SECTION INSTALLATION DETAIL.

SIDE VIEW



FOR DETAIL VIEW OF REBAR CAGE END AREA, SEE (E) ON PAGE 9.

5 HORIZONTAL TIES - SEE (B) ON PAGE 9. 44 PIECES REQUIRED PER PIER. PLACE TIES AT 0' -6" NOMINAL SPACING WITHIN END REGIONS, AND 1' NOMINAL SPACING IN REMAINDER OF PIER.

#10 VERTICAL REBAR - SEE (A) ON PAGE 9. 17 PIECES REQUIRED PER PIER, EQUALLY SPACED, TO BE PLACED INSIDE TIES.

ALTERNATE FOUNDATION #2

THREE PIERS REQUIRED
10.3 CUBIC YARDS CONCRETE REQUIRED EACH PIER

FOR INSTALLATION SPECIFICATIONS AND ADDITIONAL INFORMATION, SEE PAGE 7 OF THIS DRAWING.

STATE OF KENTUCKY
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AMERICAN TOWER CORP.
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V-29.0 X 255'

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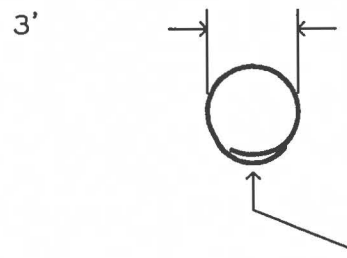
#10 REBAR - 51 PIECES REQ. TOTAL
APPROX WT = 122.6# EACH, 6253# TOTAL

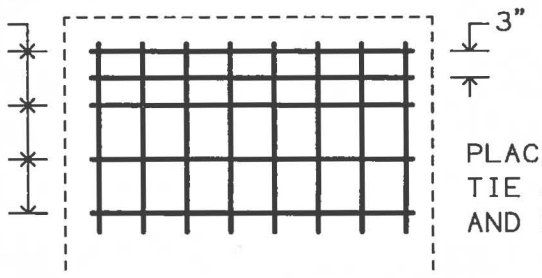


5 REBAR - 132 PIECES REQUIRED TOTAL
APPROX UNBENT LENGTH = 11' - 4- 1/4"
APPROX WT = 11.8# EACH, 1558# TOTAL

LAP DIMENSION: 1' -11- 1/8"
PLACE CIRCULAR TIES SO THAT LAPS ON ADJACENT TIES ARE 180 DEGREES APART.

0' -6"

PLACE 13 CIRCULAR TIES WITHIN EACH END REGION (TOP AND BOTTOM). PLACE FIRST TIE AT END OF VERTICAL BARS AND CONTINUE SPACING AS SHOWN. SEE PAGE 8 FOR REGION DEFINITION.



PLACE AN ADDITIONAL CIRCULAR TIE 3" FROM THE END TIE (TOP AND BOTTOM) AS SHOWN.

DETAIL OF REBAR CAGE END
(E)

ALTERNATE FOUNDATION #2

REBAR DETAIL

TOTAL APPROX REBAR WEIGHT = 7811#
REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS.

STATE OF KENTUCKY
NITESH AHUJA
28866
LICENSED PROFESSIONAL ENGINEER

MAR 19 2014

Nitesh Ahuja, KY Professional Engineer #28866

REV	DESCRIPTION OF REVISIONS	INI	DATE
C	WAS A V-27 NOW A V-29	KWD	03/18/2014
B	ADDED FOUNDATIONS PER SOIL REPORT	MS	03/18/2014

AMERICAN TOWER CORP.
#281378 PEA RIDGE, KY
V-29.0 X 255'

APPROVED/ENG.	M_S	3/18/2014
APPROVED/FOUND.	M_S	3/18/2014
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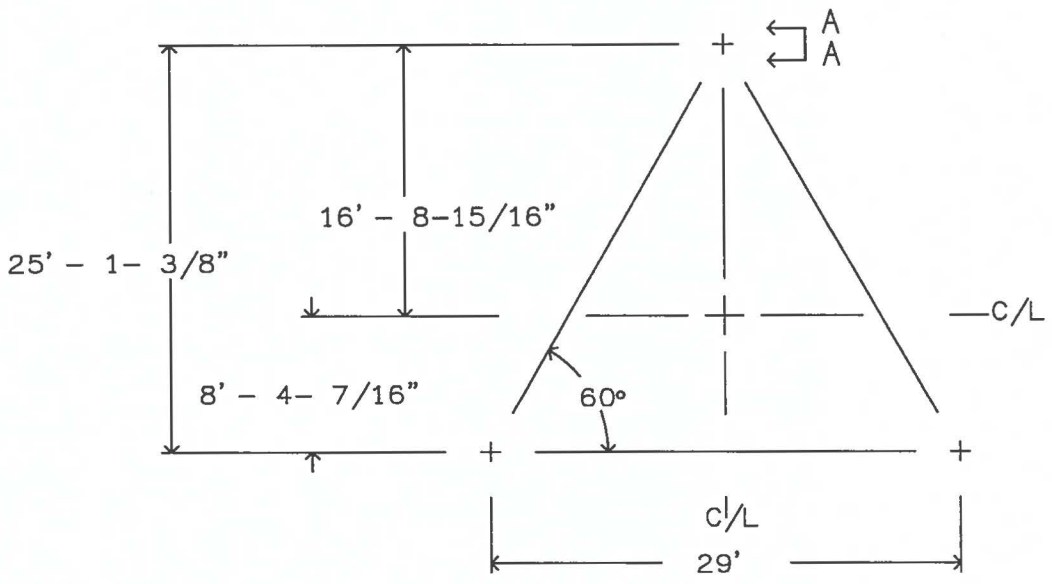
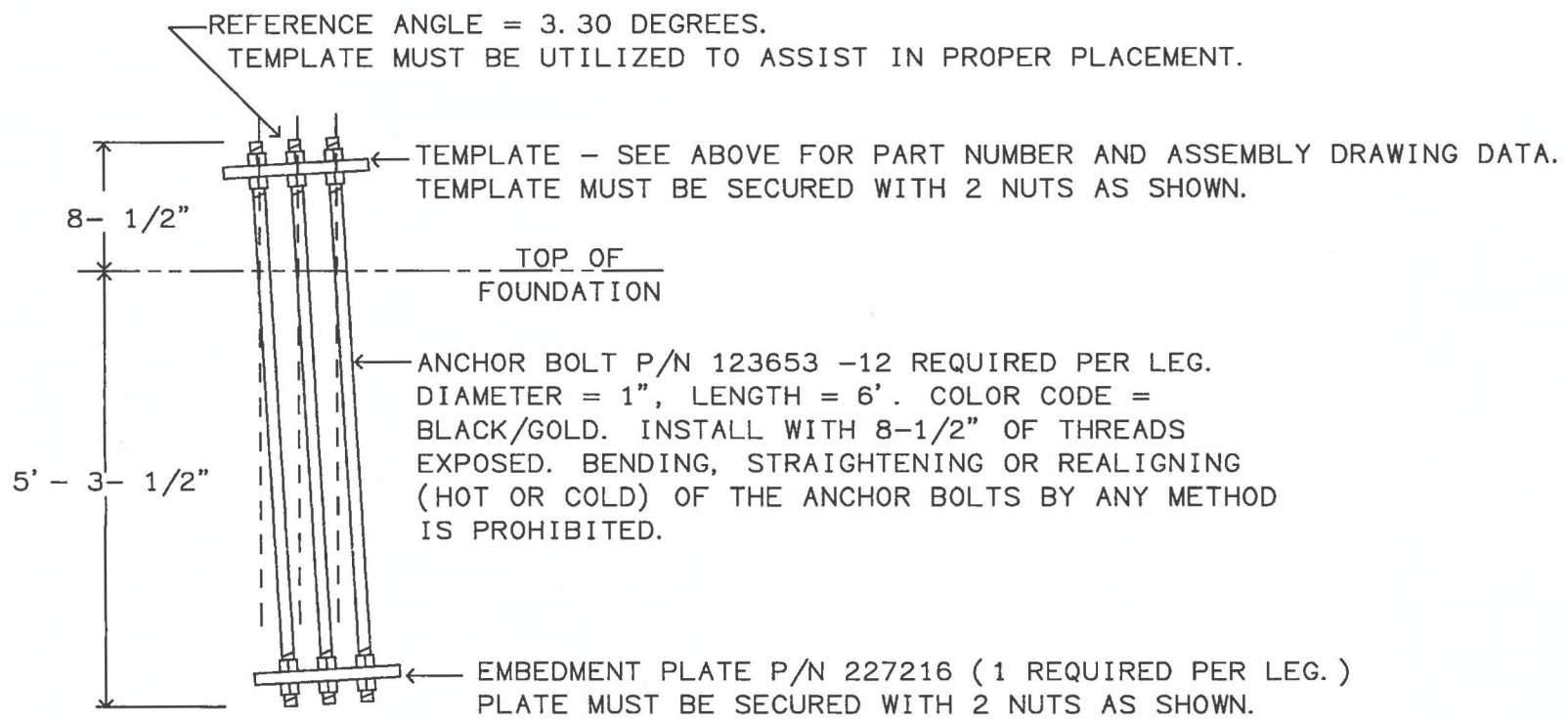
PAGE 9 OF 11



TOWER ANCHOR STEEL PLACEMENT – TOP VIEW

TEMPLATE ASSEMBLY P/N 227164 IS REQUIRED FOR INSTALLATION AND MUST BE PLACED AS SHOWN. SEE PAGE 5 FOR TOWER C/L LOCATION RELATIVE TO THE FOUNDATION LAYOUT. TEMPLATE PLACEMENT +/– 3". EACH LEG MUST BE CENTERED IN PIER WITHIN +/– 10% OF PIER DIAMETER. TEMPLATE MUST BE LEVEL +/– 1 DEGREE. INSTALL TEMPLATE WITH SUFFICIENT SPACE BENEATH (2" MINIMUM) TO PERMIT FINISHING OF CONCRETE AND TO FACILITATE TEMPLATE REMOVAL PRIOR TO TOWER ERECTION.

SEE PAGE 11 FOR BASE SECTION INSTALLATION DETAIL.



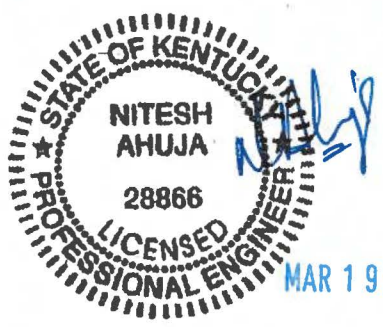
VIEW A – A – ANCHOR BOLT INSTALLATION DETAIL (NOT TO SCALE)

ATTENTION CONTRACTOR INSTALLING THE ANCHOR BOLTS!

1" DIAMETER ANCHOR BOLTS FOR TAPERED TOWER.

VERIFY THE PART NUMBERS AND SIZES FOR ALL COMPONENTS ON THIS PAGE AND PAGE 11.

IF THERE ARE ANY DISCREPANCIES, PLEASE NOTIFY PIROD, INC. PRIOR TO INSTALLATION!!



Nitesh Ahuja, KY Professional Engineer #28866

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AMERICAN TOWER CORP.
#281378 PEA RIDGE, KY
V-29.0 X 255'

APPROVED/ENG.	M_S	3/18/2014
APPROVED/FOUND.	M_S	3/18/2014
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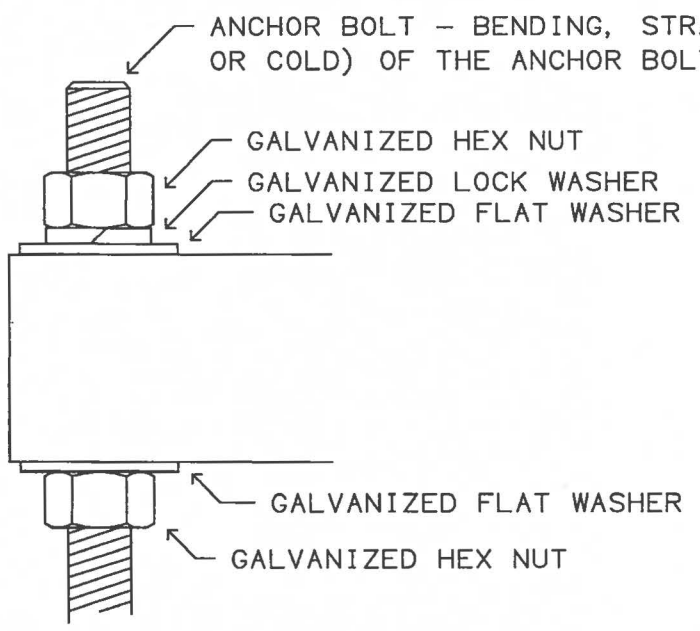
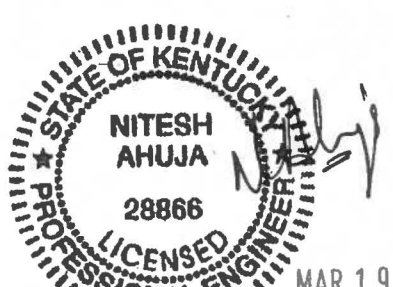


BASE SECTION INSTALLATION DETAIL



MAR 1 9 2014

Nitesh Ahuja, KY Professional Engineer #28866

AMERICAN TOWER CORP.
#281378 PEA RIDGE, KY
V-29.0 X 255'

REV	DESCRIPTION OF REVISIONS	INI	DATE
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PAGE 11 OF 11

ms13

UNIT BASE FOUNDATION SUMMARY

ATC
Pea Ridge, KY

V- 29.0 255
A- 237100

V 2.1

Foundation Dimensions		
Pad width, W:	36.5	ft
Depth, D:	7.0	ft
Ext. above grade, E:	0.5	ft
Pier diameter, d_i:	4.0	ft
Pad thickness, T:	2.00	ft
Depth neglected, N:	7.0	ft
Volume, V_o:	106.36	cy

Reinforcement Design		
pad, m_p:	38	bars *
size, s_p:	8	
vertical, m_c:	20	verticals
size, s_c:	9	3.5' cage
ties, m_t:	13	ties
size, s_t:	4	w/ overlap

* Rebar to be equally spaced, both ways, top & bottom

* Use standees to support top rebar above bottom rebar in mat

Soil Information Per:
Fstan, Dated 03/12/14, Project# 13-8782

Soil Parameters		
Soil unit weight, γ:	110	pcf
Ultimate Bearing, B_c:	7.000	ksf
Cohesion, C_o:	0.000	ksf
Friction angle, φ:	0.0	degrees
Ult. Passive P., P_p:	0.110	pcf
Base sliding, μ:	0.30	
Seismic Zone:	1	
Water at:	none	ft

Anchor Steel Selection		
Part Number, P/N:	123653	Dia = 1" Length = 72"

Material Properties		
Steel tensile str, F_y:	60000	psi
Conc. Comp. str, F'_c:	4000	psi
Conc. Density, δ:	150	pcf
Clear cover, cc:	3.00	in

Backfill Compaction		
Lift thickness:	8	in
Compaction:	98	%
Standard Proctor:	ASTM	D698

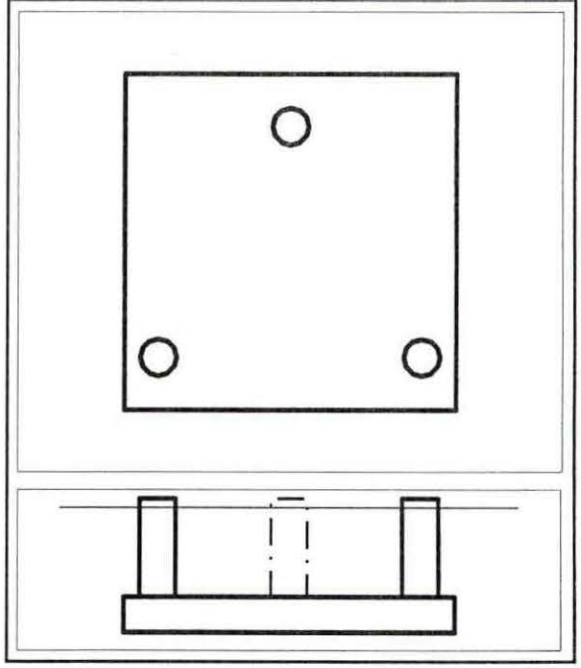
Tower design conforms to the following:

* *1997 Uniform Building Code (UBC)*
* *2000 & 2003 International Building Code (IBC)*
* *ANSI TIA-222-G*
* *Building Code Requirements for Reinforced Concrete (ACI 318-05)*

Note: The centroid of the tower is offset from the centroid of the foundation

Foundation Loading				
Load Case 1				
Load Case 2	stress ratio: 100.0%		mark up: 0.0%	
Shear (total), S:	106.00	kips	x 1 =	106.00 kips
Moment, M:	14755.00	ft-kips	x 1 =	14755.00 ft-kips
Compression/Leg, C:	617.00	kips	x 1 =	617.00 kips
Uplift/Leg, U:	546.00	kips	x 1 =	546.00 kips
Tower Weight, W_t:	89.00	kips	=	89.00 kips

Views of Foundation (not to scale)



STATE OF KENTUCKY
NITESH AHUJA
28866
LICENSED PROFESSIONAL ENGINEER
MAR 19 2014

Additional Notes:

* No foundation modifications listed.
* See attached "Foundation Notes" for further information.

FOUNDATION NOTES

1. THE ON-SITE GEOTECHNICAL ENGINEER SHALL CONFIRM THAT THE INSITU SOIL STRENGTHS MEET OR EXCEED THOSE PARAMETERS GIVEN IN THE SOIL REPORT.
2. A SUMP PUMP OR OTHER DEWATERING SYSTEM MAY BE REQUIRED TO LOWER THE WATER TABLE TO FACILITATE THE INSTALLATION OF THE FOUNDATION.
3. ANY SOFT OR UNSTABLE SUBGRADE SOILS DETECTED DURING THE EXCAVATION SHOULD BE REMOVED AND REPLACED WITH COMPACTED FILL.
4. DIFFICULTIES DURING EXCAVATION MAY ARISE DUE TO THE PRESENCE OF BOULDERS, COBBLES, AND/OR SHALLOW BEDROCK. THE BOULDERS, COBBLES, AND/OR ROCK MUST BE REMOVED FROM THE EXCAVATION OR DRILLED THROUGH.
5. A CONCRETE MAT MAY BE USED TO LEVEL THE BEARING SURFACE. THE CONCRETE IN THE LEVELING MAT IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS AND CAN NOT EXCEED 12" IN THICKNESS.

UNIT BASE FOUNDATION (Load Case 2)

ATC
Pea Ridge, KY

V- 29.0 255 v 2.1
A- 237100

Reactions		stress ratio	100.0%	mark up:	0.0%
Shear, S:	106.00 kips	x 1 =	106.00 kips		
Moment, M:	14755.00 ft-kips	x 1 =	14755.00 ft-kips		
Compression / leg, C:	617.00 kips	x 1 =	617.00 kips		
Uplift / leg, U:	546.00 kips	x 1 =	546.00 kips		
Tower weight, W_t:	89.00 kips	=	89.00 kips		

Soil per: Fstan, Dated 03/12/14, Project# 13-8782

Ultimate bearing: 7.000 ksf
Ultimate Pp: 0.110 kcf

Load Case 2 = 0.9*D + 1.0*Dg + 1.6*Wo

Physical Parameters:

Concrete volume:	$V = T * W^2 + 3 * (di^2 / 4 * \pi) * (D + E - T)$	$V =$	108.4	cy
Concrete weight:	$W_c = V * \delta$	$W_c =$	430.8	kips
Soil weight:	$W_s = (D - T) * (W^2 - 3 * (di^2 / 4 * \pi)) * \gamma$	$W_s =$	712.0	kips
Total weight:	$P = Wc + Ws + Wt$	$P =$	1231.78	kips

Passive Pressure:

Pp coefficient:	$K_p = TAN(45 + \varphi / 2)^2$	$K_p =$	1.000	
	$P_{pn} = Kp * \gamma * N + 2 * Co * \sqrt{(Kp)}$	$P_{pn} =$	0.770	ksf
	$P_{pt} = Kp * \gamma * (D - T) + 2 * Co * \sqrt{(Kp)}$	$P_{pt} =$	0.550	ksf
	$P_{pb} = Kp * \gamma * D + 2 * Co * \sqrt{(Kp)}$	$P_{pb} =$	0.770	ksf
	$P_{ptop} = IF(N < (D - T), Ppt, Ppn)$	$P_{ptop} =$	0.8	ksf
	$Pp' = (Pptop + Ppb) / 2$	$Pp' =$	0.770	ksf
Shear area:	$T_{pp} = 0$	$T_{pp} =$	0.0	ft
	$A_{pp} = Tpp * W$	$A_{pp} =$	0.00	ft^2
Shear Capacity: $\varphi r = 0.75$	$S_{actual} = (Pp' * App + \mu * P) * \varphi r$	$S_{actual} =$	277.150	kips

Check	$S_{actual} =$	277.15 kips	>=	S =	106.00 kips	OK

Overturning Moment Resistance at Toe:

Wt of soil wedge:	$W_{sw} = D * (D * TAN(\varphi)) / 2 * W * \gamma$	$W_{sw} =$	0.0	kips
Dist. from leg to edge:	$O = (W - 0.866 * w') / 2$	$O =$	5.693	ft
Additional offset of Wt:	$O_a = (2 / 3 * 0.866 * w' + O) - W / 2$	$O_a =$	4.186	ft
Resisting moments:	$M_{rwt} = P * W / 2 - Wt * Oa$	$M_{rwt} =$	22107.46	ft-kips
	$M_{rp} = Pp' * App * (D - N) / 3$	$M_{rp} =$	0.00	ft-kips
	$M_{rsw} = Wsw * (W + D * TAN(\varphi) / 3)$	$M_{rsw} =$	0.00	ft-kips
Total resisting: $\varphi r = 0.75$	$M_{rt} = (Mrwt + Mrp + Mrsw) * \varphi r$	$M_{rt} =$	16580.59	ft-kips
Total overturning:	$M_o = M + S * (D + E)$	$M_o =$	15550.00	ft-kips

Check	$M_{rt} =$	16580.59 ft-kips	>=	$M_o =$	15550.00 ft-kips	OK

Bearing Resistance due to Pressure Distribution:

Area of mat:	$area = W^2$	area =	1332.3	ft^2
Section modulus:	$SM = W^3 / 6$	SM =	8104.5	ft^3
Factored total weight:	$P' = Wt + 0.9 * (Wc + Ws)$	P' =	1117.5	kip
Pressure exerted:	$P_{pos} = P' / area + Mo / SM$	$P_{pos} =$	2.757	ksf
	$P_{neg} = P' / area - Mo / SM$	$P_{neg} =$	-1.080	ksf

Note: The stress resultant is NOT within the kern. Bearing area has been adjusted below.

