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OCT 3 2016

Public Service  
Commission

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

In the Matter of:  
THE APPLICATION OF )  
SBA TOWERS, LLC )  
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC )  
CONVENIENCE AND NECESSITY TO CONSTRUCT ) CASE NO.: 2016-00157  
A WIRELESS COMMUNICATIONS FACILITY )  
IN THE COMMONWEALTH OF KENTUCKY )  
IN THE COUNTY OF BOYD )

SITE NAME: BONITA

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

SBA Towers, LLC, a Florida limited liability company ("**Applicant**"), by and through the undersigned 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 submits 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 customers with wireless communications services.

In support of this Application, Applicant respectfully provides and states the following information:

1. The complete name and address of the Applicant: SBA Towers, LLC, a Florida limited liability company, 8051 Congress Avenue, Boca Raton, FL 33487 and 5900 Broken Sound Parkway NW, Boca Raton, FL 33487.

2. Applicant proposes to remove an existing 90 foot tall wooden tower and to replace it with a new 90-foot tall monopole and antenna for cellular telecommunications services or personal communications services, which is to be located in an area outside the jurisdiction of a planning commission. Applicant submits 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 and regulatory authority.

3. The Articles of Organization of SBA Towers, LLC were filed with the Florida Secretary of State in Tallahassee, Florida on June 30, 2011, effective June 30, 2011 a copy of which is attached as part of **Exhibit A**. The Certificate of Conversion from SBA Towers, Inc. to SBA Towers, LLC effective June 30, 2011 is also attached as a part of **Exhibit A**. SBA Towers, LLC is in good standing in Florida and is authorized to transact business in Kentucky. A copy of the certificate to transact business in the Commonwealth of Kentucky is also included as a part of **Exhibit A**.

4. West Virginia PCS Alliance, L.C., whose antennas are located on the existing tower and will be located on the new monopole, operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of the FCC license for West Virginia PCS Alliance, L.C. to provide wireless services is attached to this Application or described as part of **Exhibit B**. The facility will be constructed and operated in accordance with applicable FCC regulations. SBA Towers, LLC will build, own and manage the tower and tower compound where West

Virginia PCS Alliance, L.C. will place its equipment building, antennas, radio electronics equipment and appurtenances. (West Virginia PCS Alliance, L.C. is an indirect wholly-owned subsidiary of Shenandoah Telecommunications Company – “Shentel”; see Notification to Kentucky PSC of the Proposed Transfer of Control of nTelos Holdings Corp. to Shentel, dated May 5, 2016, attached hereto as part of **Exhibit B**).

5. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve West Virginia PCS Alliance, L.C.'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 West Virginia PCS Alliance, L.C. 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 West Virginia PCS Alliance, L.C.'s network design that must be in place to provide adequate coverage to the service area. A statement from the Radio Frequency Design Engineer of Shentel / West Virginia PCS Alliance, L.C. outlining this need is attached as part of Exhibit B.

6. To address the above-described service needs, Applicant proposes to construct a WCF in Boyd County at 4995 Buckhaven Court, Catlettsburg, KY 41129 (38°22'57.882" North latitude, 82°39'17.582" 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 Fred and Carla Faulkner, pursuant to deed of record in Deed Book 526, Page 24 in the office of the Boyd County Clerk. The proposed WCF will consist of a 90-foot tall monopole tower, with an approximately 1-foot tall lightning arrestor

attached at the top, for a total height of 91-feet. The WCF will also utilize new concrete foundations and a shelter or cabinets which currently accommodate the placement of the West Virginia PCS Alliance, L.C.'s radio electronics equipment and appurtenant equipment. The WCF equipment cabinet or shelter is approved or will be approved for use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound is 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 C** and **Exhibit D**. A list of utilities, corporations, or persons with whom the proposed WCF is likely to compete is attached as **Exhibit E**.

7. 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 C**.

8. 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 D**.

9. Applicant has considered the likely effects of the installation of the proposed WCF on nearby land uses and values and has 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, West Virginia PCS Alliance, L.C. 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. In this instance, the existing tower will be removed and replaced by the proposed, new 90-foot monopole.

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

12. A copy of the Application for Kentucky Airport Zoning Commission ("**KAZC**") Approval to construct the tower is attached as **Exhibit G**, as is the response of the KAZC, stating that no permit is required.

13. 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 H**. 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.

14. Clear directions to the proposed WCF site from the County seat are attached as **Exhibit I**. The name and telephone number of the preparer of **Exhibit I** is Nathan Meyer, PBM Wireless Services LLC, 6869 Windjammer Drive, Brownsburg, IN 46112; (317) 501-9164.