Load eccentricity:	$e_c = Mo / P'$	$e_c =$	13.91	ft
	$P_{adj} = 2 * P' / (3 * W * (W / 2 - ec))$	$P_{adj} =$	4.7	ksf
Adj. applied pressure:	$q_a = IF(Pneg >= 0, Ppos, Padj)$	$q_a =$	4.708	ksf

$\varphi r = 0.75$

Check	$q_a =$	4.708 ksf	<=	$B_c * \varphi r =$	5.250 ksf	OK

Concrete Shear Strength:

One way beam action at d_t from tower

Effective depth:	$d_c = T - cc - db\_p / 2$	$d_c =$	20.500	in.
Factored intensity:	$q_s = C / area$	$q_s =$	0.463	ksf
Required shear: $\varphi s = 0.75$ [ACI 9.3.2.3]	$V_{n1} = qs * (O - di / 2 - dc) * W / \varphi s$	$V_{n1} =$	44.73	kips
Available shear: [ACI 12.2.4]	$V_{c1} = 2 * \sqrt{(F'c)} * W * dc$	$V_{c1} =$	1135.76	kips

Check	$V_{c1} =$	1135.76 kips	>=	$V_{n1} =$	44.73 kips	OK

Two way beam action at d_i / 2 from tower

Perimeter:	$Po = (di + dc) * \pi$			$P_o =$	17.93	ft	
Required shear: $\varphi s = 0.75$ *[ACI 9.3.2.3]*	$V_{n2} = qs / \varphi s * (\text{area} - (di + dc)^2 * \pi / 4)$			$V_{n2} =$	806.86	kips	
Available shear: *[ACI 12.2.2]*	$V_{c2} = 4 * \sqrt{(F'c)} * Po * dc$			$V_{c2} =$	1116.05	kips	
	Check	$V_{c2} =$ 1116.05 kips	>=	$V_{n2} =$	806.86	kips	OK

Column Compression Capacity:

Compression reaction: $\varphi c = 0.65$ *[ACI 9.3.2.2]*	$P_c = \varphi c * 0.8 * F'c * (di^2 / 4 * \pi)$			$P_c =$	3763.9	kips	
	Check	$P_c =$ 3763.88 kips	>=	C =	617.00	kips	OK

Pier Reinforcement:

Cross-sectional area:	$A_g = di^2 * \pi / 4$			$A_g =$	1809.56	in^2	
Min. area of steel (pier): *[ACI 10.9.1] & [ACI 10.8.4]*	$A_{st\_c} = Ag * 0.005$			$A_{st\_c} =$	9.05	in^2	
Cage circle:	$d_o = di - 2 * cc$			$d_o =$	42.00	in	
Rebar:	$s\_c = 9$	$d_{b\_c} =$ 1.128 in					
	$m\_c = 20$	$A_{b\_c} =$ 1 in^2					
	$A_{s\_c} = Ab\_c * m\_c$			$A_{s\_c} =$	20.00	in^2	
	Check	$A_{s\_c} =$ 20.00 in^2	>=	$A_{st\_c} =$	9.05	in^2	OK
Actual moment:	$M_{max} = (D - T + E) * S / 2$			$M_{max} =$	291.50	ft-kips	
Pier moment capacity:	M_{allow} *per Maxmomnt.xls (see attached)*			$M_{allow} =$	420.13	ft-kips	
	Check	$M_{allow} =$ 420.13 ft-kips	>=	$M_{max} =$	291.50	ft-kips	OK
Bar separation:	$B_{s\_c} = (do * \pi) / m\_c - db\_c$			$B_{s\_c} =$	5.47	in	
	Check	10.87 >= $B_{s\_c} =$ 5.47 in		>=	4.5"		OK

Vertical Rebar Development Length:

Reinforcement location: *[ACI 12.2.4]*	ψ_{t_c} = if the space under the rebar > 12 in, use 1.3, else use 1.0	$\psi_{t\_c} =$	1.3	
Epoxy coating: *[ACI 12.2.4]*	ψ_{e_c} = if epoxy-coated bars are not used, use 1.0; but if epoxy-coated bars are used, then if Bs < 6 * db or cc < 3 * db, use 1.5, else 1.2	$\psi_{e\_c} =$	1.0	
Max term: *[ACI 12.2.4]*	$\psi_t\psi_{e\_c}$ = the product of ψt & ψe, need not be taken larger than 1.7	$\psi_t\psi_{e\_c} =$	1.3	
Reinforcement size: *[ACI 12.2.4]*	ψ_{s_c} = if the bar size is 6 or less, then use 0.8, else use 1.0	$\psi_{s\_c} =$	1	
Light weight concrete: *[ACI 12.2.4]*	λ_c = if lightweight concrete is used, 1.3, else use 1.0	$\lambda\_c =$	1.0	
Spacing/cover: *[ACI 12.2.4]*	c_c the smaller of: half the bar spacing or the concrete edge distace	$c\_c =$	3.56	in
Transverse bars: *[ACI 12.2.3]*	k_{tr_c} = 0 in (per simplification)	$k_{tr\_c} =$	0	in
Max term: *[ACI 12.2.3]*	$c\_c' = MIN(2.5, (c\_c + ktr\_c) / db\_c)$	$c\_c' =$	2.500	
Excess reinforcement: *[ACI 12.2.5]*	$R\_c = Mmax / Mallow$	$R\_c =$	0.69	
Development (tensile): [ACI 12.2.2]	$L_{dt}'\_c = (3 / 40) * (Fy / \sqrt{(F'c)}) * (\psi t\psi e\_c * \psi s\_c * \lambda\_c * R\_c / c\_c') * db\_c$	$L_{dt}'\_c =$	28.96	in
Minimum length: *[ACI 12.2.1]*	L_{d_min} = 12 inches	$L_{d\_min} =$	12.0	in
Development length:	$L_{dt\_c} = MAX(Ld\_min, Ldt'\_c)$	$L_{dt\_c} =$	28.96	in
Development (comp.): [ACI 12.3.2]	$L_{dc}'\_c = 0.02 * db\_c * Fy * R\_c / \sqrt{(F'c)}$	$L_{dc}'\_c =$	14.85	in
	$L_{dc}''\_c = 0.0003 * db\_c * Fy * R\_c$	$L_{dc}''\_c =$	14.09	in
Development length:	$L_{dc\_c} = MAX(8, Ldc'\_c, Ldc''\_c)$	$L_{dc\_c} =$	14.85	in
Length available in pier:	$L_{vc} = D - T + E - cc$	$L_{vc} =$	63.0	in
	Check	$L_{vc} =$ 63.0 in >=	$L_{dt\_c} =$	29.0 in OK
	Check	$L_{vc} =$ 63.0 in >=	$L_{dc\_c} =$	14.8 in OK
Length available in pad:	$L_{vp} = T - cc$		$L_{vp} =$	21.0 in
	Check	$L_{vp} =$ 21.0 in >=	$L_{dt\_c} =$	29.0 in HOOKS
	Check	$L_{vp} =$ 21.0 in >=	$L_{dc\_c} =$	14.8 in OK

Vertical Rebar Hook Ending:

Bar size & clear cover: [ACI 12.5.3]	α_h if the bar size <= 11 and side cc >= 2.5", use 0.7, else use 1.0				ψ_{t_h} =	0.7		
Epoxy coating: [ACI 12.5.2]	β_h if epoxy-coated bars are used, use 1.2, else use 1.0				ψ_{e_h} =	1.0		
Light weight concrete: [ACI 12.5.2]	λ_h if lightweight concrete is used, 1.3, else use 1.0				λ_h =	1.0		
Development (hook): [ACI 12.5.2]	$L_{dh}' = 0.02 * \psi t\_h * \psi e\_h * \lambda\_h * Fy / \sqrt{(F'c)} * db\_c$				L_{dh}' =	15.0	in	
Minimum length: [ACI 12.5.1]	L_{dh_min} the larger of: 8 * db or 6 in				L_{dh_min} =	9.0	in	
Development length:	L_{dh} = MAX(Ldh_min, Ldh')				L_{dh} =	15.0	in	
	Check	L_{vp} =	21.0	in >=	L_{dh} =	15.0	in	OK
Hook tail length:	L_{h_tail} 12 * db beyond the bend radius				L_{h_tail} =	19.2	in	
Length available in pad:	L_{h_pad} = (W - w' - di) / 2				L_{h_pad} =	21	in	
	Check	L_{h_pad} =	21.0	in >=	L_{dh_tail} =	19.2	in	OK

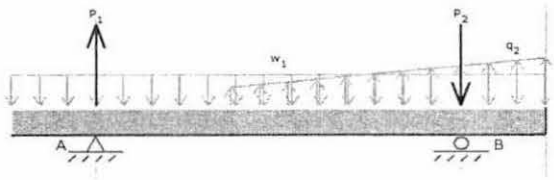
Pier Ties:

Minimum size: [ACI 7.10.5.1]	s_{t_min} =IF(s_c <= 10, 3, 4)				s_{t_min} =	3		
z factor:	z = 0.5 if the seismic zone is less than 2, else 1.0				z =	0.5		
Tie parameters:	s_t = 4			d_{b_t} =	0.5	in		
	m_t = 13			A_{b_t} =	0.2	in^2		
Allowable tie spacing:								
per vertical rebar [ACI 7.10.5.2] & [ACI 21.3.3.2]	$B_{s\_t\_max1}$ = 8 / z * db_c				$B_{s\_t\_max1}$ =	18.048	in	
per tie size [ACI 7.10.5.2] & [ACI 21.3.3.2]	$B_{s\_t\_max2}$ = 24 / z * db_t				$B_{s\_t\_max2}$ =	24	in	
per pier diameter [ACI 7.10.5.2] & [ACI 21.3.3.2]	$B_{s\_t\_max3}$ = di / (4 * z²)				$B_{s\_t\_max3}$ =	48	in	
per seismic zone [ACI 7.10.5.2] & [ACI 21.3.3.2]	$B_{s\_t\_max4}$ = 12" in active seismic zones, else 18"				$B_{s\_t\_max4}$ =	18	in	
	$B_{s\_t\_max}$ = MIN(Bs_t_max1, Bs_t_max2, Bs_t_max3, Bs_t_max4)				$B_{s\_t\_max}$ =	6	in	
	m_{t_min} = (D - T + E) / Bs_t_max + 2				m_{t_min} =	13.0		
	Check	m_t =	13.0	>=	m_{t_min} =	13.0		OK

Anchor Steel:

A/S parameters:	P_{as} = 123653			L_{as} =	72	in		
	d_{as} = 1 in			E_{as} =	63.50	in		
Development available:	L_{das} per Anchor Bolts (see attached)					L_{das} =	49.00	in
Required development:	L_{das_min} per Anchor Bolts (see attached)					L_{das_min} =	28.96	in
	Check	L_{das} =	49.00	in >=	L_{das_min} =	28.96	in	OK
To bottom rebar grid:	E_{as_max} =D + E - cc - 2 * db_p					E_{as_max} =	85	in
	Check	E_{as} =	63.50	in <=	E_{as_max} =	85.00	in	OK
To top rebar grid:	rebar @ = D + E - T + cc					rebar @	69.00	in
	Check	69 + 6 in	>=	E_{as} =	63.50	in or	<=	69 in OK
Min. cage dia:	d_{o_min} per ancsteel.xls (see attached)					d_{o_min} =	32.28	in
	Check	d_o =	42.00	in >=	d_{o_min} =	32.28	in	OK

Pad Reactions:



MDSolids Geometry Input (Option 1)

Total Beam Length:	B_{L2_1} =W	B_{L2_1}=	36.5	ft
Location of Left Support:	S_{L2_1} =O	S_{L2_1}=	5.693	ft
Location of Right Support:	S_{R2_1} =W-O	S_{R2_1}=	30.81	ft

MDSolids Geometry Input (Option 2)

Total Beam Length:	B_{L2_2} =W	B_{L2_2}=	36.5	ft
Location of Left Support:	S_{L2_2} =(W - w\) / 2	S_{L2_2}=	3.75	ft
Location of Right Support:	S_{R2_2} =S_{L1_2} + w\	S_{R2_2}=	32.75	ft

MDSolids Load Input (Option 1 & Option 2)

Uplift:	P_{2_1} =U	P_{2_1}=	546.0	kips
Compression:	P_{2_2} =C	P_{2_2}=	617.00	kips
Weight of Overburden: (Distributed)	w_{2_1} =0.9 * (W_c + W_s) / W	w_{2_1}=	28.18	klf
	Applied over the beam starting at 0' and ending at W=36.5ft.			
Distributed Soil Pressure: (Linearly Increasing)	q_{2_2L} =0	q_{2_2L}=	0.00	klf
	q_{2_2R} =q_a * W	q_{2_2R}=	171.86	klf
	This linearly increasing load is applied from e=13.91ft to W=36.5ft			

MDSolids Design Result

Option 1:	M_{max2_1} =M_{max2_1} (Max. Moment calculated from MDsolids for Option 1)	M_{max2_1}=	2095.00	ft*kips
Option 2:	M_{max2_2} =M_{max2_2} (Max. Moment calculated from MDsolids for Option 2)	M_{max2_2}=	1531.00	ft*kips
Max moment:	M_{maxp} =Max(Mmax2_1,Mmax2_2)	M_{maxp}=	2095.00	ft*kips
Required moment: ϕt = 0.9 *[ACI 9.3.2.1]*	M_n = Mmaxp / ϕt	M_n =	2327.78	ft*kips

Pad Reinforcement:

	β = IF(F'c <= 4000, 0.85, IF(F'c >= 8000, 0.65, 0.85 - (F'c - 4000) * 0.05))					β =	0.85		
Effective width:	W_e = w' * 0.866 + di					W_e =	29.114	ft	
	A_{st_p}' = Mn / (0.9 * Fy * dc)					A_{st_p}' =	25.233	in^2	
	a_p = Ast_p' * Fy / (β * F'c * We)					a_p =	1.27	in	
Required steel:	$A_{st\_p\_st}$ = Mn / (Fy * (dc - ap / 2)) * (W / We)					$A_{st\_p\_st}$ =	29.385	in^2	
Shrinkage:	ρ_{sh} = IF(Fy >= 60000, 0.0018, 0.002)					ρ_{sh} =	0.0018		
	$A_{st\_p\_sh}$ = psh * W * T / 2					$A_{st\_p\_sh}$ =	9.461	in^2	
	A_{st_p} = MAX(Ast_p_st, Ast_p_sh)					A_{st_p} =	29.385	in^2	
Rebar:	s_p = 8	Equally spaced, top and	d_{b_p} =	1	in				
	m_p = 38	bottom, both directions.	A_{b_p} =	0.79	in^2				
	A_{s_p} = Ab_p * m_p					A_{s_p} =	30.02	in^2	
	Check	A_{s_p} = 30.02 in^2	>=	A_{st_p} =	29.38 in^2				OK
Bar separation:	B_{e_p} = (W - 2 * cc - db_p) / (m_p - 1) - db_p					B_{e_p} =	10.65	in	
	Check	11	>=	B_{e_p} =	10.65 in		>=	4.5"	OK

Pad Development Length:

Reinforcement location: [ACI 12.2.4]	ψ_{t_p} = if the space under the rebar > 12 in, use 1.3, else use 1.0	ψ_{t_p} =	1.3	
Epoxy coating: [ACI 12.2.4]	ψ_{e_p} = if epoxy-coated bars are not used, use 1.0; but if epoxy-coated bars are used, then if Bs < 6 * db or cc < 3 * db, use 1.5, else 1.2	ψ_{e_p} =	1.0	
Max term: [ACI 12.2.4]	$\psi_t\psi_{e\_p}$ = the product of ψt & ψe, need not be taken larger than 1.7	$\psi_t\psi_{e\_p}$ =	1.3	
Reinforcement size: [ACI 12.2.4]	ψ_{s_p} = if the bar size is 6 or less, then use 0.8, else use 1.0	ψ_{s_p} =	1	
Light weight concrete: [ACI 12.2.4]	λ_p = if lightwieght concrete is used, 1.3, else use 1.0	λ_p =	1.0	
Spacing/cover: [ACI 12.2.4]	c_p = the smaller of: half the bar spacing or the concrete edge distace	c_p =	3.50	in
Transverse bars: [ACI 12.2.3]	k_{tr_p} = 0 in (per simplification)	k_{tr_p} =	0	in
Max term: [ACI 12.2.3]	c_p' = MIN(2.5, (c_p + ktr_p) / db_p)	c_p' =	2.500	
Excess reinforcement: [ACI 12.2.5]	R_p = Ast_p / As_p	R_p =	0.98	
Development (tensile): [ACI 12.2.2]	L_d = (3 / 40) * (Fy / √(F'c)) * ψtψe_p * ψs_p * λ_p * R_p * db_p / c_p'	L_{dp}' =	36.2	in
Minimum length: [ACI 12.2.1]	L_{d_min} = 12 inches	L_{d_min} =	12.0	in
Development length:	L_{dp} = MAX(Ld_min, Ldp')	L_{dp} =	36.2	in
Length available in pad:	L_{pad} = (W / 2 - w' / 2) - cc	L_{pad} =	42.0	in
	Check L_{pad} = 42.00 in	>=	L_{dp} =	36.22 in	OK

THIS SPREADSHEET IS SET UP FOR A MAXIMUM OF 56 BARS.
MAXIMUM FACTORED MOMENT OF A CIRCULAR SECTION

Loading (negative for compression)		
Axial load =	546.00	kips

Foundation		
Concrete		
Pier diameter =	4.00	ft
Pier area =	1809.6	in^2
Reinforcement		
Clear cover =	3.00	in
Cage diameter =	3.41	ft
Bar size =	9	
Bar diameter =	1.128	in
Bar area =	0.999	in^2
Number of bars =	20	

Material Strengths		
Concrete compressive strength =	4000	psi
Reinforcement yield strength =	60000	psi
Modulus of elasticity =	29000	ksi
Reinforcement yield strain =	0.00207	(per ACI 10.3.5 - OK)
Limiting compressive strain =	0.003	

Seismic	
Seismic Zone =	1
Are hooks required?	no

Minimum Area of Steel

Required area of steel =	9.05	in^2	
Actual area of steel =	19.99	in^2	OK
Bar spacing =	5.47	in	

Axial Loading

Load factor =	1.00	
Reduction factor =	0.65575	(per ACI 9.3.1 & 2)
Factored axial load =	832.64	kips

Neutral Axis

Distance from extreme edge to neutral axis =	4.07	in	
Equivalent compression zone factor =	0.85		(per ACI 10.2.7.3)
Distance from extreme edge to Equivalent compression zone factor =	3.46	in	
Distance from centroid to neutral axis =	19.93	in	

Compression Zone

Area of steel in compression zone =	0.00	in^2	
Angle from centroid of pier to intersection of equivalent compression zone and edge of pier =	31.13	deg	
Area of concrete in compression =	58.03	in^2	
Force in concrete = 0.85 * f'c * Acc =	197.31	kips	(per ACI 10.3.6.2)
Total reinforcement forces =	-1029.95	kips	
Factored axial load =	832.64	kips	
Force in concrete =	-197.31	kips	
Sum of the forces in concrete =	0.00	kips	OK

Maximum Moment

First moment of the concrete area in compression about the centoid =			1273.00	in^3
Distance between centroid of concrete in compression and centroid of pier =			21.94	in
Moment of concrete in compression =	4328.20	in-kips		
Total reinforcement moment =	3360.06	in-kips		
Nominal moment strength of column =	7688.26	in-kips		
Factored moment strength of column =	5041.55	in-kips	420.13	ft-kips

Maximum allowable moment of the pier =	420.13	ft-kips

Individual Bars

Bar #	Angle from first bar (deg)	Distance to centroid (in)	Distance to neutral axis (in)	Distance to equivalent comp. zone (in)	Strain	Area of steel in compression (in^2)	Axial force (kips)	Moment (in-kips)
1	0.00	0.00	-19.93	-20.54	-0.01471	0.00	-59.96	0.00
2	18.00	6.32	-13.62	-14.23	-0.01005	0.00	-59.96	-378.65
3	36.00	12.01	-7.92	-8.53	-0.00585	0.00	-59.96	-720.23
4	54.00	16.53	-3.40	-4.01	-0.00251	0.00	-59.96	-991.32
5	72.00	19.44	-0.50	-1.11	-0.00037	0.00	-10.68	-207.50
6	90.00	20.44	0.50	-0.11	0.00037	0.00	10.72	218.99
7	108.00	19.44	-0.50	-1.11	-0.00037	0.00	-10.68	-207.50
8	126.00	16.53	-3.40	-4.01	-0.00251	0.00	-59.96	-991.32
9	144.00	12.01	-7.92	-8.53	-0.00585	0.00	-59.96	-720.23
10	162.00	6.32	-13.62	-14.23	-0.01005	0.00	-59.96	-378.65
11	180.00	0.00	-19.93	-20.54	-0.01471	0.00	-59.96	0.00
12	198.00	-6.32	-26.25	-26.86	-0.01937	0.00	-59.96	378.65
13	216.00	-12.01	-31.95	-32.56	-0.02358	0.00	-59.96	720.23
14	234.00	-16.53	-36.47	-37.08	-0.02691	0.00	-59.96	991.32
15	252.00	-19.44	-39.37	-39.98	-0.02906	0.00	-59.96	1165.36
16	270.00	-20.44	-40.37	-40.98	-0.02979	0.00	-59.96	1225.34
17	288.00	-19.44	-39.37	-39.98	-0.02906	0.00	-59.96	1165.36
18	306.00	-16.53	-36.47	-37.08	-0.02691	0.00	-59.96	991.32
19	324.00	-12.01	-31.95	-32.56	-0.02358	0.00	-59.96	720.23
20	342.00	-6.32	-26.25	-26.86	-0.01937	0.00	-59.96	378.65

DEVELOPMENT LENGTH CHECK OF PIER REINFORCEMENT

Foundation:	Pier diameter =	4.0	ft	Cover between side of pier and cage =	3.00	in.
	Cage diameter =	3.5	ft	Cover between top of pier and cage =	3.00	in.
	Rebar size =	8		Compressive strength of concrete =	4000	psi
	Number of bars =	38		Rebar yield strength =	60000	psi
	Clear spacing =	10.65	in.			
	Are there hooks?	n				
	Check Compression?	n				
Anchor Steel:	Part number:	123653		Actual Bending Moment =	291.50	ft-kips
	Embedment length =	63.5	in.	Allowable Bending Moment =	420.13	ft-kips
	Bolt Diameter =	1"		Excess Reinforcement Ratio =	0.694	
Anchor Plate:	Part number:	227216				
	Plate width =	19	in.			