15. Applicant, successor in interest to SBA Towers, Inc. following conversion to a limited liability company, and pursuant to a written agreement, has acquired the right to use the WCF site and associated property rights. A copy of the agreement or an abbreviated agreement (Memorandum of Lease) recorded with the County Clerk and of the assignment of lease to Applicant are attached as **Exhibit J**.

16. 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 D** 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.

17. The Construction Manager for the proposed facility is Mauricio Agredo, and the identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained within **Exhibits C and D**.

18. As noted on the Survey attached as part of **Exhibit C** (specifically, on the Site Plan found at Sheet C-1), the engineer has determined that the site is not within any flood hazard area.

19. **Exhibit C** 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 C**.

20. Applicant has 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, the commission docket number under which this Application will be processed,

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 K** and **Exhibit L**, respectively.

21. Applicant has 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 M**.

22. 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 (2) weeks after filing of the Application, and a copy of the posted signs are attached as **Exhibit N**. 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 also included as a part of **Exhibit N**.

23. The character of the general area where the proposed facility is to be located is wooded, with some low-density rural residential nearby. Interstate 64 is due south and east of this site. The existing land use of the specific property involved is vacant, except for an existing wooden telecommunications pole (to be replaced by the subject monopole) and related equipment.

24. West Virginia PCS Alliance, L.C. currently operates from the existing wood pole at this site location. West Virginia PCS Alliance, L.C. will remove its installation from

the existing wood pole once the new replacement monopole is installed and in operation. The process that was originally used by the West Virginia PCS Alliance, L.C. 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. West Virginia PCS Alliance, L.C.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 West Virginia PCS Alliance, L.C. 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 O**.

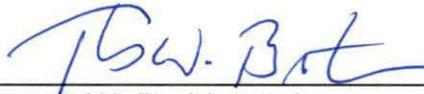
25. All Exhibits to this Application are hereby incorporated by reference as if fully set out as part of the Application.

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

Thomas W. Breidenstein  
*Counsel*  
*Direct: 859-652-7604*  
*Mobile: 513-607-3452*  
*Fax: 859-425-7952*  
*[tbreidenstein@stites.com](mailto:tbreidenstein@stites.com)*  
STITES & HARBISON PLLC  
RiverCenter II  
100 E. RiverCenter Blvd., Ste. 450  
Covington, KY 41011

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

Respectfully submitted,



---

Thomas W. Breidenstein

*Counsel*

[tbreidenstein@stites.com](mailto:tbreidenstein@stites.com)

STITES & HARBISON PLLC

RiverCenter II

100 E. RiverCenter Blvd., Ste. 450

Covington, KY 41011

*Direct: 859-652-7604*

*Mobile: 513-607-3452*

*Fax: 859-425-7952*

## LIST OF EXHIBITS

- A - Articles of Incorporation and Certificate of Conversion SBA Towers, Inc. to SBA Towers, LLC**
- B - FCC License Documentation**
- C - Construction Plans**
- D - Structural Design and Foundation Design**
- E - Competing Utilities, Corporations, or Persons List**
- F - FAA**
- G - Kentucky Airport Zoning Commission**
- H - Geotechnical Report**
- I - Directions to WCF Site**
- J - Copy of Real Estate Agreement**
- K - Notification Listing**
- L - Copy of Property Owner Notification**
- M - Copy of County Judge/Executive Notice**
- N - Photos of Posted Notices**
- O - Search Area Map**

**Exhibit A**

**Articles of Incorporation and Certificate of Conversion SBA Towers, Inc. to SBA  
Towers, LLC**



FLORIDA DEPARTMENT OF STATE  
Division of Corporations

June 30, 2011

The Articles of Organization for SBA TOWERS, LLC were filed on June 30, 2011, effective June 30, 2011, and assigned document number L11000076140. Please refer to this number whenever corresponding with this office.

To maintain "active" status with the Division of Corporations, an annual report must be filed yearly between January 1st and May 1st beginning in the year following the file date or effective date indicated above. If the annual report is not filed by May 1st, a \$400 late fee will be added. **It is your responsibility to remember to file your annual report in a timely manner.**

A Federal Employer Identification Number (FEI/EIN) will be required when this report is filed. Contact the IRS at 1-800-829-4933 for an SS-4 form or go to [www.irs.gov](http://www.irs.gov).

Please be aware if the limited liability company address changes, it is the responsibility of the limited liability company to notify this office.

Should you have any questions regarding this matter, please contact this office at the address given below.