Required development length (compression) =	999.00	in.	
Required development length (tension) =	41.73	in.	
Required development length (tension) =	28.96	in.	(reduced)
Available development length =	49.000	in.	

OK

The length available in the pier for the development of the vertical reinforcement exceeds the required length (ACI 318-02, section 12.2).

CHECK EMBEDMENT PLATE CLEARANCE IN THE PIER

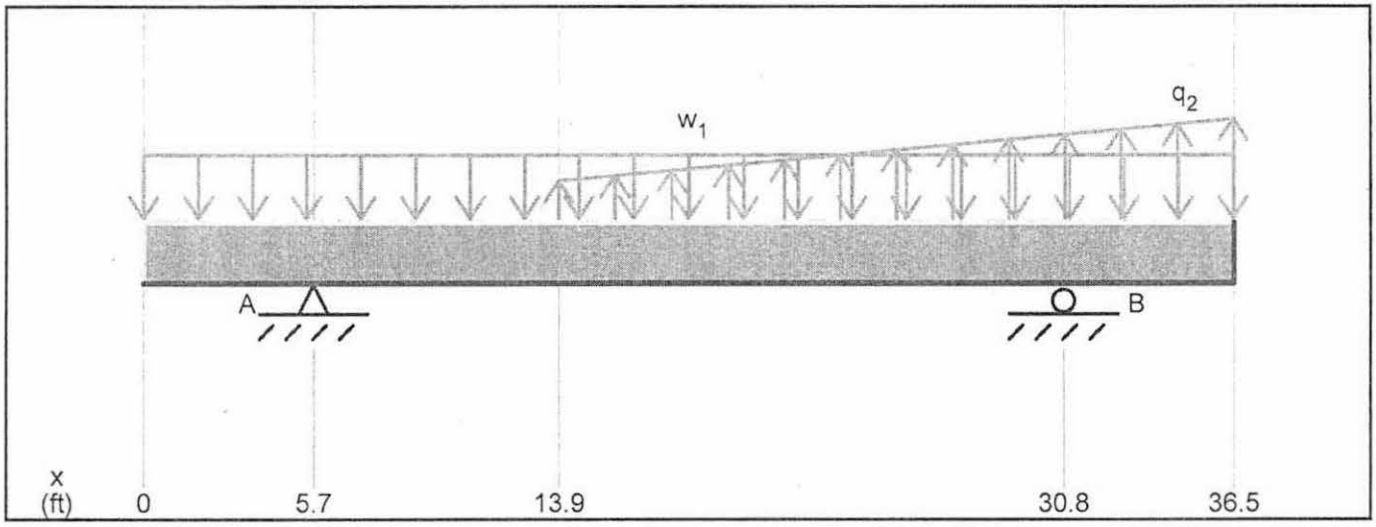
Foundation:	Pier diameter =	4.0	ft	Cover between side of pier and cage =	3.00	in.
	Cage diameter =	3.5	ft	Minimum cover between A/S and cage =	3.00	in.
Anchor Steel:	Part number:	123653		Angle of anchor steel in foundation =	3.3	degrees
	Embedment length =	63.5	in.			
Anchor Plate:	Part number:	227216				
	Largest plate width =	19.00	in.			
	Bolt Diameter =	1	in.			

Minimum cage diameter =	32.28	in.
Actual cage diameter =	42	in.

OK

The available space exceeds the minimum cage diameter required for anchor steel installed in the pier at an angle.

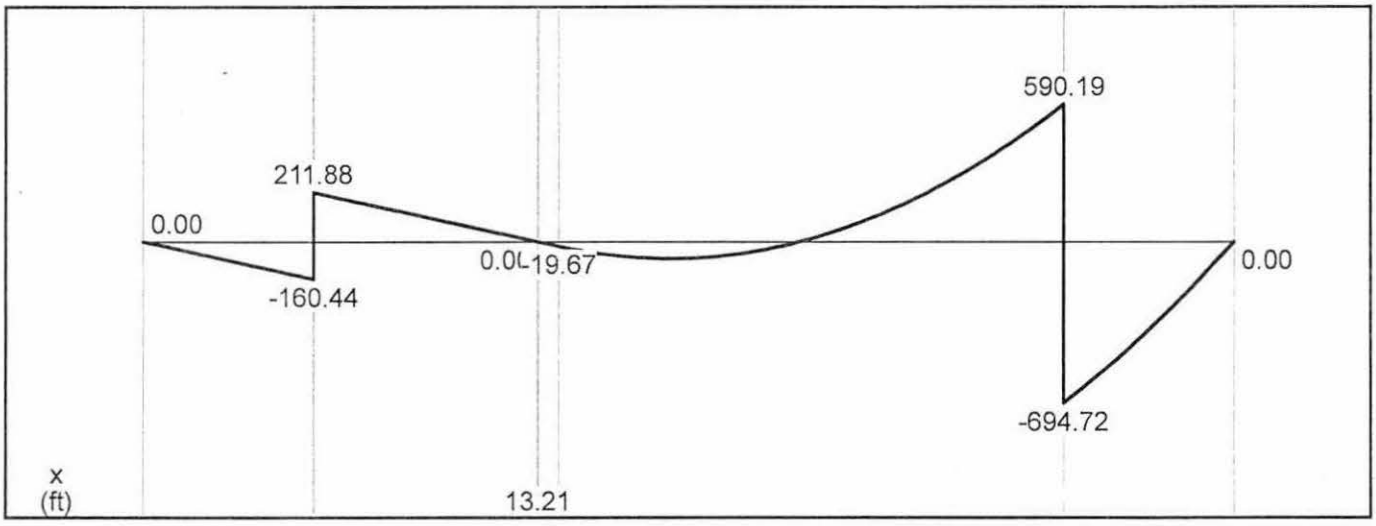
LC2- Option 1



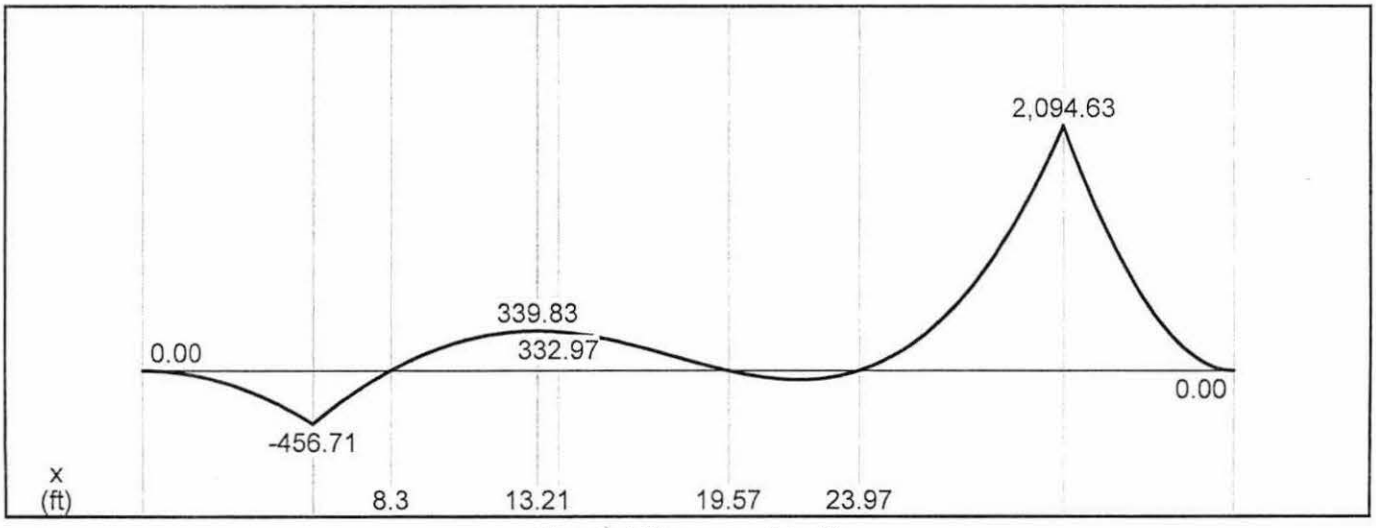
Load Diagram

w_1 = 28.18 kip/ft (down)
q_2 = 0.0 to 171.86 kip/ft (up)

A_y = 372.32 kip (up)
B_y = 1,284.91 kip (down)

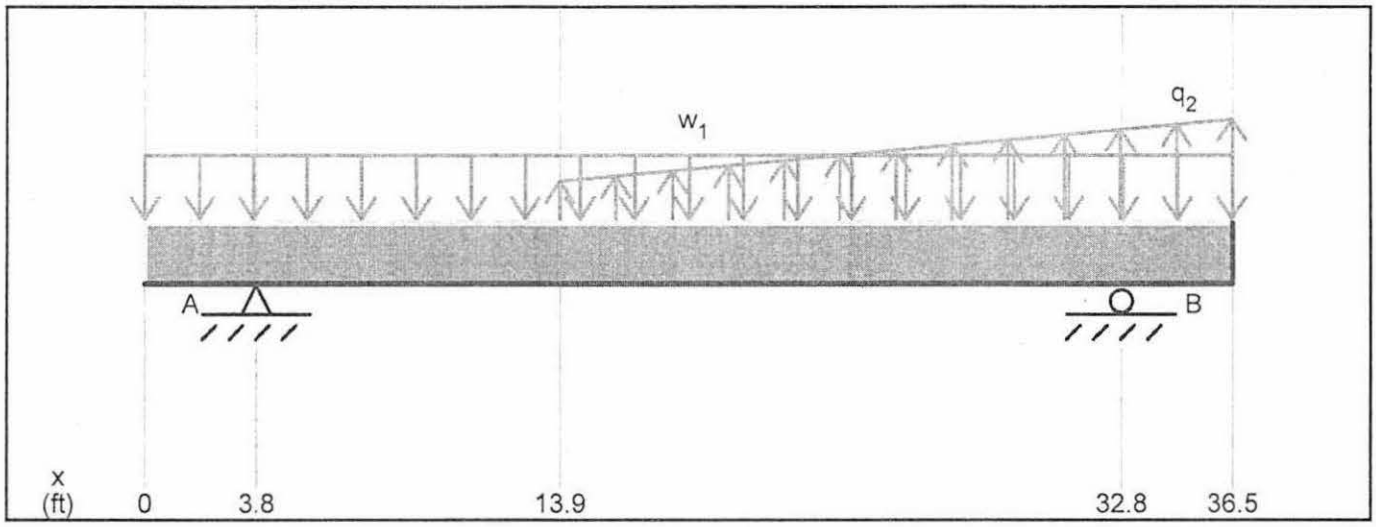


Shear Diagram (kip)



Moment Diagram (kip-ft)

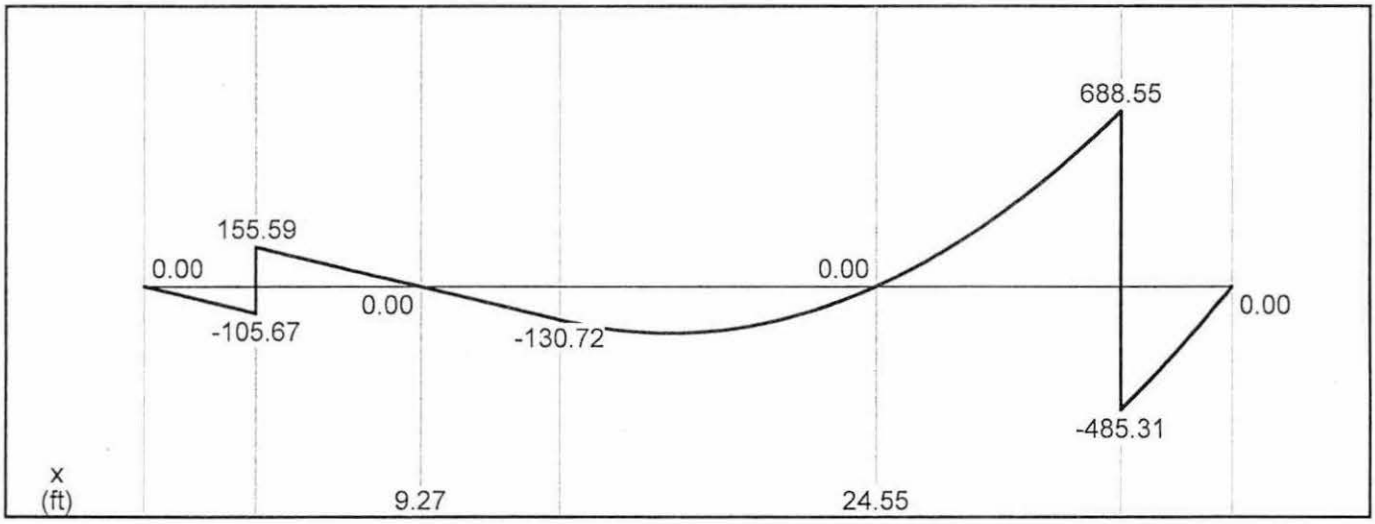
LC2- Option 2



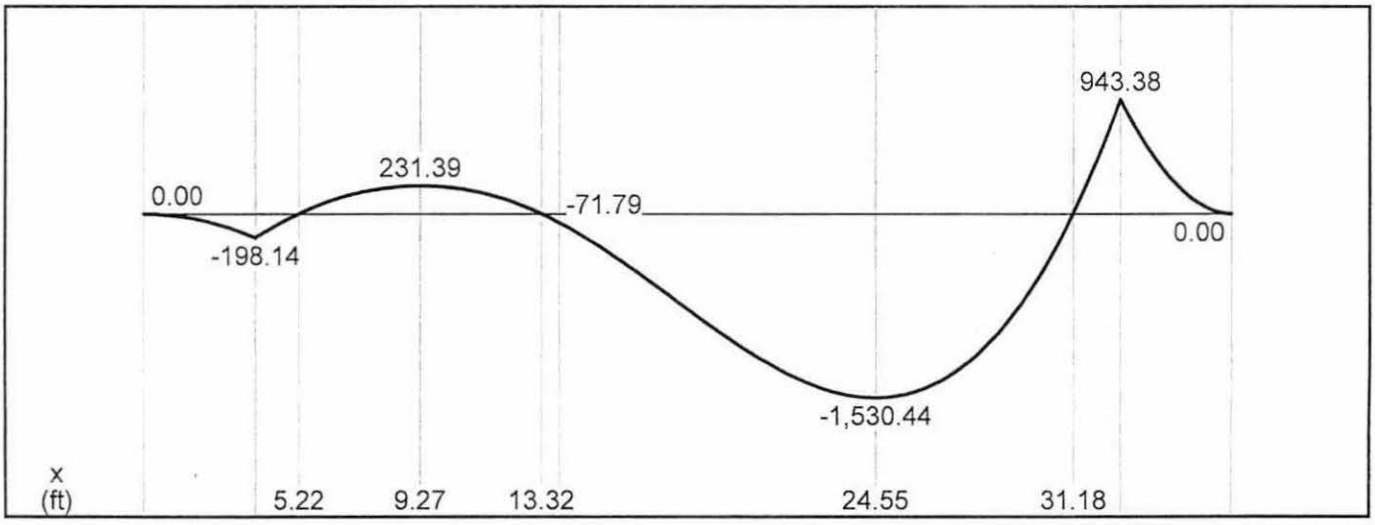
Load Diagram

w_1 = 28.18 kip/ft (down)
q_2 = 0.0 to 171.86 kip/ft (up)

A_y = 261.27 kip (up)
B_y = 1,173.85 kip (down)



Shear Diagram (kip)



Moment Diagram (kip-ft)

EXHIBIT D
COMPETING UTILITIES, CORPORATIONS, OR PERSONS LIST AND MAP OF LIKE FACILITIES IN VICINITY

KY Public Service Commission

Master Utility Search

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

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

[▼] [Active ▼]

Search

	Utility ID	Utility Name	Utility Type	Class	City	State
View	4107900	365 Wireless, LLC	Cellular	D	Atlanta	GA
View	4109300	Access Point, Inc.	Cellular	D	Cary	NC
View	4108300	Air Voice Wireless, LLC	Cellular	D	Bloomfield Hill	MI
View	44451184	Alltel Communications, LLC	Cellular	A	Basking Ridge	NJ
View	4107800	American Broadband and Telecommunications Company	Cellular	D	Toledo	OH
View	4108650	AmeriMex Communications Corp.	Cellular	B	Roswell	GA
View	4105100	AmeriVision Communications, Inc. d/b/a Affinity 4	Cellular	D	Norfolk	VA
View	4107400	Bandwidth.com, Inc.	Cellular	B	Raleigh	NC
View	4108600	BCN Telecom, Inc.	Cellular	D	Morristown	NJ
View	4108750	Blue Jay Wireless, LLC	Cellular	D	Addison	TX
View	4202300	Bluegrass Wireless, LLC	Cellular	A	Elizabethtown	KY
View	4107600	Boomerang Wireless, LLC	Cellular	D	Hiawatha	IA
View	4105600	Budget PrePay, Inc. dba Budget Mobile	Cellular	A	Bossier City	LA
View	4105500	BullsEye Telecom, Inc.	Cellular	D	Southfield	MI
View	4100700	Cellco Partnership dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
View	4106600	Cintex Wireless, LLC	Cellular	D	Rockville	MD
View	4101900	Consumer Cellular, Incorporated	Cellular	A	Portland	OR