Gretchen Harvey  
Document Specialist Supervisor  
Registration/Qualification Section  
Division of Corporations

Letter Number: 311A00015811

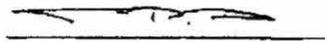
[www.sunbiz.org](http://www.sunbiz.org)

Division of Corporations - P.O. BOX 6327 -Tallahassee, Florida 32314

**CERTIFICATE OF CONVERSION**

This Certificate of Conversion and attached Articles of Organization are submitted to convert the following "Other Business Entity" into a Florida Limited Liability Company in accordance with s.608.439, Florida Statutes.

- First:** The name of the "Other Business Entity" immediately prior to the filing of this Certificate of Conversion is: SBA Towers, Inc.
- Second:** The "Other Business Entity" is a corporation, first organized, formed or incorporated under the laws of Florida on May 22, 1997.
- Third:** The name of the Florida Limited Liability Company as set forth in the attached Articles of Organization: SBA Towers, LLC
- Fourth:** The conversion shall become effective at 11:58 p.m. on June 30, 2011.
- Fifth:** The conversion is permitted by the applicable law governing the other business entity and the conversion complies with such law and the requirements of s.608.439, F.S., in effecting the conversion.
- Sixth:** The "Other Business Entity" currently exists on the official records of the jurisdiction under which it is currently organized, formed or incorporated.
- Seventh:** SIGNATURES FOR EACH ENTITY

<u>Name of Entity</u>	<u>Signature</u>	<u>Typed of Printed Name of Individual and Title</u>
SBA Towers, Inc.		Thomas P. Hunt Senior Vice President
SBA Towers, LLC		Thomas P. Hunt Senior Vice President

FILED  
11 JUN 30 PM 2:23  
SECRETARY OF STATE  
TALLAHASSEE, FLORIDA

FILED  
11 JUN 30 PM 2:24  
SECRETARY OF STATE  
TALLAHASSEE, FLORIDA

ARTICLES OF ORGANIZATION  
OF  
SBA TOWERS, LLC

ARTICLE I  
NAME

The name of the limited liability company (the "Company") is: SBA TOWERS, LLC

ARTICLE II  
ADDRESS

The mailing address and street address of the principal office of the Company are:

5900 Broken Sound Parkway NW  
Boca Raton, FL 33487

ARTICLE III  
INITIAL REGISTERED OFFICE AND AGENT

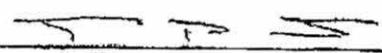
The name and street address of the Company's initial registered agent are:

Corporate Creations Network Inc.  
11380 Prosperity Farms Rd, #221E  
Palm Beach Gardens, FL 33410

ARTICLE IV

The conversion shall become effective as of 11:58 P.M. Eastern on June 30, 2011.

IN WITNESS WHEREOF, the undersigned has executed these Articles of Organization  
this 30 day of June, 2011.

  
\_\_\_\_\_  
Thomas P. Hunt,  
Authorized Representative of  
SBA Senior Finance II LLC, sole member

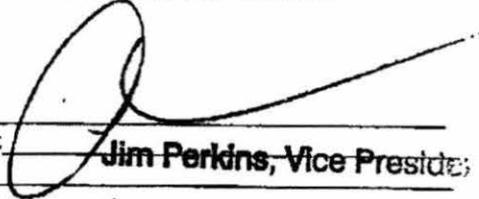
**CERTIFICATE OF ACCEPTANCE BY  
REGISTERED AGENT**

Pursuant to the provisions of the Florida Limited Liability Company Act, the undersigned submits the following statement in accepting the designation as registered agent of **SBA TOWERS, LLC**, a Florida limited liability company (the "Company"), in the Company's Articles of Organization:

Having been named as registered agent and to accept service of process for the Company at the registered office designated in the Company's Articles of Organization, the undersigned accepts the appointment as registered agent and agrees to act in this capacity. The undersigned further agrees to comply with the provisions of all statutes relating to the proper and complete performance of its duties, and the undersigned is familiar with and accepts the obligations of its position as registered agent.

IN WITNESS WHEREOF, the undersigned has executed this Certificate this 30 day of June, 2011.

Corporate Creations Network Inc.

By:   
Name: Jim Perkins, Vice President  
Title: \_\_\_\_\_

11 JUN 30 PM 2:24  
SECRETARY OF STATE  
TALLAHASSEE, FLORIDA

FILED

**Commonwealth of Kentucky**  
**Alison Lundergan Grimes, Secretary of State**

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

**Certificate of Authorization**

Authentication number: 176326  
Visit <https://app.sos.ky.gov/ftshow/certvalidate.aspx> to authenticate this certificate.

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

**SBA TOWERS, LLC**

, a limited liability company authorized under the laws of the state of Florida, is authorized to transact business in the Commonwealth of Kentucky, and received the authority to transact business in Kentucky on March 2, 1998.

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

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 10<sup>th</sup> day of May, 2016, in the 224<sup>th</sup> year of the Commonwealth.



*Alison Lundergan Grimes*  
Alison Lundergan Grimes  
Secretary of State  
Commonwealth of Kentucky  
176326/0452998

**Exhibit B**  
**FCC License Documentation**

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



**Federal Communications Commission**  
**Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: WEST VIRGINIA PCS ALLIANCE, L.C.

ATTN: BRIAN J. O'NEIL  
 WEST VIRGINIA PCS ALLIANCE, L.C.  
 1154 SHENANDOAH VILLAGE DR.  
 WAYNESBORO, VA 22980

<b>Call Sign</b> WPOH986	<b>File Number</b> 0006731334
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0002049328

<b>Grant Date</b> 06-22-2015	<b>Effective Date</b> 06-22-2015	<b>Expiration Date</b> 06-23-2025	<b>Print Date</b> 06-23-2015
<b>Market Number</b> MTA018	<b>Channel Block</b> B	<b>Sub-Market Designator</b> 2	
<b>Market Name</b> Cincinnati-Dayton			
<b>1st Build-out Date</b> 08-04-2000	<b>2nd Build-out Date</b> 06-23-2005	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

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

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

**Conditions:**

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

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

**Licensee Name:** WEST VIRGINIA PCS ALLIANCE. L.C.

**Call Sign:** WPOH986

**File Number:** 0006731334

**Print Date:** 06-23-2015

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

Reference Copy



**STOLL  
KEENON  
OGDEN**  
P L L C

300 WEST VINE STREET  
SUITE 2100  
LEXINGTON, KY 40507-1801  
MAIN: (859) 231-3000  
FAX: (859) 253-1093

**DOUGLAS F. BRENT**  
DIRECT DIAL: (502) 568-5734  
DIRECT FAX: (502) 562-0934  
Douglas.Brent@skofirm.com  
**RECEIVED**

May 5, 2016

MAY 05 2016

Aaron D. Greenwell  
Acting Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
P.O. Box 615  
Frankfort, KY 40602-0615

PUBLIC SERVICE  
COMMISSION

**Re: Notification of the Proposed Transfer of Control of NTELOS Holdings Corp.  
to Shenandoah Telecommunications Company**

Dear Mr. Greenwell:

Pursuant to the Commission's Order issued in Administrative Case No. 370 on January 8, 1998, this letter is to notify the Commission that Shenandoah Telecommunications Company ("Shentel") and NTELOS Holdings Corp., the parent company of West Virginia PCS Alliance, L.C. d/b/a NTELOS ("NTELOS"), have entered into a merger agreement pursuant to which Shentel will acquire direct ownership and control of NTELOS Holdings Corp. and NTELOS, as described more fully below (the "Merger" or "Transaction"). The proposed transaction is scheduled to close on May 6, 2016.

**The Parties**

**Shentel.** Shentel is a holding company that provides, through its operating subsidiaries, a broad range of telecommunications services. Shentel is traded on the NASDAQ Global Select Market under the symbol "SHEN." Shentel has a long, successful history of providing a broad range of communications services in rural markets in the mid-Atlantic United States. Through its affiliates Shentel provides: wireless voice and data services; voice, video, and Internet services (delivered over hybrid-fiber coaxial cable networks); fiber network services; and traditional local and long-distance telephone services. Shentel has been providing telephone service in rural Shenandoah County, Virginia since 1902. It began offering DSL Internet service to its telephone subscribers in 1994, and now is able to offer high-speed Internet access service through 100% of its approximately 21,600 access lines. Shentel began building its fiber optic network, which now totals more than 4,400 route miles serving rural communities in Virginia, West Virginia, Maryland and Pennsylvania, in 1984. In 1990, Shentel's wireless subsidiary, Shenandoah Personal Communications, LLC ("Shentel PC") began offering rural cellular

Aaron D. Greenwell  
May 5, 2016  
Page 2

service, and it became the first rural PCS provider in the United States (through an agreement with American Personal Communications) in 1995.

Since 1999, Shentel PC has been the exclusive wireless communications affiliate of Sprint in primarily rural portions of West Virginia, Pennsylvania, Maryland and Virginia. Under their longstanding partnership in providing Sprint-branded wireless service in these areas, Shentel PC deploys and operates the wireless network and manages local retail operations, while Sprint holds and controls the spectrum used in the network, provides customer handsets, and provides customer service and other managed services. Through this partnership with Sprint, Shentel PC provides digital wireless service to more than 440,000 customers as of June 30, 2015.