View	4104900	Credit Union Wireless, LLC	Cellular	D	Salem	OR
View	4106400	Credo Mobile, Inc.	Cellular	A	San Francisco	CA
View	4201000	Cricket Communications, LLC	Cellular	A	Atlanta	GA
View	4108850	Cricket Wireless, LLC	Cellular	D	Alpharetta	GA
View	4001900	CTC Communications Corp. d/b/a EarthLink Business I	Cellular	D	Marlborough	MA
View	10640	Cumberland Cellular Partnership	Cellular	A	Elizabethtown	KY
View	4109250	Defense Mobile Corporation	Cellular	D	Westport	CT
View	4101000	East Kentucky Network, LLC dba Appalachian Wireless	Cellular	A	Ivel	KY
View	4002300	Easy Telephone Service Company dba Easy Wireless	Cellular	D	Ocala	FL
View	4109500	Enhanced Communications Group, LLC	Cellular	D	Bartlesville	OK
View	4109050	EOS Mobile Holdings, LLC	Cellular	D	Southlake	TX
View	4104700	Ernest Communications, Inc.	Cellular	D	Norcross	GA
View	4105900	Flash Wireless, LLC	Cellular	D	Concord	NC
View	4107100	Flatel Wireless, Inc dba Zing PCS	Cellular	D	Royal Palm Bch	FL
View	4104800	France Telecom Corporate Solutions L.L.C.	Cellular	D	Oak Hill	VA
View	4109350	Global Connection Inc. of America	Cellular	D	Norcross	GA
View	4102200	Globalstar USA, LLC	Cellular	B	Covington	LA
View	4109600	Google North America Inc.	Cellular	C	Mountain View	CA
View	33350363	Granite Telecommunications, LLC	Cellular	D	Quincy	MA
View	4106000	GreatCall, Inc. d/b/a Jitterbug	Cellular	A	San Diego	CA
View	10630	GTE Wireless of the Midwest dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
View	4103100	i-Wireless, LLC	Cellular	A	Newport	KY
View	4109800	IM Telecom, LLC d/b/a Infiniti Mobile	Cellular	C	Tulsa	OK
View	22215360	KDDI America, Inc.	Cellular	C	New York	NY
View	10872	Kentucky RSA #1 Partnership	Cellular	A	Basking Ridge	NJ
View	10680	Kentucky RSA #3 Cellular General	Cellular	A	Elizabethtown	KY
View	10681	Kentucky RSA #4 Cellular General	Cellular	A	Elizabethtown	KY
View	4109750	Konatel, Inc. dba telecom.mobi	Cellular	C	Johnstown	PA
View	4107300	Lycamobile USA, Inc.	Cellular	D	Newark	NJ
View	4108100	MCC Telephony of the South, LLC	Cellular	D	Mediacom Park	NY
View	4108800	MetroPCS Michigan, LLC	Cellular	A	Bellevue	WA
View	4109650	Mitel Cloud Services, Inc.	Cellular	C	Mesa	AZ
					Woodland	

View	4109400	NetZero Wireless, Inc.	Cellular	D	Hills	CA
View	4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular	A	San Antonio	TX
View	10900	New Par dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
View	4000800	Nextel West Corporation	Cellular	A	Overland Park	KS
View	4104500	Nexus Communications, Inc.	Cellular	D	Columbus	OH
View	4001300	NPCR, Inc. dba Nextel Partners	Cellular	A	Overland Park	KS
View	4001800	OnStar, LLC	Cellular	A	Detroit	MI
View	4109450	Pix Wireless, LLC	Cellular	D	Boca Raton	FL
View	4109850	PLATINUMTEL COMMUNICATIONS, LLC d/b/a Care Wireless	Cellular	C	Justice	IL
View	33351182	PNG Telecommunications, Inc. dba PowerNet Global Communications	Cellular	D	Cincinnati	OH
View	4202100	Powertel/Memphis, Inc. dba T-Mobile	Cellular	A	Bellevue	WA
View	4107700	Puretalk Holdings, LLC	Cellular	A	Covington	GA
View	4106700	Q Link Wireless, LLC	Cellular	A	Dania	FL
View	4108700	Ready Wireless, LLC	Cellular	C	Hiawatha	IA
View	4106200	Rural Cellular Corporation	Cellular	A	Basking Ridge	NJ
View	4108550	Sage Telecom Communications, LLC	Cellular	D	Dallas	TX
View	4109150	SelecTel, Inc. d/b/a SelecTel Wireless	Cellular	D	Freemont	NE
View	4106300	SI Wireless, LLC	Cellular	A	Carbondale	IL
View	4109100	Solavei, LLC	Cellular	C	Bellevue	WA
View	4200100	Sprint Spectrum, L.P.	Cellular	A	Atlanta	GA
View	4200500	SprintCom, Inc.	Cellular	A	Atlanta	GA
View	4109550	Stream Communications, LLC	Cellular	C	Dallas	TX
View	4202200	T-Mobile Central, LLC dba T-Mobile	Cellular	A	Bellevue	WA
View	4002500	TAG Mobile, LLC	Cellular	D	Carrollton	TX
View	4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular	C	South Portland	ME
View	4107200	Telefonica USA, Inc.	Cellular	D	Miami	FL
View	4108900	Telrite Corporation dba Life Wireless	Cellular	D	Covington	GA
View	4108450	Tempo Telecom, LLC	Cellular	D	Kansas City	MO
View	4109000	Ting, Inc.	Cellular	B	Toronto	ON
View	4103900	Total Call Mobile, Inc.	Cellular	A	Gardena	CA
View	4103300	Touchtone Communications, Inc.	Cellular	D	Whippany	NJ
View	4104200	TracFone Wireless, Inc.	Cellular	D	Miami	FL

View	4002000	Truphone, Inc.	Cellular	D	Durham	NC
View	4105700	Virgin Mobile USA, L.P.	Cellular	A	Atlanta	GA
View	4104100	WDT Wireless Telecommunications, Inc.	Cellular	D	Dallas	TX
View	4200600	West Virginia PCS Alliance, L.C.	Cellular	A	Waynesboro	VA
View	4106500	WiMacTel, Inc.	Cellular	D	Omaha	NE
View	4109900	Wireless Telecom Cooperative, Inc. dba theWirelessFreeway	Cellular	C	Louisville	KY

EXHIBIT E
FAA

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

Aeronautical Study No.
2015-ASO-16409-OE
Prior Study No.
2013-ASO-11700-OE

Issued Date: 12/03/2015

FAA/FCC Department
American Towers, LLC
10 Presidential Way
Suite 100
Woburn, MA 01801

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Antenna Tower PEA RIDGE KY (281378)
Location:	Pine Ridge, KY
Latitude:	37-46-24.18N NAD 83
Longitude:	83-38-08.92W
Heights:	1280 feet site elevation (SE) 265 feet above ground level (AGL) 1545 feet above mean sea level (AMSL)

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

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

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

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

This determination expires on 06/03/2017 unless:

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

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

This determination is based, in part, on the foregoing description which includes specific coordinates , heights, frequency(ies) and power . Any changes in coordinates , heights, and frequencies or use of greater power will void this determination. Any future construction or alteration , including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

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

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

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

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (817) 222-5932. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2015-ASO-16409-OE.

Signature Control No: 268209159-274132609 (DNE)
Joan Tengowski
Technician

Attachment(s)
Frequency Data
Map(s)

cc: FCC

Frequency Data for ASN 2015-ASO-16409-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
698	806	MHz	1000	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W

TOPO Map for ASN 2015-ASO-16409-OE

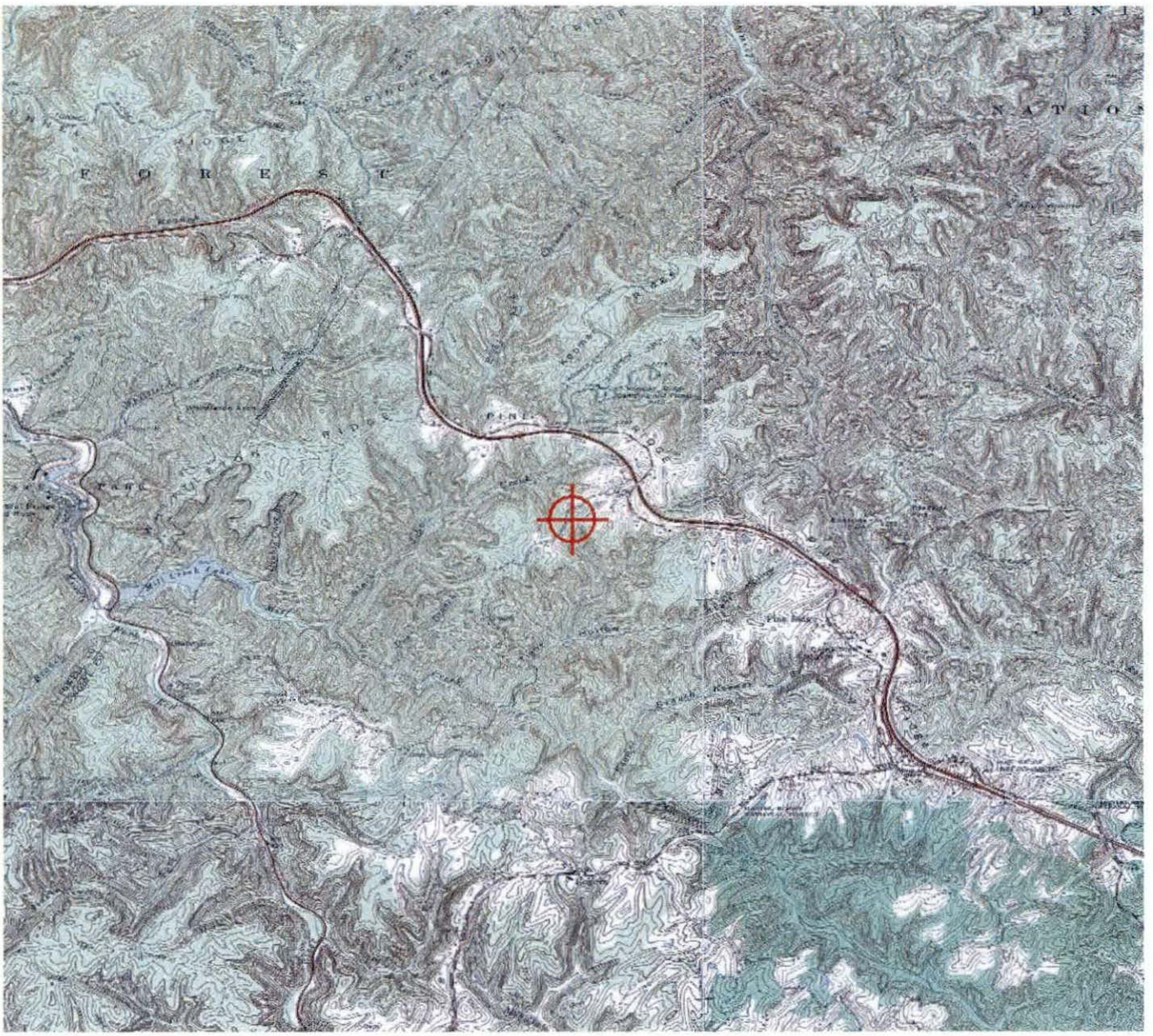


EXHIBIT F
KENTUCKY AIRPORT ZONING COMMISSION

KENTUCKY AIRPORT ZONING COMMISSION

STEVEN BESHEAR
Governor

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

September 1, 2015

APPROVAL OF APPLICATION EXTENSION

APPLICANT:
American Tower Inc
American Tower Inc
10 Presidential Way
Woburn, MA 01801

SUBJECT: AS–119-150–2014-003

STRUCTURE:	Antenna Tower
LOCATION:	Pine Ridge, KY
COORDINATES:	37° 46' 24.18" N / 83° 38' 8.92" W
HEIGHT:	265' AGL/1545'AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 265'AGL/ 1545'AMSL Antenna Tower near Pine Ridge, KY 37° 46' 24.18" N / 83° 38' 8.92" W.

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

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

John Houlihan
Administrator

KENTUCKY AIRPORT ZONING COMMISSION
STEVEN BESHEAR
Governor
90 Airport Road, Bldg 400
Frankfort, KY 40601
www.transportation.ky.gov/aviation
502 564-4480

CONSTRUCTION/ALTERATION STATUS REPORT

September 1, 2015

AERONAUTICIAL STUDY NUMBER: AS-119-150-2014-003

American Tower Inc
American Tower Inc
10 Presidential Way
Woburn, MA 01801

This concerns the permit which was issued to you by the Kentucky Airport Zoning Commission on September 1, 2015. This permit is valid for a period of 18 Month(s) from its date of issuance. If construction is not completed within the said 18-Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit. When appropriate, please indicate the status of the project in the place below and return this letter to John Houlihan, Administrator, Kentucky Airport Zoning Commission, 90 Airport Road, Bldg 400, Frankfort, KY, 40601. 502 564-4480.

STRUCTURE:	Antenna Tower
LOCATION:	Pine Ridge, KY
COORDINATES:	37° 46' 24.18" N / 83° 38' 8.92" W
HEIGHT:	265' AGL /1545'AMSL

CONSTRUCTION/ALTERATION STATUS

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

2. Construction status is as follows:
   Structure reached its greatest height of _____ ft. AGL
   _____ ft. AMSL on _____ (date).

   Date construction was completed. _____

   Type of obstruction marking/painting. _____

   Type of obstruction lighting. _____

   As built coordinates. _____

   Miscellaneous Information. _____

   DATE _____

   SIGNATURE/TITLE _____

Kentucky
UNBRIDLED SPIRIT

KENTUCKY AIRPORT ZONING COMMISSION

STEVEN BESHEAR
Governor

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

March 6, 2014

APPROVAL OF APPLICATION

APPLICANT:
American Tower Inc
American Tower Inc
10 Presidential Way
Woburn, MA 01801

SUBJECT: AS–119-I50–2014-003

STRUCTURE:	Antenna Tower
LOCATION:	Pine Ridge, KY
COORDINATES:	37° 46' 24.18" N / 83° 38' 8.92" W
HEIGHT:	265' AGL/1545'AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 265'AGL/ 1545'AMSL Antenna Tower near Pine Ridge, KY 37° 46' 24.18" N / 83° 38' 8.92" W.

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

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

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

John Houlihan
Administrator

STEVEN BESHEAR
Governor

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

CONSTRUCTION/ALTERATION STATUS REPORT

March 6, 2014

AERONAUTICIAL STUDY NUMBER: AS-119-I50–2014-003

American Tower Inc
American Tower Inc
10 Presidential Way
Woburn, MA 01801

This concerns the permit which was issued to you by the Kentucky Airport Zoning Commission on March 6, 2014. This permit is valid for a period of 18 Month(s) from its date of issuance. If construction is not completed within the said 18-Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit. When appropriate, please indicate the status of the project in the place below and return this letter to John Houlihan, Administrator, Kentucky Airport Zoning Commission, 90 Airport Road, Bldg 400, Frankfort, KY, 40601. 502 564-4480.

STRUCTURE:	Antenna Tower
LOCATION:	Pine Ridge, KY
COORDINATES:	37° 46' 24.18" N / 83° 38' 8.92" W
HEIGHT:	265' AGL /1545'AMSL

CONSTRUCTION/ALTERATION STATUS

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

2. Construction status is as follows:
   Structure reached its greatest height of _____ ft. AGL
   _____ ft. AMSL on _____ (date).

   Date construction was completed. _____

   Type of obstruction marking/painting. _____

   Type of obstruction lighting. _____

   As built coordinates. _____

   Miscellaneous Information. _____

   DATE _____

   SIGNATURE/TITLE_____

EXHIBIT G
GEOTECHNICAL REPORT

FStan

Land Surveyors & Consulting Engineers

GEOTECHNICAL ENGINEERING STUDY

Proposed Pea Ridge Tower
N37° 46' 24.18" W83° 38' 08.92"
395 Miller Ridge Road,
Pine Ridge, Wolfe County, Kentucky
Project No. 13-8782; AT&T NSB No. 143436; ATC No. 281378

FStan Land Surveyors &
Consulting Engineers
933 South 3rd Street
Louisville, KY 40203
Phone: (502) 636-5111
Fax: (502) 636-5263

Prepared For:

Ms. Vicki Hollis
American Tower Corporation
10 Presidential Way
Woburn, MA 01801

Date: March 12, 2014

FStan

Land Surveyors and Consulting Engineers
Formerly F.S. Land & T. Alan Neal Companies

March 12, 2014

Ms. Vicki Hollis
American Tower Corporation
10 Presidential Way
Woburn, MA 01801

Re: Geotechnical Engineering Study
Proposed 255-foot Self-support Tower with 10 foot Lighting Arrestor
American Tower Corporation Site Name: Pea Ridge
N37° 46' 24.18" W83° 38' 08.92"
395 Miller Ridge Road, Pine Ridge, Wolfe County, Kentucky
FStan Project No. 13-8782; AT&T NSB No. 143436; ATC No. 281378

Dear Ms. Hollis:

Transmitted herewith is our geotechnical engineering report for the referenced project. This report contains our findings, an engineering interpretation of these findings with respect to the available project characteristics, and recommendations to aid design and construction of the tower foundations.

We appreciate the opportunity to be of service to you on this project. If you have any questions regarding this report, please contact our office.

Cordially,

Elizabeth W. Stuber, P.E.
Geotechnical Engineer
Kentucky License No.: 21636

STATE OF KENTUCKY
ELIZABETH W. STUBER
21636
LICENSED PROFESSIONAL ENGINEER
3/13/14

Copies submitted: (3) Ms. Vicki Hollis

933 S. Third Street PO Box 17546 Louisville, KY 40217
Phone: (502) 636-5111 (502) 635-5866 Fax: (502) 636-5263

LETTER OF TRANSMITTAL

TABLE OF CONTENTS

GEOTECHNICAL ENGINEERING INVESTIGATION
Proposed 255-foot Self-support Tower with 10 foot Lighting Arrestor
American Tower Corporation Site Name: Pea Ridge
N37° 46' 24.18" W83° 38' 08.92"
395 Miller Ridge Road, Pine Ridge, Wolfe County, Kentucky
FStan Project No. 13-8782; AT&T NSB No. 143436; ATC No. 281378

1. PURPOSE AND SCOPE

The purpose of this study was to determine the general subsurface conditions at the site of the proposed tower by drilling three soil test borings and to evaluate this data with respect to foundation concept and design for the proposed tower. Also included is an evaluation of the site with respect to potential construction problems and recommendations dealing with quality control during construction.

2. PROJECT CHARACTERISTICS

American Tower Corporation is proposing to construct a 255 feet tall self-support communications tower with a 10 foot lighting arrestor on property owned by Ronnie Halsey located at N37° 46' 24.18" /W83° 38' 08.92", 395 Miller Ridge Road, Pine Ridge, Wolfe County, Kentucky. The proposed lease area will be 42 feet x 70 feet with an access road from the site southwest to Miller Ridge Road. The site is located on a steep slope of about 25 percent and is currently undeveloped east of a residence. Both surface and underground mining are common in far eastern Kentucky. A limited investigation of the area using information provided on the Kentucky Geological Survey website did not indicate that either type of mining has taken place on the Halsey property. The topographical site relief within the lease area is about 10 feet. The elevation of the site is approximately 1280 feet msl. Surface water runoff is directed by the topography toward the east. A detailed evaluation of long-term slope stability was beyond the scope of this study. The proposed tower location is shown on the Boring Location Plan in the Appendix.

Preliminary information provided us indicates that this project will consist of constructing a self-support communications tower 255 feet tall with a 10 foot lightning arrestor. We have assumed the following structural information:

- Compression = 450 kips
- Uplift (each leg) = 300 kips
- Total shear = 45 kips

The development will also include a small equipment shelter near the base of the tower. The wall and floor loads for the shelter are assumed to be less than 4 kip/ln.ft. and 200 lbs/sq.ft., respectively.

3. SUBSURFACE CONDITIONS

The subsurface conditions were explored by drilling three test borings at the base of the proposed tower that was staked in the field by the project surveyor. The Geotechnical Soil Test Boring Logs, which are included in the Appendix, describes the materials and conditions encountered. A sheet defining the terms and symbols used on the boring log is also included in the Appendix. The general subsurface conditions disclosed by the test borings are discussed in the following paragraphs.

About 6 inches of topsoil were encountered at the existing ground surface. Below the topsoil, the borings encountered clay (CH) of high plasticity. Between 6 and 8.5 feet, the borings encountered highly weathered clay shale. The SPT N-values in the clay ranged from 5 to 18 blows per foot indicating a soft to very stiff consistency. Borings 2 and 3 were terminated in the clay shale at the scheduled depth of 15 feet. Boring 1 encountered weathered, black shale at about 18.5 feet to auger refusal at about 30 feet. Auger refusal is defined as the depth at which the boring can no longer be advanced using the current drilling method.

The refusal material was cored from 30 to 40 feet below the ground surface in Boring 1. Shale that was moderately hard, moderately weathered, thin bedded and bluish gray to gray was encountered. The recovery of the rock core was 85 percent and the RQD value was 50 percent. These values generally represent fair to good quality rock from a foundation support viewpoint.

According to the USGS 7.5 minute topographic map of the Slade Quadrangle of Kentucky, the site is underlain by the upper member of the Breathitt Formation. This formation is about 80 percent shale and siltstone with sandstone and coal.

Observations made at the completion of soil drilling operations indicated the borings to be dry. It must be noted, however, that short-term water readings in test borings are not necessarily a reliable indication of the actual groundwater level. Furthermore, it must be emphasized that the groundwater level is not stationary, but will fluctuate seasonally.

Based on the limited subsurface conditions encountered at the site and using Table 1615.1.1 of the 2002 Kentucky Building Code, the site class is considered "B". Seismic design requirements for telecommunication towers are given in section 1622 of the code. A detailed seismic study was beyond the scope of this report.