**NTELOS.** NTELOS, through various operating subsidiaries, including West Virginia PCS Alliance, L.C. in Kentucky, is a regional provider of digital wireless communications services to customers primarily in West Virginia and Virginia, as well as parts of Maryland, North Carolina, Pennsylvania, Ohio, and Kentucky. It operates a CDMA digital PCS network that covers more than 86,000 consumers in Kentucky, and has deployed 4G LTE to some communities in the state. NTELOS provides retail wireless services to approximately 297,500 subscribers, of which 7,041 reside in Kentucky. NTELOS also provides wholesale network access to other telecommunications carriers, most notably through an arrangement with subsidiaries of Sprint. NTELOS presently operates one (1) retail store in Kentucky.

**Sprint.** Sprint is one of the nation's leading mobile broadband providers. Sprint and its affiliates served more than 57 million connections as of June 30, 2015 and is widely recognized for developing, engineering and deploying innovative technologies, including the first wireless 4G service from a national carrier in the United States; leading no-contract brands including Virgin Mobile USA, Boost Mobile, and Assurance Wireless; instant national and international push-to-talk capabilities; and a global Tier 1 Internet backbone. A more detailed description of Sprint's operations can be found at: <http://newsroom.sprint.com/about-us/>.

For purposes of this Notification, copies of any correspondence or communications should be additionally directed to:

K.C. Halm  
Bradley Guyton  
Davis Wright Tremaine LLP  
1919 Pennsylvania Ave., NW, Suite 800  
Washington, D.C. 20006

*Counsel to Shenandoah Telecommunications Company*

and

John Monroe  
Counsel, State Regulatory Affairs  
3065 Akers Mill Road, SE, 7th Floor  
Atlanta, GA 30339

*Counsel to Sprint*

### **The Transaction**

On August 10, 2015, Shentel and NTELOS entered into a merger agreement pursuant to which NTELOS (and West Virginia PCS Alliance L.C.) will become an indirect wholly-owned subsidiary of Shentel. As a result of the merger, Shentel will acquire all of NTELOS' operations, including wireless network assets and spectrum, retail stores and retail subscribers of NTELOS, including those in Kentucky. A copy of Shentel's pre- and post-close organization is set forth as Exhibit A.

Concurrently with the signing of the agreement with NTELOS, Shentel and Sprint entered into a series of agreements, whereby Shentel will, immediately after consummation of the merger, assign to Sprint all of the FCC spectrum licenses held by NTELOS and its operating subsidiaries, as well as certain spectrum leases acquired from NTELOS. Shentel will convert NTELOS' retail wireless customers into Sprint-branded customers. Shentel will also upgrade the remainder of NTELOS' current network to Sprint's enhanced LTE architecture, and will invest up to \$350 million and deploy 150 additional cell sites to expand coverage in the NTELOS service area, including approximately six (6) in Kentucky.

Post-transaction and pursuant to amended affiliate agreements between the Joint Petitioners, Shentel PC will offer Sprint-branded wireless service, including to NTELOS' existing customers, in NTELOS' service areas in Kentucky and elsewhere, as well as in the areas in which Shentel currently acts as Sprint's affiliate. Post-transaction, Shentel PC intends to continue to operate the NTELOS retail stores currently operating in Kentucky.

No NTELOS subscribers will lose service as a result of this transaction. Upon close of this transaction, and for a period of up to twenty-four months, current NTELOS customers may keep their existing handset and will be transitioned to Sprint rate plans that will be, for the vast majority of subscribers, identical or substantially similar to their existing service contracts for the duration of their existing contracts. During that time, however, and following expiration of their service contracts, NTELOS customers will also have access to a broader array of handsets and service plans, including the many options that are available to Shentel PC customers through its affiliation with Sprint. Current subscribers for whom substantially similar rate plans cannot be created will be able to choose a different rate plan offered by Sprint and Shentel. Following a transition period, all customers will be transitioned to a more robust service delivery platform, which will permit Shentel and Sprint to provide greater service options, expanded handsets, and enhanced features.

Aaron D. Greenwell  
May 5, 2016  
Page 4

Shentel has begun the process of informing NTELOS customers about the pending changes, in part through a new website that provides detailed information in plain language for NTELOS customers: <http://welcometoshentel.com/>. The Parties will continue these efforts to inform NTELOS customers about the pending changes through other forms of direct customer communication, including direct mail notice to all customers.