4. FOUNDATION DESIGN RECOMMENDATIONS

The following design recommendations are based on the previously described project information, the subsurface conditions encountered in our borings, the results of our laboratory testing, empirical correlations for the soil types encountered, our analyses, and our experience. If there is any change in the project criteria or structure location, you should retain us to review our recommendations so that we can determine if any modifications are required. The findings of such a review can then be presented in a supplemental report or addendum.

We recommend FStan be retained to review the near-final project plans and specifications, pertaining to the geotechnical aspects of the project, prior to bidding and construction. We recommend this review to check that our assumptions and evaluations are appropriate based on the current project information provided to us, and to check that our foundation and earthwork recommendations were properly interpreted and implemented.

4.1 Tower

Our findings indicate that the proposed self-support tower can be supported on drilled piers or on a common mat foundation.

4.1.1. Drilled Piers

Drilled piers that bear in the highly weathered clay shale below a depth of about 8 feet can be designed for a net allowable end bearing pressure of 15,000 pounds per square foot (psf). This can be increased to 30,000 psf for piers bearing in the shale bedrock below about 30 feet. The following table summarizes the recommended values for use in analyzing lateral and frictional resistance for the various strata encountered at the test boring. It is important to note that these values are estimated based on the standard penetration test results and soil types, and were not directly measured. The values provided for undrained shear strength and total unit weight are ultimate values and appropriate factors of safety should be used in conjunction with these values. If the piers will bear deeper than about 40 feet, a deeper boring should be drilled to determine the nature of the deeper material.

Depth Below Ground Surface, feet	Undrained Shear Strength, psf	Angle of Internal Friction, Ø, degrees	Total Unit Weight, pcf	Allowable Passive Soil Pressure, psf/one foot of depth	Allowable Side Friction, psf
0 – 5	1,000	0	120	750 + 40D	200
5 - 8	2,500	0	120	1,750 + 40(D-5)	400
8 – 30	7,500	0	135	5,000 + 45(D-8)	1500
30 - 40	15,000	0	135	10,000 + 45(D-30)	3000

Note: D = Depth below ground surface (in feet) to point at which the passive pressure is calculated.

It is important that the drilled piers be installed by an experienced, competent drilled pier contractor who will be responsible for properly installing the piers in accordance with industry standards and generally accepted methods, without causing deterioration of the subgrade. The recommendations

contained herein relate only to the soil-pier interaction and do not account for the structural design of the piers.

4.1.2. Mat Foundation

As an alternative, the tower could be supported on a common mat foundation bearing at a depth of at least 4 feet in the clay. A net allowable bearing pressure of up to 3,500 pounds per square foot may be used. These values may be increased by 30 percent for the maximum edge pressure under transient loads. A friction value of 0.30 may be used between the concrete and the underlying clay soil. The passive pressures given for the drilled pier foundation may be used to resist lateral forces.

It is important that the mat be designed with an adequate factor of safety with regard to overturning under the maximum design wind load.

4.2. Equipment Building

The equipment building may be supported on shallow spread footings bearing in the clay soil and designed for a net allowable soil pressure of 2,000 pounds per square foot. The footings should be at least ten inches wide. If the footings bear on soil they should bear at a depth of at least 36 inches to minimize the effects of frost action. All existing topsoil or soft natural soil should be removed beneath footings.

The floor slab for the new equipment building may be subgrade supported on a properly prepared subgrade. The slab should be designed and adequately reinforced to resist the loads proposed. The exposed subgrade should be carefully inspected by probing and testing as needed. Any organic material still in place, frozen or excessively soft soil and other undesirable materials should be removed.

Once the subgrade has been properly prepared and evaluated, fill may be placed to attain the desired final grade. Any non-organic, naturally occurring, non-expansive soils can be used for structural fill, including those encountered on this site, pending evaluation by the geotechnical engineer.

All engineered fill should be compacted to a dry density of at least 98 percent of the standard Proctor maximum dry density (ASTM D698). The compaction should be accomplished by placing the fill in about eight inch loose lifts and mechanically compacting each lift to at least the specified density. Field tests should be performed on each lift as necessary to insure that adequate compaction is being achieved.

4.3. Drainage and Groundwater Considerations

Good site drainage must be provided. Surface run-off water should be drained away from the shelter building and not allowed to pond. It is recommended that all foundation concrete be placed the same day the excavation is made.

At the time of this investigation, groundwater was not encountered. Therefore, no special provisions regarding groundwater control are considered necessary for the proposed structures.

5. GENERAL CONSTRUCTION PROCEDURES AND RECOMMENDATIONS

It is possible that variations in subsurface conditions will be encountered during construction. Although only minor variations that can be readily evaluated and adjusted for during construction are anticipated, it is recommended the geotechnical engineer or a qualified representative be retained to perform continuous inspection and review during construction of the soils-related phases of the work. This will permit correlation between the test boring data and the actual soil conditions encountered during construction.

5.1 Drilled Piers

The following recommendations are recommended for drilled pier construction:

- Clean the foundation bearing area so it is nearly level or suitably benched and is free of ponded water or loose material.

- Make provisions for ground water removal from the drilled shaft excavation. While the borings were dry prior to rock coring and significant seepage is not anticipated, the drilled pier contractor should have pumps on hand to remove water in the event seepage into the drilled pier is encountered.

- Specify concrete slumps ranging from 4 to 7 inches for the drilled shaft construction. These slumps are recommended to fill irregularities along the sides and bottom of the drilled hole, displace water as it is placed, and permit placement of reinforcing cages into the fluid concrete.

- Retain the geotechnical engineer to observe foundation excavations after the bottom of the hole is leveled, cleaned of any mud or extraneous material, and dewatered.

- Install a temporary protective steel casing to prevent sidewall collapse, prevent excessive mud and water intrusion, and to allow workers to safely enter, clean and inspect the drilled shaft.

- Clean the socket "face" prior to concrete placements. Cleaning will require hand cleaning or washing if a mud smear forms on the face of the rock. The geotechnical engineer should approve the rock socket surface prior to concrete placement.

- The protective steel casing may be extracted as the concrete is placed provided a sufficient head of concrete is maintained inside the steel casing to prevent soil or water intrusion into the newly placed concrete.

- Direct the concrete placement into the drilled hole through a centering chute to reduce side flow or segregation.

5.2 Fill Compaction

All engineered fill placed adjacent to and above the tower foundation should be compacted to a dry density of at least 95 percent of the standard Proctor maximum dry density (ASTM D-698). This minimum compaction requirement should be increased to 98 percent for any fill placed below the tower foundation bearing elevation. Any fill placed beneath the tower foundation should be limited to well-graded sand and gravel or crushed stone. The compaction should be

accomplished by placing the fill in about 8 inch (or less) loose lifts and mechanically compacting each lift to at least the specified minimum dry density. Field density tests should be performed on each lift as necessary to insure that adequate moisture conditioning and compaction is being achieved.

Compaction by flooding is not considered acceptable. This method will generally not achieve the desired compaction and the large quantities of water will tend to soften the foundation soils.

5.3 Construction Dewatering

There is a slight risk that groundwater may be encountered during drilled pier excavation. It is anticipated that any such seepage can be handled by conventional dewatering methods such as pumping from sumps. Dewatering of drilled pier excavations that extend below the groundwater level may be more difficult since pumping directly from the excavations could cause a deterioration of the bottom of the excavation. If the pier excavations are not dewatered, concrete should be placed by the tremie method.

6 FIELD INVESTIGATION

Three soil test borings were drilled based on the tower center location established in the field by the project surveyor. Split-spoon samples were obtained by the Standard Penetration Test (SPT) procedure (ASTM D1586) in the test boring. Borings 2 and 3 were terminated at the scheduled depth of 15 feet. Boring 1 encountered auger refusal at about 30 feet below the existing ground surface. A sample of the refusal material was cored in Boring 1 from 30 to 40 feet below the ground surface. The split-spoon samples were inspected and visually classified by a geotechnical engineer. Representative portions of the soil samples were sealed in glass jars and returned to our laboratory.

The boring logs are included in the Appendix along with a sheet defining the terms and symbols used on the logs and an explanation of the Standard Penetration Test (SPT) procedure. The logs present visual descriptions of the soil strata encountered, Unified System soil classifications, groundwater observations, sampling information, laboratory test results, and other pertinent field data and observations.

7 WARRANTY AND LIMITATIONS OF STUDY

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties, either express or implied. FStan is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploration and laboratory test data presented in this report.

A geotechnical study is inherently limited since the engineering recommendations are developed from information obtained from test borings, which depict subsurface conditions only at the specific locations, times and depths shown on the log. Soil conditions at other locations may differ from those encountered in the test borings, and the passage of time may cause the soil conditions to change from those described in this report.

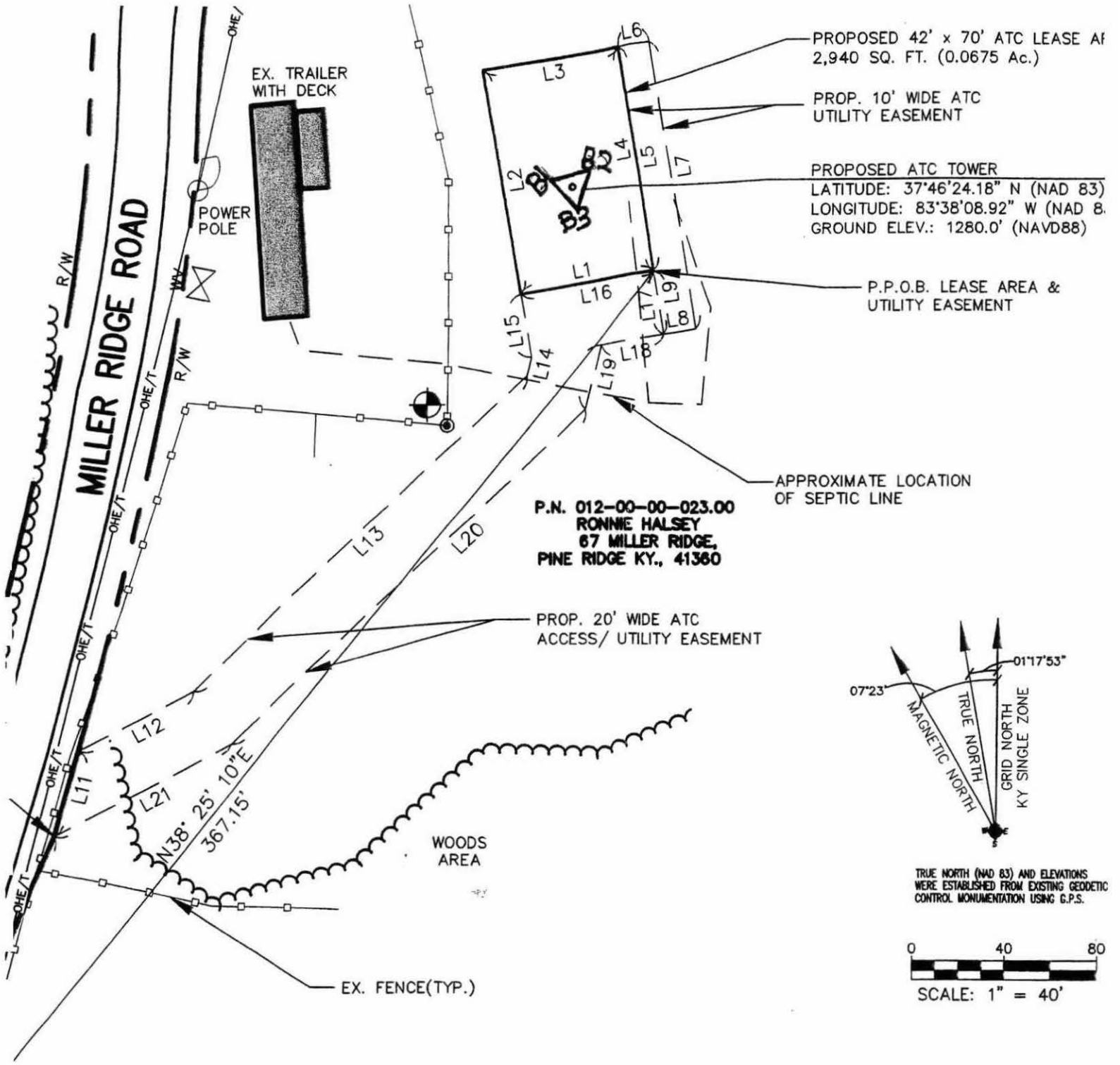
The nature and extent of variation and change in the subsurface conditions at the site may not become evident until the course of construction. Construction monitoring by the geotechnical engineer or a representative is therefore considered necessary to verify the subsurface conditions and to check that the soils connected construction phases are properly completed. If significant variations or changes are in evidence, it may then be necessary to reevaluate the recommendations of this report. Furthermore, if the project characteristics are altered significantly from those discussed in this report, if the project information contained in this report is incorrect, or if additional information becomes available, a review must be made by this office to determine if any modification in the recommendations will be required.

APPENDIX

BORING LOCATION PLAN

GEOTECHNICAL BORING LOG

SOIL SAMPLE CLASSIFICATION



BENCHMARK:

TOP OF NAIL IN CORNER POST OF FENCE
ELEVATION = 1287.30

F.S. Tan Land Consulting Engineers
P.O. Box 17546
Louisville, KY 40217
502-636-5111
502-636-5263

Geotechnical Boring Log

Boring No: **B-1**

Client: American Tower Corporation	Project Number: 13-8781
Project: Proposed Pea Ridge Tower	Drilling Firm: Hoosier Drilling
Location: N37° 46' 24.18" /W83° 38' 08.92"	Project Manager: Beth Stuber
Date Started: 3/8/2014	Total Depth of Boring: 40 ft
Date Completed: 3/8/2014	NA on rods
Boring Method: HSA-Manual Hammer	DRY at completion
Surface Elevation: NA	NA NA hours after completion

Layer Depth ft	Material Description	Sample No.	Type	Blows	Rec. %	PP tsf	W %	Remarks
	CLAY (CH) - medium stiff, moist, tan-light brown	1	SS	4-4-5	67			About 6 inches of topsoil was encountered at the existing ground surface.
	- stiff	2	SS	4-5-10	78			
6.0	CLAY SHALE - highly weathered, tan-gray-brown-black	3	SS	10-9-9	67			
		4	SS	10-20-33	67			
		5	SS	22-50	44			
18.5	SHALE - weathered, black	6	SS	50-50	44			
		7	SS	50	28			
		8	SS	50	0			
30.0	SHALE - moderately hard, moderately weathered, blue gray to gray	9	RC		85			RQD = 50 percent
40.0	Bottom of Boring at 40 ft							

Depth Scale ft: 5, 10, 15, 20, 25, 30, 35, 40

GEOTECHNICAL BORING LOG 13-8781.GPJ FSTAN.GDT 3/13/14

F.S. Tan Land Consulting Engineers
P.O. Box 17546
Louisville, KY 40217
502-636-5111
502-636-5263

Geotechnical Boring Log

Boring No: **B-2**

Client: American Tower Corporation	Project Number: 13-8781
Project: Proposed Pea Ridge Tower	Drilling Firm: Hoosier Drilling
Location: N37° 46' 24.18" /W83° 38' 08.92"	Project Manager: Beth Stuber
Date Started: 3/8/2014	Total Depth of Boring: 15 ft
Date Completed: 3/8/2014	NA on rods
Boring Method: HSA-Manual Hammer	DRY at completion
Surface Elevation: NA	NA NA hours after completion

Layer Depth ft	Material Description	Sample No.	Type	Blows	Rec. %	PP tsf	W %	Remarks
	CLAY (CH) - soft, moist, tan-light brown	1	SS	3-2-3	67			About 6 inches of topsoil was encountered at the existing ground surface.
	- very stiff	2	SS	7-8-10	78			
6.0	CLAY SHALE - highly weathered, tan-gray-brown-black	3	SS	6-6-10	67			
		4	SS	8-20-22	56			
15.0	Bottom of Boring at 15 ft	5	SS	50	28			

Depth Scale ft: 5, 10, 15, 20, 25, 30, 35, 40

GEOTECHNICAL BORING LOG 13-8781.GPJ FSTAN.GDT 3/13/14

F.S. Tan Land Consulting Engineers
P.O. Box 17546
Louisville, KY 40217
502-636-5111
502-636-5263

Geotechnical Boring Log

Boring No: **B-3**

Client: American Tower Corporation	Project Number: 13-8781
Project: Proposed Pea Ridge Tower	Drilling Firm: Hoosier Drilling
Location: N37° 46' 24.18" /W83° 38' 08.92"	Project Manager: Beth Stuber
Date Started: 3/8/2014	Total Depth of Boring: 15 ft
Date Completed: 3/8/2014	NA on rods
Boring Method: HSA-Manual Hammer	DRY at completion
Surface Elevation: NA	NA NA hours after completion

Layer Depth ft	Legend	Material Description	Depth Scale ft	Sample Data No.	Type	Blows	Rec. %	PP tsf	W %	Remarks
		CLAY (CH) - medium stiff, very moist, tan-light brown		1	SS	3-3-3	78			About 6 inches of topsoil was encountered at the existing ground surface.
		- stiff		2	SS	6-7-7	67			
			5	3	SS	9-7-8	56			
8.5		CLAY SHALE - highly weathered, tan-gray-brown-black		4	SS	11-9-9	67			
			10							
15.0		Bottom of Boring at 15 ft	15	5	SS	50	22			
			20							
			25							
			30							
			35							
			40							

GEOTECHNICAL BORING LOG 13-8781.GPJ FSTAN.GDT 3/13/14

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

EXHIBIT H
DIRECTIONS TO WCF SITE

Driving Directions to Proposed Tower Site:

1. Beginning at the Wolfe County Circuit Court Clerk's Office, located at 133 Main Street, Campton, Kentucky, head west towards Johnson Street.
2. Make a slight left onto Johnson Street and travel approximately 285 feet.
3. Make a slight right onto Drake Street and travel approximately 0.1 miles.
4. Continue onto KY-15 N for an additional 6.9 miles.
5. Turn left onto Miller Ridge. Travel approximately 0.4 miles. The site is on the left at 395 Miller Ridge Road.
6. site coordinates are
    a. 37 deg 46 min 24.18 sec N
    b. 83 deg 38 min 08.92 sec W

Prepared by:
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Pike Legal Group PLLC
1578 Highway 44 East, Suite 6
PO Box 369
Shepherdsville, KY 40165-0369
Telephone: 502-955-4400 or 800-516-4293

EXHIBIT I
COPY OF REAL ESTATE AGREEMENT

LEASE AGREEMENT

THIS LEASE AGREEMENT ("***Agreement***") is made effective as of the date of the latter signature hereof (the "***Execution Date***") and is by and between Landlord and American Tower.

RECITALS

A. WHEREAS, Landlord is the owner of that certain parcel of land (the "***Property***") located in the County of Wolfe, State of Kentucky, as more particularly described on Exhibit A;

B. WHEREAS, Landlord desires to grant to American Tower an option to lease from Landlord a portion of the Property (the "***Compound***"), together with easements for ingress and egress and the installation and maintenance of utilities (the "***Easement***" and together with the Compound, the "***Site***") both being approximately located as shown on Exhibit B; and

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, and other good and valuable consideration, the receipt, adequacy and sufficiency of all of which are hereby acknowledged, the parties hereto hereby agree as follows:

1. Business and Defined Terms. For the purposes of this Agreement, the following capitalized terms have the meanings set forth in this paragraph 1.

(a) ***American Tower:*** American Towers LLC, a Delaware limited liability company d/b/a Delaware American Towers, LLC

(b) ***Notice Address of American Tower:*** American Towers LLC
c/o American Tower Corporation
10 Presidential Way
Woburn, MA 01801
Attn: Land Management

with a copy to: American Towers LLC
c/o American Tower Corporation
116 Huntington Ave.
Boston, MA 02116
Attn: Law Department

(c) ***Landlord:*** Ronnie Halsey and Elaine Halsey, his wife, with rights of survivorship

(d) ***Notice Address of Landlord:*** 258 Halsey Lane
Pine Ridge, KY 41360

(e) ***Initial Option Period:*** One (1) year

(f) ***Renewal Option Period(s):*** One (1) period of One (1) year each.

(g) ***Option Period:*** The Initial Option Period and any Renewal Option Period(s)

(h) ***Option Consideration (Initial Option Period):*** [redacted]

(j) ***Commencement Date***: The date specified in the written notice by American Tower to Landlord exercising the Option constitutes the Commencement Date of the Term.

(k) ***Initial Term:*** Five years, commencing on the Commencement Date and continuing until midnight of the day immediately prior to the fifth anniversary of the Commencement Date.

(l) ***Renewal Terms:*** Each of the Five (5) successive periods of five (5) years each, with the first Renewal Term commencing upon the expiration of the Initial Term and each subsequent Renewal Term commencing upon the expiration of the immediately preceding Renewal Term.

(m) ***Term***: The Initial Term with any and all Renewal Terms

(n) ***Rent:*** The yearly amount of [redacted]

(o) ***Increase Amount:*** Rent will increase at the commencement of each Renewal Term by an amount equal to [redacted] of Rent for the previous five year period.

(p) ***Increase Date***: The first date of each Renewal Term.

2. Option to Lease.

(a) Grant of Option. Landlord hereby gives and grants to American Tower and its assigns, an exclusive and irrevocable option to lease the Site during the Initial Option Period (the "***Option***").

(b) Extension of Option. The Initial Option Period will automatically be extended for each Renewal Option Period unless American Tower provides Landlord written notice of its intent not to extend the Option.

(c) Consideration for Option. Option Consideration is due and payable in full within 30 days of the Execution Date and American Tower will pay Landlord any Option Extension Consideration within 30 days of the commencement of any Renewal Option Period.

(d) Option Period Inspections and Investigations.

(i) During the Option Period, Landlord will provide American Tower with any keys or access codes necessary for access to the Property.

(ii) During the Option Period, American Tower and its officers, agents, employees and independent contractors may enter upon the Property to perform or cause to be performed test borings of the soil, environmental audits, engineering studies and to conduct a metes and bounds survey of the Site and/or the Property (the "***Survey***"), provided that American Tower will not unreasonably interfere with Landlord's use of the Property in conducting these activities. At American Tower's discretion, the legal description of the Site as shown on the Survey may replace Exhibit B of this Agreement and be added as Exhibit B of the Memorandum of Lease.

(iii) American Tower may not begin any construction activities on the Site during the Option Period other than those activities described in, or related to, this paragraph 2(d).

(e) Exercise of Option. American Tower may, in its sole discretion, exercise the Option by delivery of written notice to Landlord at any time during the Option Period. If American Tower exercises the Option then Landlord will lease the Site to American Tower subject to the terms and conditions of this Agreement. If American Tower does not exercise the Option, this Agreement will terminate.

(f) Removal of Existing Leach Bed System. Landlord shall during the Option period remove the existing leach bed system located in the proposed Compound area to another location on the Property as more particularly described in the Exhibit B attached herewith (the "Relocation of Leach Bed System"). Landlord must complete such Relocation of Leach Bed System within 60 days upon receiving the written request from American Tower. American Tower shall pay Landlord a total amount of [redacted] to complete such Relocation of Leach Bed System and shall make the payment within 15 business days after notifying Landlord to commence the Relocation of Leach Bed System. The Relocation of Leach Bed System shall comply with any applicable laws, regulations, and rules and be completed in good and workmanlike manner in accordance with the generally accepted standard in the industry. If the Landlord fails to complete the Relocation of Leach Bed System within the required time period, American Tower shall have the right to complete such relocation and to deduct its cost incurred from this relocation from future installments of Rent.

3. Term.

(a) Initial Term. The Initial Term is as provided in paragraph 1(k).

(b) Renewal Terms. American Tower will have the right to extend this Agreement for each of the Renewal Terms. Each Renewal Term will be on the same terms and conditions provided in this Agreement except that Rent will escalate as provided in paragraph 4(b). This Agreement will automatically be renewed for each successive Renewal Term unless American Tower notifies Landlord in writing of American Tower's intention not to renew the Agreement at any time prior to the expiration of the Initial Term or the Renewal Term which is then in effect.

4. Consideration.

(a) American Tower will pay its first installment of Rent within thirty (30) days of the Commencement Date. Rent will be prorated for any partial months, including, the month in which the Commencement Date occurs.

(b) On the Increase Date, the Rent will increase by the Increase Amount.

(c) In the event American Tower makes an overpayment of Rent or any other fees or charges to Landlord during the Term of this Agreement, American Tower may, but will not be required, to treat any such overpayment amount as prepaid Rent and apply such amount as a credit against future Rent due to Landlord. If this Agreement is early terminated, American Tower shall have the right to abate the prorated prepaid Rent for the remainder lease term.

(d) American Tower will not be required to remit the payment of Rent to more than two recipients at any given time.

5. Use.

(a) American Tower will be permitted to use the Site for the purpose of constructing, maintaining, removing, replacing, securing and operating a communications facility, including, but not limited to, the construction or installation and maintenance of a telecommunications tower (the "***Tower***"), structural tower base(s), communications equipment, one or more buildings or equipment cabinets, radio transmitting and receiving antennas, personal property and related improvements and facilities on the Compound (collectively, the "***Tower Facilities***"), to facilitate the use of the Site as a site for the transmission and receipt of communication signals including, but not limited to, voice, data and internet

transmissions and for any other uses which are incidental to the transmission and receipt of communication signals (the "***Intended Use***").

(b) American Tower, at its sole discretion, will have the right, without prior notice or the consent of Landlord, to license or sublease all or a portion of the Site or the Tower Facilities to other parties (each, a "***Collocator***" and collectively, the "***Collocators***"). The Collocators will be entitled to modify the Tower Facilities and to erect additional improvements on the Compound including but not limited to antennas, dishes, cabling, additional buildings or shelters ancillary to the Intended Use. The Collocators will be entitled to all rights of ingress and egress to the Site and the right to install utilities on the Site that American Tower has under this Agreement.

6. **Tower Facilities.**

(a) American Tower will have the right, at American Tower's sole cost and expense, to erect the Tower Facilities which will be the exclusive property of American Tower throughout the Term as well as upon the expiration or termination of this Agreement. Landlord grants American Tower a non-exclusive easement in, over, across and through the Property and other real property owned by Landlord contiguous to the Site as may be reasonably required for construction, installation, maintenance, and operation of the Tower Facilities including: (i) access to the Site for construction machinery and equipment, (ii) storage of construction materials and equipment during construction of the Tower Facilities, and (iii) use of a staging area for construction, installation and removal of equipment. Notwithstanding the foregoing, American Tower shall, at its sole cost, repair the damages caused by American Tower during its performing of any actions stated in this Section 6 (b).

(b) American Tower may, at its sole expense, use any and all appropriate means of restricting access to the Compound or the Tower Facilities, including, without limitation, construction of a fence and may install and maintain identifying signs or other signs required by any governmental authority on or about the Site, including any access road to the Site.

(c) American Tower will maintain the Compound, including the Tower Facilities, in a reasonable condition throughout the Term. American Tower is not responsible for reasonable wear and tear or damage from casualty and condemnation. Landlord grants American Tower the right to clear all trees, undergrowth, or other obstructions and to trim, cut, and keep trimmed all tree limbs which may interfere with or fall upon the Tower Facilities or the Site.

(d) American Tower will remove all of the above-ground portions of the Tower Facilities within 180 days following the expiration or termination of this Agreement.

7. **Utilities.**

(a) American Tower will have the right to install underground utilities, at American Tower's expense, and to improve present utilities on the Property and the Site. American Tower will have the right to permanently place utilities on (or under) the Site to service the Compound and the Tower Facilities.

(b) If utilities necessary to serve the equipment of American Tower or the equipment of any Collocator cannot be located within the Site, Landlord agrees to allow the installation of utilities on the Property or other real property owned by Landlord without requiring additional compensation from American Tower or any Collocator. Landlord will, upon American Tower's request, execute a separate recordable written easement or lease to the utility company providing such service evidencing this right.

(c) American Tower and the Collocators each may install backup generator(s).

8. Access

(a) In the event that the Site loses access to a public right of way during the Term, Landlord and American Tower will amend this Agreement, at no imposed cost to either party, to provide access to a public way by: (i) amending the location of the Easement; or (ii) granting an additional easement to American Tower.

(b) To the extent damage (including wear and tear caused by normal usage) to the Easement or any other route contemplated hereunder intended to provide American Tower with access to the Site and the Tower Facilities is caused by Landlord or Landlord's tenants, licensees, invites or agents, Landlord will repair the damage at its own expense.

(c) Landlord will maintain access to the Compound from a public way in a free and open condition so that no interference is caused to American Tower by Landlord or lessees, licensees, invitees or agents of Landlord. In the event that American Tower's or any Collocator's access to the Compound is impeded or denied by Landlord or Landlord's lessees, licensees, invitees or agents, without waiving any other rights that it may have at law or in equity, American Tower may at its sole discretion deduct from Rent due under this Agreement an amount equal to [redacted] per day for each day that such access is impeded or denied.

9. Representations and Warranties of Landlord. Landlord represents and warrants to American Tower and American Tower's successors and assigns:

(a) Landlord has the full right, power, and authority to execute this Agreement;

(b) There are no pending or threatened administrative actions, including bankruptcy or insolvency proceedings under state or federal law, suits, claims or causes of action against Landlord or which may otherwise affect the Property;

(c) The Property is not presently subject to an option, lease or other contract which may adversely affect Landlord's ability to fulfill its obligations under this Agreement, and the execution of this Agreement by Landlord will not cause a breach or an event of default of any other agreement to which Landlord is a party. Landlord agrees that it will not grant an option or enter into any contract or agreement which will have any adverse effect on the Intended Use or American Tower's rights under this Agreement;

(d) No licenses, rights of use, covenants, restrictions, easements, servitudes, subdivision rules or regulations, or any other encumbrances relating to the Property prohibit or will interfere with the Intended Use;

(e) Landlord has good and marketable fee simple title to the Site, the Property and any other property across which Landlord may grant an easement to American Tower or any Collocator, free and clear of all liens and encumbrances. Landlord covenants that American Tower will have the quiet enjoyment of the Compound during the term of this Agreement. If Landlord fails to keep the Site free and clear of any liens and encumbrances, American Tower will have the right, but not the obligation, to satisfy any such lien or encumbrance and to deduct the full amount paid by American Tower on Landlord's behalf from future installments of Rent;

(f) American Tower will at all times during this Agreement enjoy ingress, egress, and access from the Site 24 hours a day, 7 days a week, to an open and improved public road which is adequate to service the Site and the Tower Facilities; and

(g) These representations and warranties of Landlord survive the termination or expiration of this Agreement.

10. **Interference.** Landlord will not use, nor will Landlord permit its tenants, licensees, invitees or agents to use any portion of the Property in any way which interferes with the Intended Use, including, but not limited to, any use on the Property or surrounding property that causes electronic or physical obstruction or degradation of the communications signals from the Tower Facilities (***"Interference"***). Interference will be deemed a material breach of this Agreement by Landlord and Landlord will have the responsibility to terminate Interference immediately upon written notice from American Tower. Notwithstanding anything in this Agreement to the contrary, if the Interference does not cease or is not rectified as soon as possible, but in no event longer than 24 hours after American Tower's written notice to Landlord, Landlord acknowledges that continuing Interference will cause irreparable injury to American Tower, and American Tower will have the right, in addition to any other rights that it may have at law or in equity, to bring action to enjoin the Interference.

11. **Termination.** This Agreement may be terminated, without any penalty or further liability upon written notice as follows:

(a) By either party upon a default of any covenant or term of this Agreement by the other party which is not cured within 60 days of receipt of written notice of default (without, however, limiting any other rights available to the parties in law or equity); provided, that if the defaulting party commences efforts to cure the default within such period and diligently pursues such cure, the non-defaulting party may not terminate this Agreement as a result of that default.

(b) Upon 30 days' written notice by American Tower to Landlord if American Tower is unable to obtain, maintain, renew or reinstate any agreement, easement, permit, certificates, license, variance, zoning approval, or any other approval which may be required from any federal, state or local authority necessary to the construction and operation of the Tower Facilities or to the Intended Use (collectively, the ***"Approvals"***); or

(c) Upon 30 days' written notice from American Tower to Landlord if the Site is or becomes unsuitable, in American Tower's sole, but reasonable judgment for use as a wireless communications facility by American Tower or by American Tower's licensee(s) or sublessee(s).

(d) In the event of termination by American Tower or Landlord pursuant to this provision, American Tower shall be relieved of all further liability hereunder.

12. **Taxes.**

(a) American Tower will pay any personal property taxes assessed on or attributable to the Tower Facilities. American Tower will reimburse Landlord for any increase to Landlord's real property taxes that are directly attributable to American Tower's Site and/or Tower Facilities upon receipt of the following: (1) a copy of Landlord's tax bill; (2) proof of payment; and (3) written documentation from the assessor of the amount attributable to American Tower. American Tower shall have no obligation to reimburse Landlord for any taxes paid by Landlord unless Landlord requests reimbursement within 12 months of the date said taxes were originally due. Additionally, as a condition precedent to Landlord

having the right to receive reimbursement, Landlord shall, within 3 days of receipt of any notice from the taxing authority of any assessment or reassessment, provide American Tower with a copy of said notice. American Tower shall have the right to appeal any assessment or reassessment relating to the Site or Tower Facilities and Landlord shall either (i) designate American Tower as its attorney-in-fact as required to effect standing with the taxing authority, or (ii) join American Tower in its appeal.

(b) Landlord will pay when due all real property taxes and all other fees and assessments attributable to the Property, Compound and Easement. If Landlord fails to pay when due any taxes affecting the Property or the Site, American Tower will have the right, but not the obligation, to pay such taxes and either: (i) deduct the full amount of the taxes paid by American Tower on Landlord's behalf from future installments of Rent, or (ii) collect such taxes by any lawful means.

13. Environmental Compliance.

(a) Landlord represents and warrants that:

(i) No Hazardous Materials have been used, generated, stored or disposed of, on, under or about the Property in violation of any applicable law, regulation or administrative order (collectively, "***Environmental Laws***") by either Landlord or to Landlord's knowledge, any third party; and

(ii) To Landlord's knowledge, no third party been permitted to use, generate, store or dispose of any Hazardous Materials on, under, about or within the Property in violation of any Environmental Laws.

(b) Landlord will not, and will not permit any third party to use, generate, store or dispose of any Hazardous Materials on, under, about or within the Property in violation of any Environmental Laws.

(c) American Tower agrees that it will not use, generate, store or dispose of any Hazardous Material on, under, about or within the Site in violation of any applicable laws, regulations or administrative orders.

(d) The term "***Hazardous Materials***" means any: contaminants, oils, asbestos, PCBs, hazardous substances or wastes as defined by federal, state or local environmental laws, regulations or administrative orders or other materials the removal of which is required or the maintenance of which is prohibited or regulated by any federal, state or local government authority having jurisdiction over the Property.

14. Indemnification.

(a) General.

(i) Landlord, its heirs, grantees, successors, and assigns will exonerate, hold harmless, indemnify, and defend American Tower from any claims, obligations, liabilities, costs, demands, damages, expenses, suits or causes of action, including costs and reasonable attorney's fees, which may arise out of: (A) any injury to or death of any person; (B) any damage to property, if such injury, death or damage arises out of or is attributable to or results from the acts or omissions of Landlord, or Landlord's principals, employees, invitees, agents or independent contractors; or (C) any breach of any representation or warranty made by Landlord in this Agreement.

(ii) American Tower, its grantees, successors, and assigns will exonerate, hold harmless, indemnify, and defend Landlord from any claims, obligations, liabilities, costs, demands, damages, expenses, suits or causes of action, including costs and reasonable attorney's fees; which may arise out of: (A) any injury to or death of any person; (B) any damage to property, if such injury, death or damage arises out of or is attributable to or results from the negligent acts or omissions of American Tower, or American Tower's employees, agents or independent contractors; or (C) any breach of any representation or warranty made by American Tower in this Agreement.

(b) Environmental Matters.

(i) Landlord, its heirs, grantees, successors, and assigns will indemnify, defend, reimburse and hold harmless American Tower from and against any and all damages arising from the presence of Hazardous Materials upon, about or beneath the Property or migrating to or from the Property or arising in any manner whatsoever out of the violation of any Environmental Laws, which conditions exist or existed prior to or at the time of the execution of this Agreement or which may occur at any time in the future through no fault of American Tower. Notwithstanding the obligation of Landlord to indemnify American Tower pursuant to this Agreement, Landlord will, upon demand of American Tower, and at Landlord's sole cost and expense, promptly take all actions to remediate the Property which are required by any federal, state or local governmental agency or political subdivision or which are reasonably necessary to mitigate environmental damages or to allow full economic use of the Site, which remediation is necessitated from the presence upon, about or beneath the Property of a Hazardous Material. Such actions include but not be limited to the investigation of the environmental condition of the Property, the preparation of any feasibility studies, reports or remedial plans, and the performance of any cleanup, remediation, containment, operation, maintenance, monitoring or actions necessary to restore the Property to the condition existing prior to the introduction of such Hazardous Material upon, about or beneath the Property notwithstanding any lesser standard of remediation allowable under applicable law or governmental policies.

(ii) American Tower, its grantees, successors, and assigns will indemnify, defend, reimburse and hold harmless Landlord from and against environmental damages caused by the presence of Hazardous Materials on the Compound in violation of any Environmental Laws and arising solely as the result of American Tower's activities after the execution of this Agreement.

15. Right of First Refusal; Sale of Property.

(a) During the Term, prior to selling the Site or any portion of or interest in the Property or the Site, including but not limited to a leasehold interest or easement, or otherwise transfer Landlord's interest in Rent, and prior to assigning the Rent or any portion of Rent to a third party, Landlord shall notify American Tower in writing of the sale price and terms offered by a third party (the "***Offer***"), together with a copy of the Offer. American Tower will have the right of first refusal to purchase the real property interest or Rent or portion of Rent being sold by Landlord to such third party on the same financial terms of the Offer. American Tower will exercise its right of first refusal within 30 days of receipt of Landlord's notice and if American Tower does not provide notice within 30 days, American Tower will be deemed to have not exercised its right of first refusal. If American Tower does not exercise its right of first refusal, section 15(b) of this Agreement will control the terms of the sale.

(b) Landlord may sell the Property or a portion thereof to a third party, provided: (i) the sale is made subject to the terms of this Agreement; and (ii) if the sale does not include the assignment of Landlord's full interest in this Agreement the purchaser must agree to perform, without requiring compensation from American Tower or any Collocator, any obligation of the Landlord under this

Agreement, including Landlord's obligation to cooperate with American Tower as provided hereunder, which obligation Landlord would no longer have the legal right or ability to perform following the sale without requiring compensation from American Tower or any Collocator to be paid to such purchaser.

16. **Assignment.**

(a) Any sublease, license or assignment of this Agreement that is entered into by Landlord or American Tower is subject to the provisions of this Agreement.

(b) Landlord may assign this Agreement in its entirety to any third party in conjunction with a sale of the Property in accordance with Paragraph 15 of this Agreement. Landlord will not otherwise assign less than Landlord's full interest in this Agreement without the prior written consent of American Tower.

(c) American Tower may assign this Agreement without prior notice to or the consent of Landlord. Upon assignment, American Tower shall be relieved of all liabilities and obligations hereunder and Landlord shall look solely to the assignee for performance under this Agreement and all obligations hereunder.

(d) American Tower may mortgage or grant a security interest in this Agreement and the Tower Facilities, and may assign this Agreement and the Tower Facilities to any such mortgagees or holders of security interests including their successors and assigns (collectively, "***Secured Parties***"). If requested by American Tower, Landlord will execute such consent to such financing as may reasonably be required by Secured Parties. In addition, if requested by American Tower, Landlord agrees to notify American Tower and American Tower's Secured Parties simultaneously of any default by American Tower and to give Secured Parties the same right to cure any default as American Tower. If a termination, disaffirmance or rejection of the Agreement by American Tower pursuant to any laws (including any bankruptcy or insolvency laws) occurs, or if Landlord will terminate this Agreement for any reason, Landlord will give to Secured Parties prompt notice thereof and Secured Parties will have the right to enter upon the Compound during a 30-day period commencing upon Secured Parties' receipt of such notice for the purpose of removing any Tower Facilities. Landlord acknowledges that Secured Parties are third-party beneficiaries of this Agreement.

17. **Condemnation.** If a condemning authority takes all of the Site, or a portion sufficient in American Tower's sole judgment, to render the Site unsuitable for the Intended Use, this Agreement will terminate as of the date the title vests in the condemning authority. Landlord and American Tower will share in the condemnation proceeds in proportion to the values of their respective interests in the Site (which for American Tower includes, where applicable, the value of the Tower Facilities, moving expenses, prepaid rent and business dislocation expenses). If a condemning authority takes less than the entire Site such that the Site remains suitable for American Tower's Intended Use, the Rent payable under this Agreement will be reduced automatically by such percentage as the area so condemned bears to the Site as of the date the title vests in the condemning authority. A sale of all or part of the Site to a purchaser with the power of eminent domain in the face of the exercise of eminent domain power will be treated as a taking by condemnation for the purposes of this paragraph.

18. **Insurance.** American Tower will purchase and maintain in full force and effect throughout the Option Period and the Term such general liability and property damage policies as American Tower may deem necessary. Said policy of general liability insurance will at a minimum provide a combined single limit of $1,000,000.

19. **Waiver of Damages.**

(a) In the event that American Tower does not exercise its Option: (i) Landlord's sole compensation and damages will be fixed and liquidated to the sums paid by American Tower to Landlord as consideration for the Option; and (ii) Landlord expressly waives any other remedies it may have for a breach of this Agreement including specific performance and damages for breach of contract.

(b) Neither Landlord nor American Tower will be responsible or liable to the other party for any loss or damage arising from any claim to the extent attributable to any acts of omissions of other licensees or tower users occupying the Tower Facilities or vandalism or for any structural or power failures or destruction or damage to the Tower Facilities except to the extent caused by the negligence or willful misconduct of such party.