The transaction will serve the public interest of Kentucky consumers and, indeed, the state in general, in a variety of ways. NTELOS' customers, including its customers in rural areas, will benefit greatly from this transaction. These customers will be able to avail themselves of the planned new infrastructure investments, enhanced wireless coverage, improved service quality, broader variety of service plans and handsets, expanded roaming opportunities, and the expansion of service to new areas. Together, these benefits will enhance wireless competition as well as mobile broadband service offered in rural areas, and help promote deployment of enhanced broadband technologies, products, and services to those residing in rural areas.

Shentel's acquisition of NTELOS and subsequent assignment of spectrum to Sprint will provide Shentel, operating as a Sprint affiliate, with the increased incentive and ability to make significant upgrades to the existing NTELOS network in Kentucky and elsewhere. Shentel's infrastructure investments will significantly improve network service and coverage, as the planned deployment will accelerate the upgrade of the current NTELOS 3G network to 4G LTE network capabilities, improve service quality for consumers using the existing NTELOS network, and promote competition in the provision of mobile broadband service in these rural areas.

Existing NTELOS customers will enjoy more service, handset, and roaming options than ever before. These added benefits will enable customers to maximize the improved service that will be provided within the NTELOS footprint, as well as improve their overall wireless experience when they travel outside of those service areas. In addition, this transaction will enable Shentel and Sprint to continue their partnership's history of deploying high-capacity wireless networks to serve rural markets.

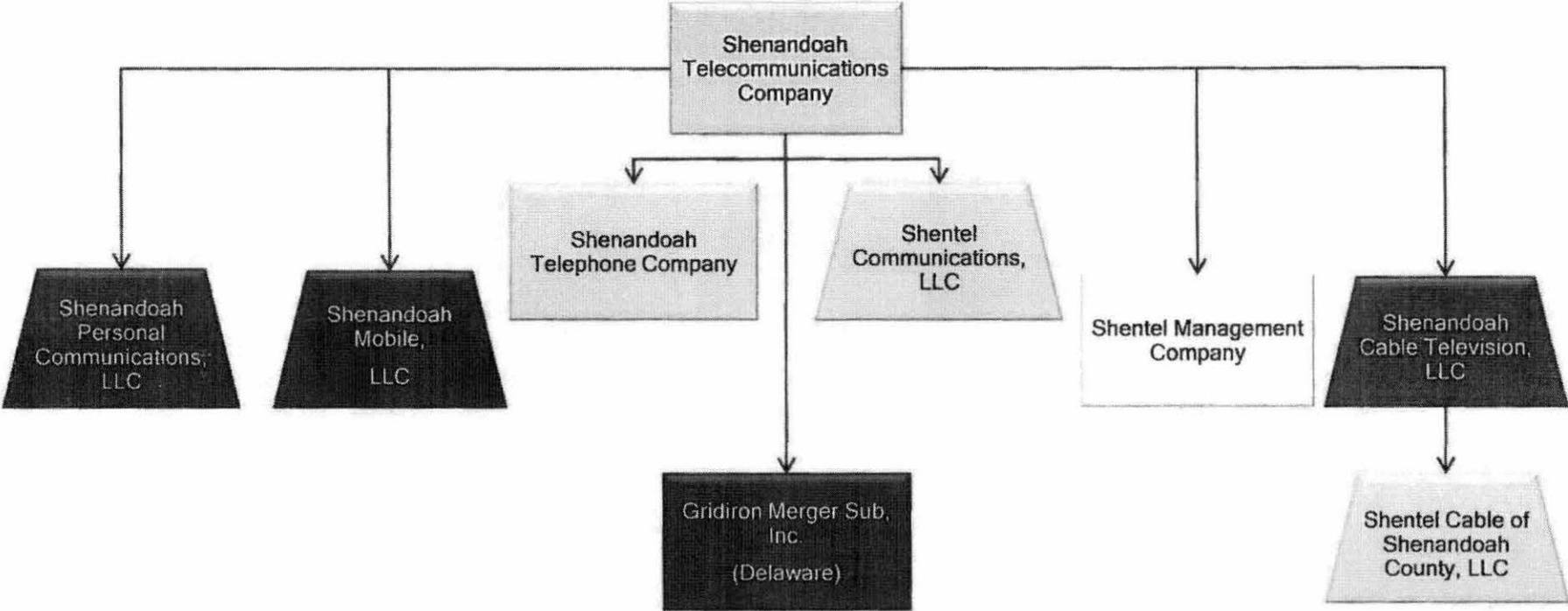
Please do not hesitate to contact the undersigned if you have any questions.