(c) EXCEPT AS SPECIFICALLY PROVIDED IN THIS AGREEMENT, IN NO EVENT WILL LANDLORD OR AMERICAN TOWER BE LIABLE TO THE OTHER FOR, AND AMERICAN TOWER AND LANDLORD EACH HEREBY WAIVE THE RIGHT TO RECOVER INCIDENTAL, CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOSS OF USE OR LOSS OF BUSINESS OPPORTUNITY), PUNITIVE, EXEMPLARY AND SIMILAR DAMAGES.

20. **Confidentiality.** Landlord will not disclose to any third party the Rent payable by American Tower under this Agreement and will treat such information as confidential, except that Landlord may disclose such information to prospective buyers, prospective or existing lenders, Landlord's affiliates and attorneys, or as may be required by law or as may be necessary for the enforcement of Landlord's rights under the Agreement.

21. **Subordination Agreements.**

(a) If the Site is encumbered by a mortgage or deed of trust, within 30 days of receipt of a written request from American Tower, Landlord agrees to execute and obtain the execution by its lender of a non-disturbance and attornment agreement in the form provided by American Tower, to the effect that American Tower and American Tower's sublessees and licensees will not be disturbed in their occupancy and use of the Site by any foreclosure or to provide information regarding the mortgage to American Tower.

(b) Should a subordination, non-disturbance and attornment agreement be requested by Landlord or a lender working with Landlord on a loan to be secured by the Property and entered into subsequent to the Execution Date, American Tower will use good faith efforts to provide Landlord or Landlord's lender with American Tower's form subordination, non-disturbance and attornment agreement executed by American Tower within 30 days of such request.

22. **Notices.** All notices or demands by or from American Tower to Landlord, or Landlord to American Tower, required under this Agreement will be in writing and sent (United States mail postage pre-paid, certified with return receipt requested or by reputable national overnight carrier service, transmit prepaid) to the other party at the addresses set forth in paragraph 1 of this Agreement or to such other addresses as the parties may, from time to time, designate consistent with this paragraph 22, with such new notice address being effective 30 days after receipt by the other party. Notices will be deemed to have been given upon either receipt or rejection.

23. **Further Acts.**

(a) Within 15 days after receipt of a written request from American Tower, Landlord will execute any document necessary or useful to protect American Tower's rights under this Agreement or to

facilitate the Intended Use including documents related to title, zoning and other Approvals, and will otherwise cooperate with American Tower in its exercise of its rights under this Agreement.

(b) American Tower will be entitled to liquidated damages for the revenue lost by American Tower as a result of any delay caused by Landlord's unwillingness to execute a document or to take any other action deemed necessary by American Tower to protect American Tower's leasehold rights or to facilitate the Intended Use. As the actual amount of such lost revenue is difficult to determine, the parties agree that American Tower may deduct the amount of [redacted] per day from future installments of Rent for any delay to American Tower caused by Landlord's failure or unwillingness to act, such amount being an estimate of American Tower's lost revenue. American Tower's right to collect such liquidated damages will in no way affect American Tower's right to pursue any and all other legal and equitable rights and remedies permitted under applicable laws.

24. **Memorandum of Lease.** Simultaneously with the execution of this Agreement, the parties will enter into the Memorandum of Lease attached to this Agreement as Exhibit C which American Tower may record in the public records of the county of the Property. Landlord acknowledges and agrees that after Landlord signs the Memorandum of Lease but before American Tower records it, American Tower may add both: (a) a reference to the recording granting Landlord its interest in the Property; and (b) a legal description of the Site as Exhibit B. Landlord agrees to execute and return to American Tower a recordable Amended Memorandum of Lease in form supplied by American Tower if: (i) the information included in the Memorandum of Lease changes, or (ii) if it becomes clear that such information is incorrect or incomplete or if this Agreement is amended.

25. **Miscellaneous.**

(a) This Agreement runs with the Property and is binding upon and will inure to the benefit of the parties, their respective heirs, successors, personal representatives and assigns.

(b) American Tower may at American Tower's sole cost and expense procure an abstract of title or a commitment to issue a policy of title insurance (collectively "***Title***") on the Property.

(c) Landlord hereby waives any and all lien rights it may have, statutory or otherwise, in and to the Tower Facilities or any portion thereof, regardless of whether or not same is deemed real or personal property under applicable laws.

(d) The substantially prevailing party in any litigation arising hereunder is entitled to its reasonable attorney's fees and court costs, including appeals, if any.

(e) Each party agrees to furnish to the other, within 30 days after request, such estoppel information as the other may reasonably request.

(f) This Agreement constitutes the entire agreement and understanding of Landlord and American Tower with respect to the subject matter of this Agreement, and supersedes all offers, negotiations and other agreements. There are no representations or understandings of any kind not stated in this Agreement. Any amendments to this Agreement must be in writing and executed and delivered by Landlord and American Tower.

(g) If either Landlord or American Tower is represented by a real estate broker in this transaction, that party is fully responsible for any fees due such broker and will hold the other party harmless from any claims for commission by such broker.

(h) The Agreement will be construed in accordance with the laws of the state in which the Site is situated.

(i) If any term of the Agreement is found to be void or invalid, the remainder of this Agreement will continue in full force and effect.

(j) American Tower may obtain title insurance on its interest in the Site, and Landlord will cooperate by executing any documentation required by the title insurance company.

(k) This Agreement may be executed in two or more counterparts, all of which are considered one and the same agreement and become effective when one or more counterparts have been signed by each of the parties, it being understood that all parties need not sign the same counterpart.

(l) Landlord will not, during the Option Period or the Term, enter into any other lease, license, or other agreement for the same or similar purpose as the Intended Use, on or adjacent to the Property.

(m) Failure or delay on the part of either party to exercise any right, power or privilege hereunder will not operate as a waiver thereof and waiver of breach of any provision hereof under any circumstances will not constitute a waiver of any subsequent breach.

(n) The parties agree that irreparable damage would occur if any of the provisions of this Agreement were not performed in accordance with their specified terms or were otherwise breached. Therefore, the parties agree the parties will be entitled to an injunction(s) in any court in the state in which the Site is located to prevent breaches of the provisions of this Agreement and to enforce specifically the terms and provisions of the Agreement, this being in addition to any other remedy to which the parties are entitled at law or in equity.

(o) Each party executing this Agreement acknowledges that it has full power and authority to do so and that the person executing on its behalf has the authority to bind the party.

(p) The parties agree that a scanned or electronically reproduced copy or image of this Agreement will be deemed an original and may be introduced or submitted in any action or proceeding as competent evidence of the execution, terms and existence hereof notwithstanding the failure or inability to produce or tender an original, executed counterpart of this Agreement and without the requirement that the unavailability of such original, executed counterpart of this Agreement first be proven.

[SIGNATURES APPEAR ON NEXT PAGE]

Site Name: Pea Ridge, KY
Site Number: 281378

IN WITNESS WHEREOF, Landlord and American Tower have each executed this Agreement as of the respective dates written below.

LANDLORD:

Ronnie Halsey and Elaine Halsey, his wife,
with rights of survivorship

Ronnie Halsey
Name: Ronnie Halsey

Date: 11-14-2013

Elaine Halsey
Name: Elaine Halsey

Date: 11-14-2013

Acknowledgement

STATE OF KENTUCKY
COUNTY OF WOLFE

I, a Notary Public of the County and State aforesaid, certify that Ronnie Halsey and Elaine Halsey came before me this day and acknowledged the execution of the foregoing instrument.

Witness my hand and official stamp or seal, this 14th day of Nov., 2013.

[Affix Notary Seal]

Rebecca Long
Notary Public 463391
My commission expires:

3-26-16

Site Name: Pea Ridge, KY
Site Number: 281378

AMERICAN TOWER:

American Towers LLC, a Delaware limited liability company d/b/a Delaware American Towers LLC

By: _____
Name: Richard Rossi
Title: Vice President Legal
Date: 11-26-13

Acknowledgement

COMMONWEALTH OF MASSACHUSETTS)
) ss:
COUNTY OF MIDDLESEX)

On the 26th day of November, 2013, the undersigned notary public, personally appeared Richard Rossi, proved to me through satisfactory evidence of identification, which were ***personally known***, to be the person who name is signed on the preceding or attached document, and acknowledged that he/she signed it voluntarily for its stated purpose, as VP Legal, of American Towers LLC, before me.

DANIEL A. POWERS
Notary Public
Commonwealth of Massachusetts
My Commission Expires
October 23, 2020

_____
Notary Public
My Commission Expires:

Site Name: Pea Ridge, KY
Site Number: 281378

The following exhibits are attached to this Agreement and incorporated into this Agreement:

Exhibit A	Description or Depiction of Property
Exhibit B	Description or Depiction of Site
Exhibit C	Memorandum of Lease

Site Name: Pea Ridge, KY
Site Number: 281378

EXHIBIT A

DESCRIPTION OR DEPICTION OF PROPERTY

The Property is described and/or depicted as follows:

THAT CERTAIN TRACT OR PARCEL OF LAND LYING AND BEING IN WOLFE COUNTY, KENTUCKY, BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A SET STONE AT A FENCE AND THE MILLER RIDGE ROAD; THENCE WITH THE FENCE AN EAST COURSE 210 FEET TO A SET STONE AT THE CORNER OF THE FENCE; THENCE WITH THE FENCE A SOUTH COURSE 250 FEET TO A SET STONE AT THE CORNER OF THE FENCE; THENCE WITH THE FENCE A WEST COURSE 185 FEET TO A SET STONE AT THE MILLER RIDGE ROAD; THENCE WITH THE MILLER RIDGE ROAD A NORTH COURSE 210 FEET TO THE FENCE AND SET STONE THE PLACE OF BEGINNING.

TAX I.D. NUMBER: 012-00-00-023.00

Site Name: Pea Ridge, KY
Site Number: 281378

EXHIBIT B

DESCRIPTION OR DEPICTION OF SITE

Locations are approximate. American Tower may, at its option, replace this exhibit with a copy of the survey of the Site.

Proposed Compound area:

Situated in Wolfe County, State of Kentucky and known as being a part of Wolfe County Parcel Number: 012-00-00-023.00 as conveyed to Ronnie Halsey by Deed Book 120 Page 607 and more recorded deed documents, further bound and described as follows:

Commencing at the Southwest corner of said lands conveyed to Halsey, the same being a point in the Eastern Right-of-Way line of Miller Ridge Road, and the Northwest corner of lands conveyed to Loretta Spencer, etal by deed dated August 4, 1997 as recorded in Deed Book 100, Page 154 of Wolfe County Clerk Records;

Thence leaving said Right-of-Way line, bearing North 38°25'10" East, a distance of 367.15 feet to an iron pin set and being the **TRUE PLACE OF BEGINNING** of the Lease Area herein described;

Thence, bearing South 80°15'19" West, a distance of 42.00 feet to an iron pin set;

Thence at a right angle, bearing North 09°44'41" West, a distance of 70.00 feet to an iron pin set;

Thence at a right angle, bearing North 80°15'19" East, a distance of 42.00 feet to an iron pin set;

Thence at a right angle, bearing South 09°44'41" East, a distance of 70.00 feet to the TRUE PLACE OF BEGINNING, containing 0.0675 acres of land, more or less but subject to all legal highways and all covenants and agreements of record.

Bearings are based on Grid North of KY Single Zone NAD 83 and are used herein to indicate angles only.

This legal description was prepared based on a survey under the supervision of Andrew G. Planet, P.L.S. #3912 by Rolling & Hoeevar, Inc. in October 2013.

Site Name: Pea Ridge, KY
Site Number: 281378

EXHIBIT B Continued

Proposed Access Easement:

Legal Description for a 20-foot Access/Utility Easement
Project No. 1308-47
October 18, 2013

Situated in Wolfe County, State of Kentucky and known as being a part of Wolfe County Parcel Number: 012-00-00-023.00 as conveyed to Ronnie Halsey by Deed Book 120 Page 607 and more recorded deed documents, further bound and described as follows:

Commencing at the Southwest corner of said lands conveyed to Halsey, the same being a point in the Eastern Right-of-Way line of Miller Ridge Road, and the Northwest corner of lands conveyed to Loretta Spencer, etal by deed dated August 4, 1997 as recorded in Deed Book 100, Page 154 of Wolfe County Clerk Records;

Thence along said Right-of-Way line, bearing North 22°20'13" East, a distance of 121.55 feet to a point thereon and being the TRUE PLACE OF BEGINNING of the Access/Utility Easement herein described;

Thence continuing along said Right-of-Way line, bearing North 15°20'01" East, a distance of 27.45 feet to a point thereon;

Thence, bearing North 62°06'34" East, a distance of 39.41 feet to a point,

Thence, bearing North 45°48'33" East, a distance of 140.14 feet to a point;

Thence, bearing North 13°17'13" East, a distance of 5.98 feet to a point;

Thence, bearing North 09°44'41" West, a distance of 20.00 feet to an iron pin set at the Southwestern corner of a proposed American Tower Corporation Lease Area;

Thence at a right angle and along the Southern line of said Lease Area, bearing North 80°15'19" East, a distance of 42.00 feet to an iron pin set at the Southeastern corner thereof;

Thence leaving said Lease Area line at a right angle, bearing South 09°44'41" East, a distance of 20.00 feet to a point;

Thence at a right angle, bearing South 80°15'19" West, a distance of 20.27 feet to a point;

Thence, bearing South 13°17'13" West, a distance of 20.31 feet to a point,

Thence, bearing South 45°48'33" West, a distance of 148.84 feet to a point,

Thence, bearing South 62°06'34" West, a distance of 61.07 feet to the TRUE PLACE OF BEGINNING, containing 0.1147 acres of land, intending to be a 20-foot wide strip of land, more or less but subject to all legal highways and all covenants and agreements of record

Bearings are based on Grid North of KY Single Zone NAD 83 and are used herein to indicate angles only

This legal description was prepared based on a survey under the supervision of Andrew G Planet, P.L.S. #3912 by Rolling & Hoeven, Inc in October 2013.

Site Name: Pea Ridge, KY
Site Number: 281378

EXHIBIT B Continued

Proposed Utility Easement:

Situated in Wolfe County, State of Kentucky and known as being a part of Wolfe County Parcel Number: 012-00-00-023.00 as conveyed to Ronnie Halsey by Deed Book: 120 Page 607 and more recorded deed documents, further bound and described as follows:

Commencing at the Southwest corner of said lands conveyed to Halsey, the same being a point in the Eastern Right-of-Way line of Miller Ridge Road, and the Northwest corner of lands conveyed to Loretta Spencer, etal by deed dated August 4, 1997 as recorded in Deed Book: 100, Page 154 of Wolfe County Clerk Records;

Thence leaving said Right-of-Way line, bearing North 38°25'10" East, a distance of 367.15 feet to an iron pin set at the Southeastern corner of a proposed American Tower Corporation Lease Area and being the **TRUE PLACE OF BEGINNING** of the Utility Easement herein described;

Thence along the Eastern line of said Lease Area, bearing North 09°44'41" West, a distance of 70.00 feet to an iron pin set at the Northeastern corner thereof;

Thence leaving said Lease Area line at a right angle, bearing North 80°15'19" East, a distance of 10.00 feet to a point;

Thence at a right angle, bearing South 09°44'41" East, a distance of 90.00 feet to a point;

Thence at a right angle, bearing South 80°15'19" West, a distance of 10.00 feet to a point;

Thence at a right angle, bearing North 09°44'41" West, a distance of 20.00 feet to the TRUE PLACE OF BEGINNING, containing 0.0207 acres of land, intending to be a 10-foot wide strip of land, more or less but subject to all legal highways and all covenants and agreements of record.

Bearings are based on Grid North of KY Single Zone NAD 83 and are used herein to indicate angles only.

Site Name: Pea Ridge, KY
Site Number: 281378

EXHIBIT C

MEMORANDUM OF LEASE

[see following pages]

EXHIBIT J
NOTIFICATION LISTING

Pea Ridge Landowner Notice Listing

Ronnie Halsey
67 Miller Ridge
Pine Ridge, KY 41360

Ronald P. & Elaine M. Halsey
A.K.A – Ronnie and Elaine Halsey
67 Miller Ridge Rd.
Pine Ridge, KY 41360

Ronnie and Elaine Halsey
67 Miller Ridge Rd.
Pine Ridge, KY 41360

Faye Brewer
57 Meadowbrook Drive
Stanton, KY 40380

Donna Exman
P.O. Box 431
Medway, OH 45341

Ernest & Opal Pennington
6395 Old KY., 15
Pine Ridge, KY 41360

Ernest Pennington
6395 Old KY., 15
Pine Ridge, KY 41360

Ernie Tyra
8050 Old KY., 15
Pine Ridge, KY 41360

Ernie Tyra
c/o Betty Gregory
P.O. Box 323
Campton, KY 41301

USDA US Forestry Division
100 Vaught Road
Winchester, KY 40391

Loretta Spencer, Et Al
c/o Dephia Graham
P.O. Box 455
Winchester, KY 40392

Danny Phillips
270 Miller Ridge Road
Pine Ridge, KY 41360

Danny and Barbara Phillips
270 Miller Ridge Road
Pine Ridge, KY 41360

Michael Prater
1019 Silverleaf Lane
Liberty, Missouri 64068

Michael Prater
c/o Randolf Prater
102 Miller Ridge Rd
Pine Ridge, KY 41360

John & April Abner
540 Old KY 15
Campton, KY 41301

John & April Abner
54 Miller Ridge Rd.
Pine Ridge, KY 41360

Diannia Haney
68 Miller Ridge Road
Pine Ridge, KY 41360

EXHIBIT K
COPY OF PROPERTY OWNER NOTIFICATION

PIKE
LEGAL

1578 Highway 44 East, Suite 6
P.O. Box 369
Shepherdsville, KY 40165-0369
Phone (502) 955-4400 or (800) 516-4293
Fax (502) 543-4410 or (800) 541-4410

Notice of Proposed Construction of
Wireless Communications Facility
Site Name: Pea Ridge

Dear Landowner:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and American Towers LLC, a Delaware limited liability company d/b/a Delaware American Towers have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 395 Miller Ridge Road, Pine Ridge, KY 41360 (37° 46' 24.18" North latitude, 83° 38' 08.92" West longitude). The proposed facility will include a 255-foot tall antenna tower, plus a 10-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

This notice is being sent to you because the Wolfe County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site or contiguous to the property on which the tower is to be constructed. You have a right to submit testimony to the Kentucky Public Service Commission ("PSC"), either in writing or to request intervention in the PSC's proceedings on the application. You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2015-00404 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. AT&T Mobility's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the area. Please feel free to contact us toll free at (800) 516-4293 if you have any comments or questions about this proposal.

Sincerely,
David A. Pike
Attorney for Applicants

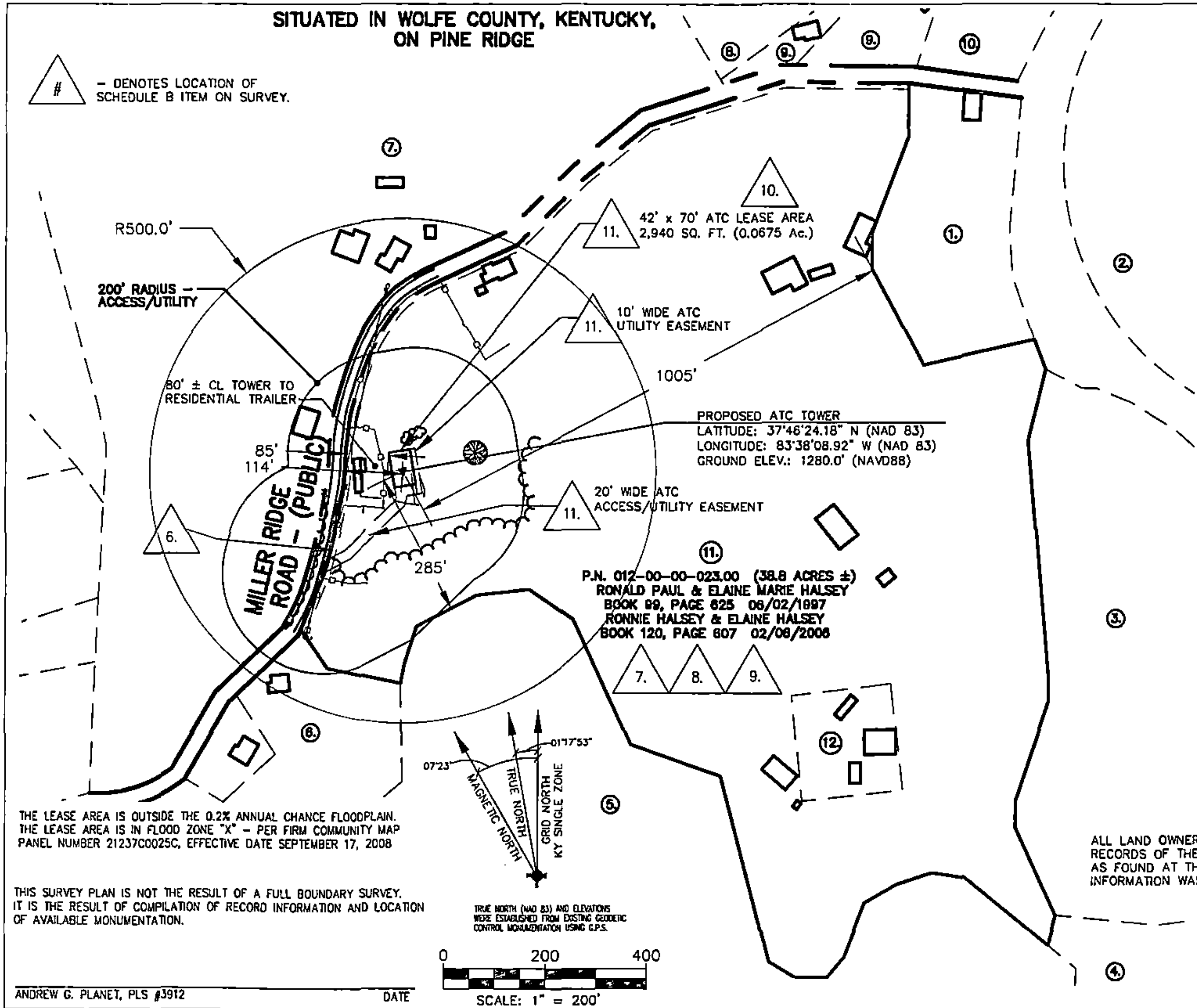
enclosure

Driving Directions to Proposed Tower Site:

1. Beginning at the Wolfe County Circuit Court Clerk's Office, located at 133 Main Street, Campton, Kentucky, head west towards Johnson Street.
2. Make a slight left onto Johnson Street and travel approximately 285 feet.
3. Make a slight right onto Drake Street and travel approximately 0.1 miles.
4. Continue onto KY-15 N for an additional 6.9 miles.
5. Turn left onto Miller Ridge. Travel approximately 0.4 miles. The site is on the left at 395 Miller Ridge Road.
6. site coordinates are
    a. 37 deg 46 min 24.18 sec N
    b. 83 deg 38 min 08.92 sec W

Prepared by:
Aaron Roof
Pike Legal Group PLLC
1578 Highway 44 East, Suite 6
PO Box 369
Shepherdsville, KY 40165-0369
Telephone: 502-955-4400 or 800-516-4293

SITUATED IN WOLFE COUNTY, KENTUCKY, ON PINE RIDGE



THE LEASE AREA IS OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THE LEASE AREA IS IN FLOOD ZONE "X" – PER FIRM COMMUNITY MAP PANEL NUMBER 21237C0025C, EFFECTIVE DATE SEPTEMBER 17, 2008

THIS SURVEY PLAN IS NOT THE RESULT OF A FULL BOUNDARY SURVEY. IT IS THE RESULT OF COMPILATION OF RECORD INFORMATION AND LOCATION OF AVAILABLE MONUMENTATION.

ANDREW G. PLANET, PLS #3912 DATE

OWNERSHIP INFORMATION

1. P.N. 012-00-00-022.00
   FAYE BREWER
   57 MEADOWBROOK DR.
   STANTON, KY 40380
2. P.N. 012-00-00-043.00
   DONNA EXMAN
   P.O. BOX 431
   MEDWAY, OHIO 45341
3. P.N. 012-00-00-044.00
   ERNEST PENNINGTON
   6395 OLD KY 15
   PINE RIDGE, KY 41360
4. P.N. 012-00-00-045.00
   ERNIE TYRA
   C/O BETTY GREGORY
   P.O. BOX 323
   CAMPTON, KY 41301
5. P.N. 020-00-00-012.00
   USDA US FORESTRY DIVISION
   100 VAUGHT ROAD
   WINCHESTER, KY 40391
6. P.N. 012-00-00-028.00
   LORETTA SPENCER, ETAL
   C/O DEPHIA GRAHAM
   P.O. BOX 455
   WINCHESTER, KY 40392
7. P.N. 012-00-00-025.00
   DANNY & BARBARA PHILLIPS
   270 MILLER RIDGE RD.
   PINE RIDGE, KY 41360
8. P.N. 012-00-00-026.02
   MICHAEL PRATER
   C/O RANDOLF PRATER
   102 MILLER RIDGE RD.
   PINE RIDGE, KY, 41360
9. P.N. 012-00-00-026.01
   (TRACT 1 AND TRACT 2)
   JOHN & APRIL ABNER
   54 MILLER RIDGE RD.
   PINE RIDGE, KY 41360
10. P.N. 012-00-00-021.00
    DIANNIA HANEY
    68 MILLER RIDGE ROAD
    PINE RIDGE, KY 41360
11. P.N. 012-00-00-023.00
    RONALD P. & ELAINE M. HALSEY
    A.K.A – RONNIE AND ELAINE HALSEY
    67 MILLER RIDGE RD.
    PINE RIDGE, KY 41360
12. P.N. 012-00-00-024.00
    RONNIE AND ELAINE HALSEY
    67 MILLER RIDGE RD.
    PINE RIDGE, KY 41360

ALL LAND OWNERS LISTED ARE ACCORDING TO THE RECORDS OF THE PROPERTY VALUATION ADMINISTRATOR AS FOUND AT THE WOLFE COUNTY PVA OFFICE. THIS INFORMATION WAS COMPILED ON 10-29-2015.

ROLLING & HOCEVAR INC.
CIVIL ENGINEERING SURVEYING

AMERICAN TOWER CORPORATION
TERRA
500 Busse Highway
Park Ridge, IL 60068

NO	DATE	DESCRIPTION	BY
1	12-18-15	FINAL SURVEY	ACP
2	01-26-16	REVISE FLOOD STATEMENT - UPDATE OWNERSHIP	ACP
3	11-18-15	REVIEW TITLE	ACP
4	12-04-15	OWNERSHIP LABELS	ACP

AT&T SITE # 143438
ATC SITE # 281378

PEA RIDGE

395 MILLER RIDGE ROAD
PINE RIDGE,
KENTUCKY 41360

DRAWN BY:	PRL
CHECKED BY:	ACP
DATE:	10/16/2015
PROJECT #:	1006-471

SHEET TITLE: OVERALL SITE

SHEET NUMBER: S3

EXHIBIT L
COPY OF COUNTY JUDGE/EXECUTIVE NOTICE

PIKE
LEGAL

1578 Highway 44 East, Suite 6
P.O. Box 369
Shepherdsville, KY 40165-0369
Phone (502) 955-4400 or (800) 516-4293
Fax (502) 543-4410 or (800) 541-4410

VIA CERTIFIED MAIL

Hon. Dennis Brooks
Wolfe County Judge Executive
10 Court Street
P.O. Box 429
Campton, KY 41301

RE: Notice of Proposal to Construct Wireless Communications Facility
Kentucky Public Service Commission Docket No. 2015-00404
Site Name: Pea Ridge

Dear Judge Brooks:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and American Towers LLC, a Delaware limited liability company d/b/a Delaware American Towers have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 395 Miller Ridge Road, Pine Ridge, Kentucky 41360 (37° 46' 24.18" North latitude, 83° 38' 08.92" West longitude). The proposed facility will include a 255-foot tall antenna tower, plus a 10-foot lightning arrestor and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2015-00404 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. AT&T Mobility's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the area. Please feel free to contact us with any comments or questions you may have.

Sincerely,

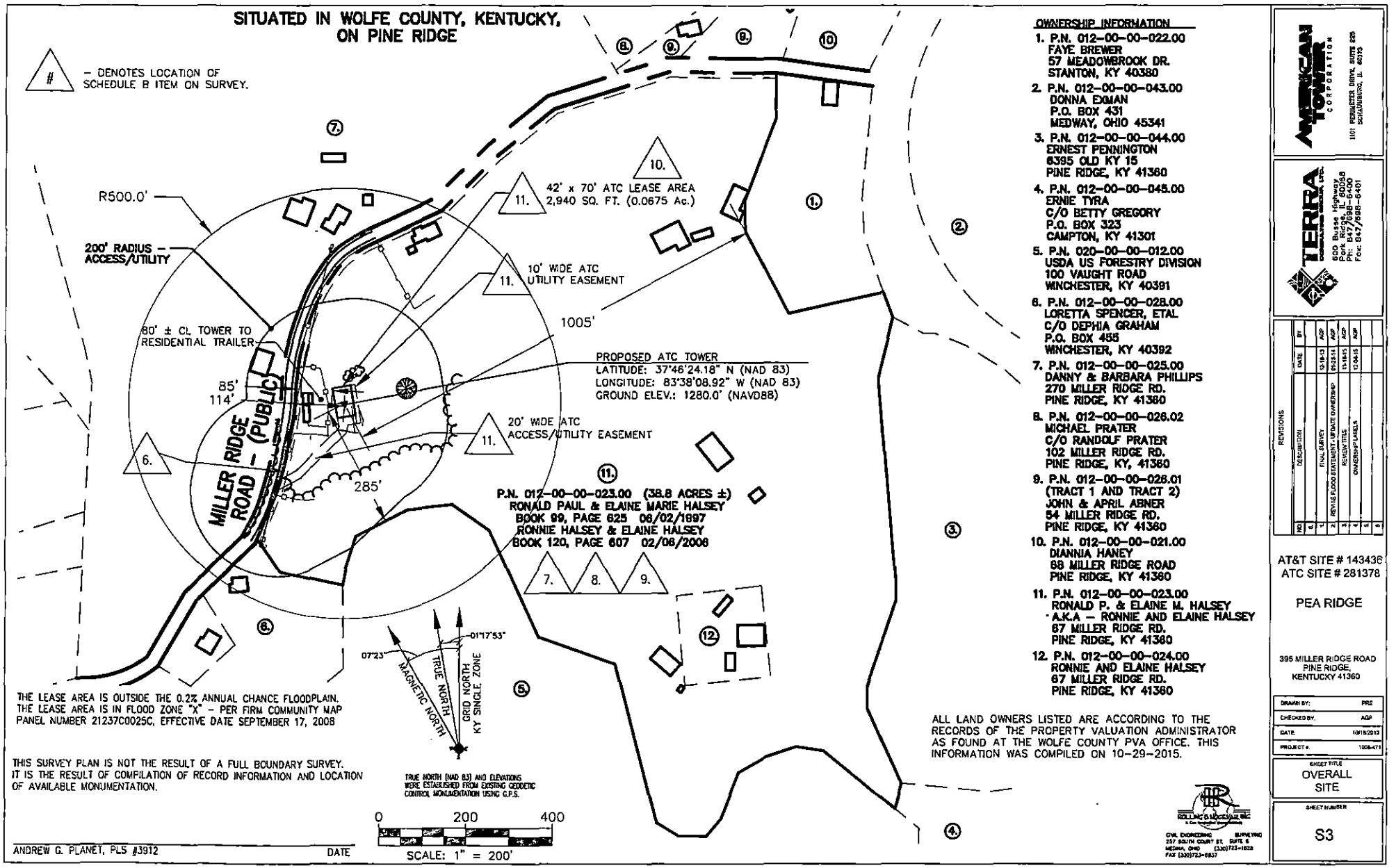
David A. Pike
Attorney for Applicants
enclosures

Driving Directions to Proposed Tower Site:

1. Beginning at the Wolfe County Circuit Court Clerk's Office, located at 133 Main Street, Campton, Kentucky, head west towards Johnson Street.
2. Make a slight left onto Johnson Street and travel approximately 285 feet.
3. Make a slight right onto Drake Street and travel approximately 0.1 miles.
4. Continue onto KY-15 N for an additional 6.9 miles.
5. Turn left onto Miller Ridge. Travel approximately 0.4 miles. The site is on the left at 395 Miller Ridge Road.
6. site coordinates are
    a. 37 deg 46 min 24.18 sec N
    b. 83 deg 38 min 08.92 sec W

Prepared by:
Aaron Roof
Pike Legal Group PLLC
1578 Highway 44 East, Suite 6
PO Box 369
Shepherdsville, KY 40165-0369
Telephone: 502-955-4400 or 800-516-4293

SITUATED IN WOLFE COUNTY, KENTUCKY, ON PINE RIDGE



THE LEASE AREA IS OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THE LEASE AREA IS IN FLOOD ZONE "X" – PER FIRM COMMUNITY MAP PANEL NUMBER 21237C0025C, EFFECTIVE DATE SEPTEMBER 17, 2008

THIS SURVEY PLAN IS NOT THE RESULT OF A FULL BOUNDARY SURVEY. IT IS THE RESULT OF COMPILATION OF RECORD INFORMATION AND LOCATION OF AVAILABLE MONUMENTATION.

TRUE NORTH (NAD 83) AND ELEVATIONS WERE ESTABLISHED FROM EXISTING GEODETIC CONTROL MONUMENTATION USING G.P.S.

ANDREW G. PLANET, PLS #3912 DATE

OWNERSHIP INFORMATION

1. P.N. 012-00-00-022.00
   FAYE BREWER
   57 MEADOWBROOK DR.
   STANTON, KY 40380
2. P.N. 012-00-00-043.00
   DONNA EXMAN
   P.O. BOX 431
   MEDWAY, OHIO 45341
3. P.N. 012-00-00-044.00
   ERNEST PENNINGTON
   6395 OLD KY 15
   PINE RIDGE, KY 41360
4. P.N. 012-00-00-045.00
   ERNIE TYRA
   C/O BETTY GREGORY
   P.O. BOX 323
   CAMPTON, KY 41301
5. P.N. 020-00-00-012.00
   USDA US FORESTRY DIVISION
   100 VAUGHT ROAD
   WINCHESTER, KY 40391
6. P.N. 012-00-00-028.00
   LORETTA SPENCER, ETAL
   C/O DEPHIA GRAHAM
   P.O. BOX 455
   WINCHESTER, KY 40392
7. P.N. 012-00-00-025.00
   DANNY & BARBARA PHILLIPS
   270 MILLER RIDGE RD.
   PINE RIDGE, KY 41360
8. P.N. 012-00-00-026.02
   MICHAEL PRATER
   C/O RANDOLF PRATER
   102 MILLER RIDGE RD.
   PINE RIDGE, KY, 41360
9. P.N. 012-00-00-026.01
   (TRACT 1 AND TRACT 2)
   JOHN & APRIL ABNER
   54 MILLER RIDGE RD.
   PINE RIDGE, KY 41360
10. P.N. 012-00-00-021.00
    DIANNIA HANEY
    88 MILLER RIDGE ROAD
    PINE RIDGE, KY 41360
11. P.N. 012-00-00-023.00
    RONALD P. & ELAINE M. HALSEY
    A.K.A – RONNIE AND ELAINE HALSEY
    67 MILLER RIDGE RD.
    PINE RIDGE, KY 41360
12. P.N. 012-00-00-024.00
    RONNIE AND ELAINE HALSEY
    67 MILLER RIDGE RD.
    PINE RIDGE, KY 41360

ALL LAND OWNERS LISTED ARE ACCORDING TO THE RECORDS OF THE PROPERTY VALUATION ADMINISTRATOR AS FOUND AT THE WOLFE COUNTY PVA OFFICE. THIS INFORMATION WAS COMPILED ON 10-29-2015.

ROLLING B SURVEYING, INC.
CIVIL ENGINEERING SURVEYING
257 SOUTH COURT ST. SUITE 6
MEDINA, OHIO (330)723-1828
FAX (330)723-0837

AMERICAN TOWER CORPORATION
1101 PERIMETER DRIVE, SUITE 825
SCHAUMBURG, IL 60173

TERRA CONSULTING, LLC
600 Busse Highway
Park Ridge, IL 60068
Ph: 847/698-6400
Fax: 847/698-6401

NO	DESCRIPTION	DATE	BY
1	FINAL SURVEY	3-18-13	AGP
2	REVISE FLOOD STATEMENT - UPDATE OWNERSHIP	9-13-14	AGP
3	REVIEW TITLE	11-18-15	AGP
4	OWNERSHIP LABELS	12-04-15	AGP

AT&T SITE # 143436
ATC SITE # 281378

PEA RIDGE

395 MILLER RIDGE ROAD
PINE RIDGE,
KENTUCKY 41360

DRAWN BY:	PRE
CHECKED BY:	AGP
DATE:	10/18/2013
PROJECT #:	1008-471

SHEET TITLE
OVERALL SITE

SHEET NUMBER
S3

EXHIBIT M
COPY OF POSTED NOTICES

SITE NAME: PEA RIDGE
NOTICE SIGNS

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

New Cingular Wireless PCS, LLC d/b/a AT&T Mobility and American Towers LLC, a Delaware limited liability company, propose to construct a telecommunications **tower** on this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165 (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2015-00404 in your correspondence.

New Cingular Wireless PCS, LLC d/b/a AT&T Mobility and American Towers LLC, a Delaware limited liability company, propose to construct a telecommunications **tower** near this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165 (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2015-00404 in your correspondence.

VIA TELEFAX: 606-668-6001

The Wolfe County News
Attn: J.B. Stamper
P.O. Box 129
Campton, KY 41301

RE: Legal Notice Advertisement
Site Name: Pea Ridge

Dear Mr. Stamper:

Please publish the following legal notice advertisement in the next edition of *the Wolfe County News:*

NOTICE

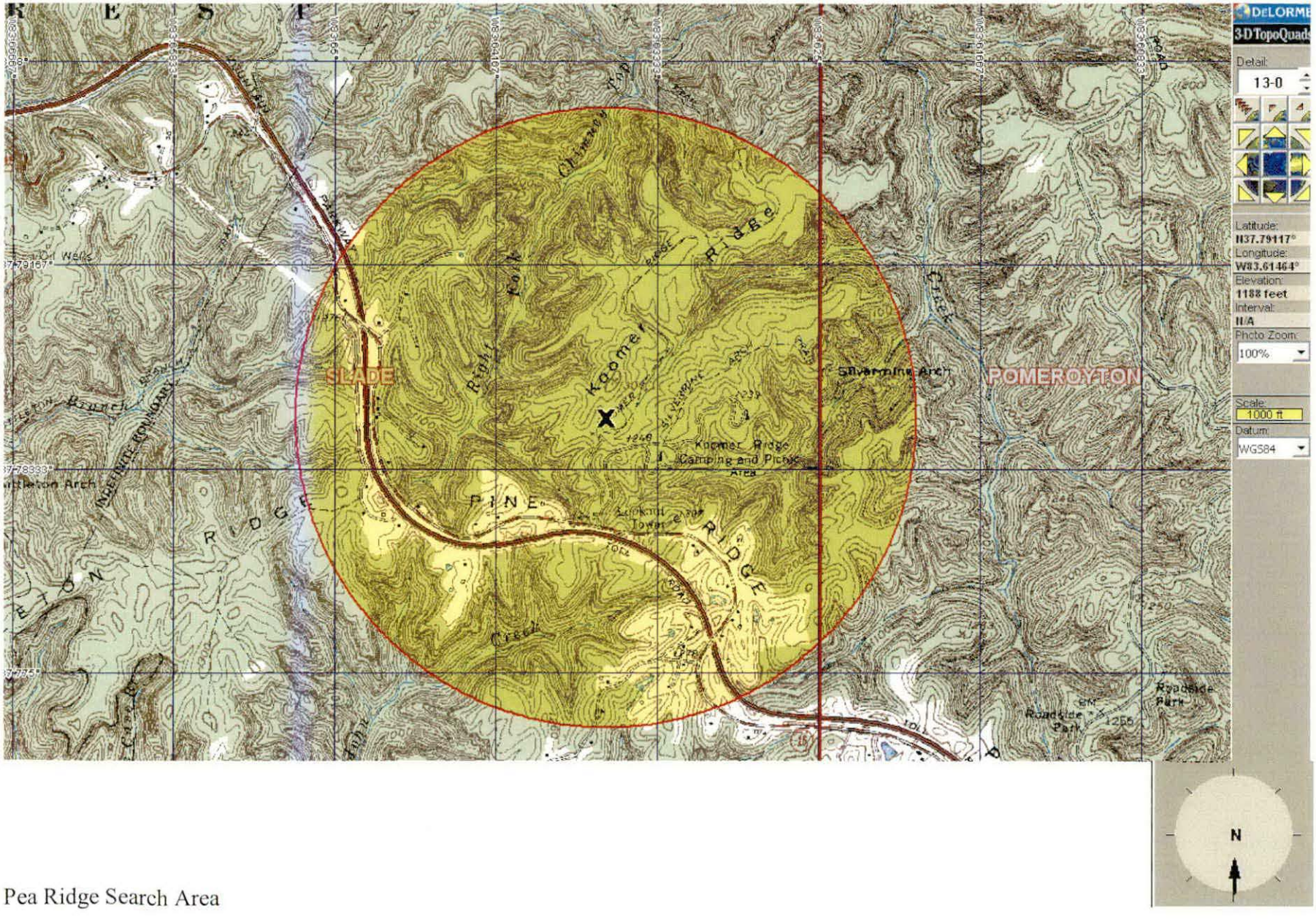
New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and American Towers LLC, a Delaware limited liability company d/b/a Delaware American Towers have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 395 Miller Ridge Road, Pine Ridge, KY 41360 (37°46'24.18" North latitude, 83°38'08.92" West longitude). You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2015-00404 in any correspondence sent in connection with this matter.

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

Sincerely,

Aaron L. Roof
Pike Legal Group, PLLC

EXHIBIT N
COPY OF RADIO FREQUENCY DESIGN SEARCH AREA



Pea Ridge Search Area