Sincerely,

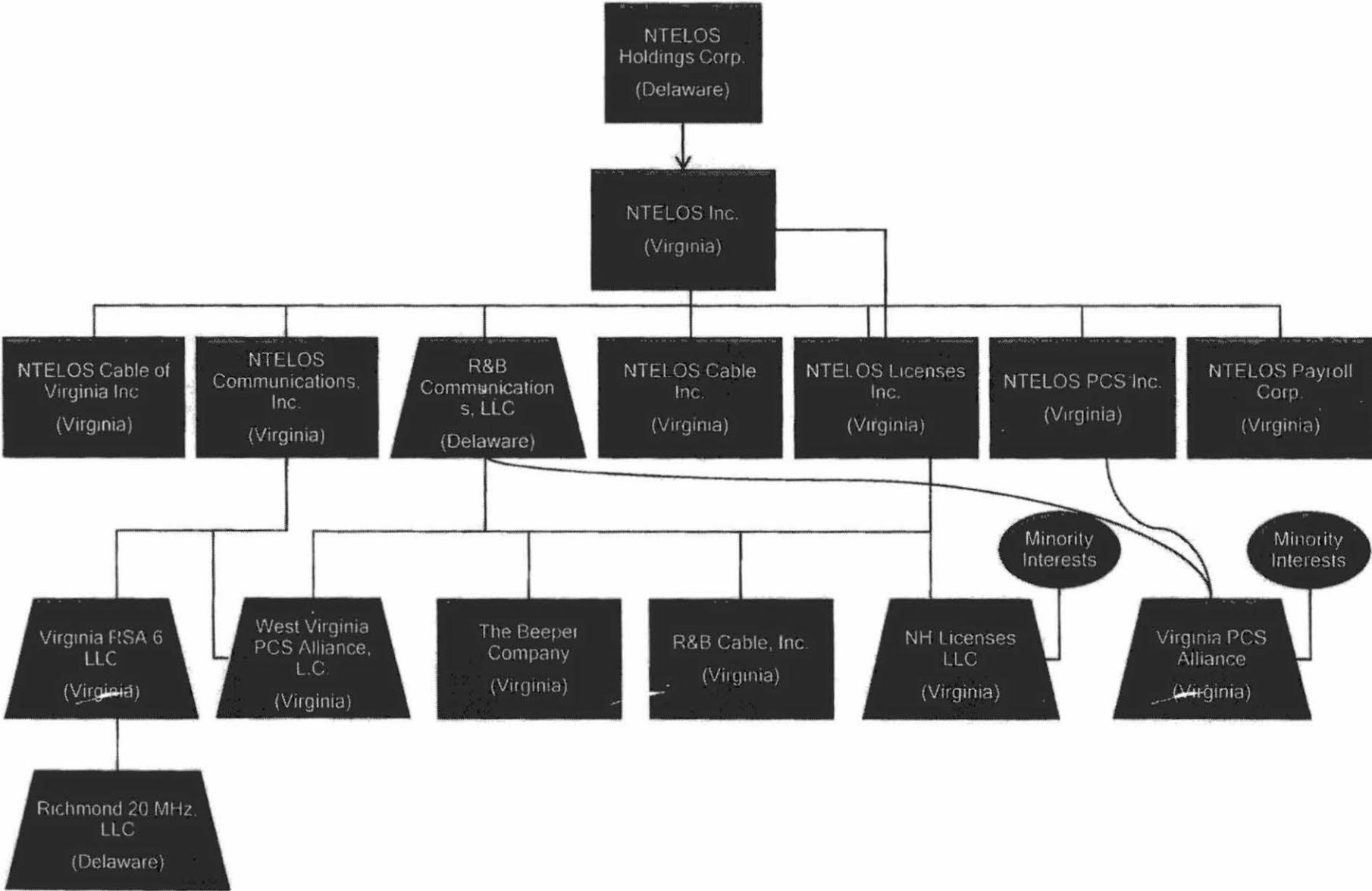


Douglas F. Brent  
Counsel to Sprint

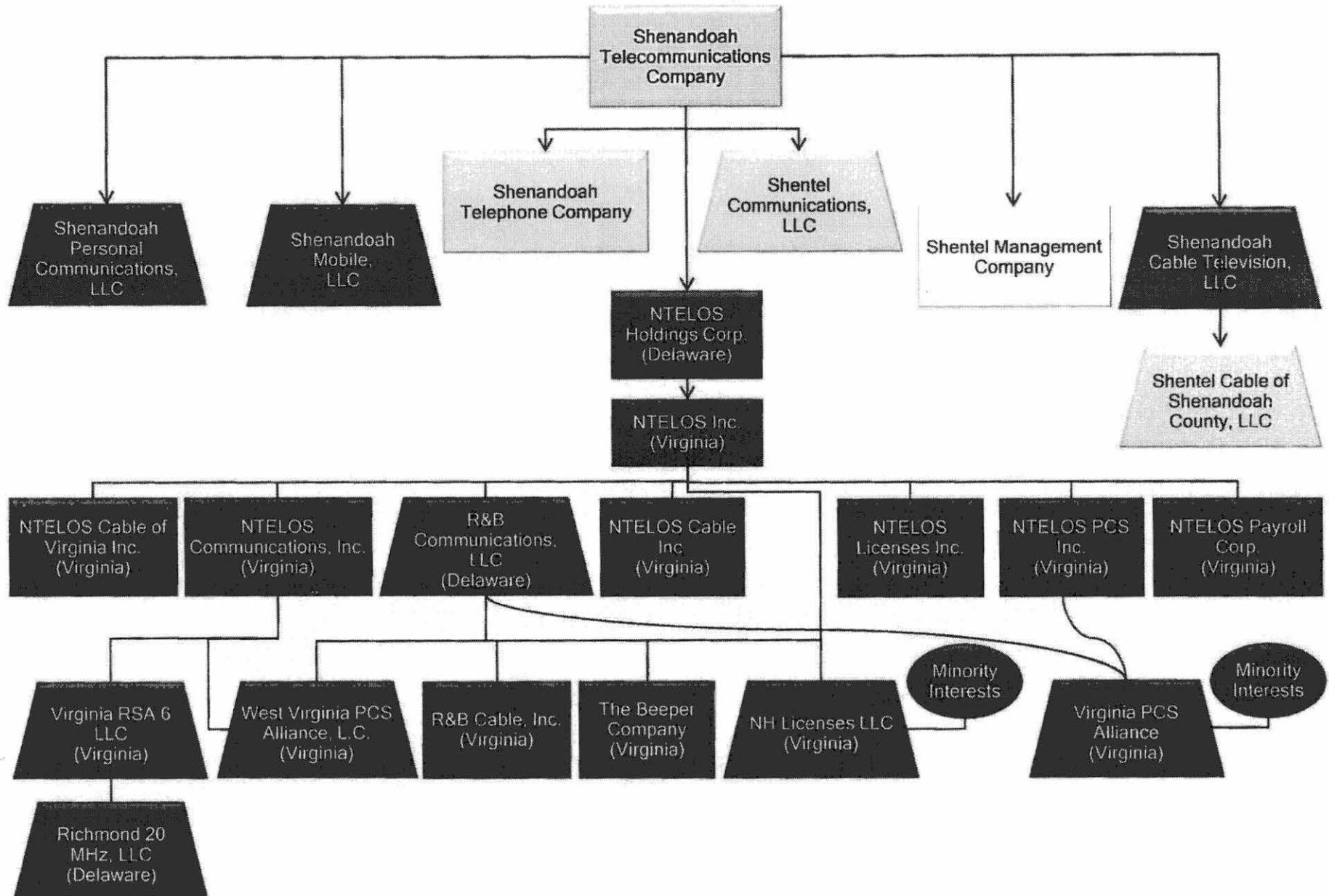
# Shentel Pre-Close Org Chart



# NTELOS Pre-close Org Chart



# Shentel Organizational Structure At Closing





August 15, 2016

RE: West Virginia PCS Alliance, L.C. Cell Site HT215  
4995 Buckhaven Ct., Catlettsburg, KY

Dear Sir or Madam:

This letter is to state the need to upgrade the Shentel site HT215 located in Boyd County. It is necessary to replace the existing wood pole with a steel monopole to accommodate the new equipment configuration required to provide LTE service. HT215 currently provides voice coverage in the area between exits 185 and 191 along I-64. Without the upgrade to HT215, customers will experience poor data connectivity and dropped data calls in this area. With the upgrade to this site, customers in Boyd County will be provided with reliable communications on our LTE network.

Sincerely,

 Recoverable Signature

X 

---

David Mellick  
RF Engineer, Shentel  
Signed by: Mellick, David

**Exhibit C**  
**Construction Plans**



**DAVID D. McKINNEY**  
**Director of Survey**  
**Professional Land Surveyor**

**EDUCATION**

- 1991 / Graduate National Geospatial Intelligence College/Geodetic Survey Course / U.S.A.C.E.
- 1992 / I.B.M. Government / Business Computer Course
- Fayetteville Technical Community College.
- Continuing Education.

**REGISTRATION**

- Registered Professional Surveyor  
State of Alabama No. 30350  
State of Kentucky No. 3964

Mr. McKinney serves as the Director of Surveying with 25 years of experience and brings a high level of technical expertise to the firm. He is a graduate of the National Geospatial Intelligence College where he was trained in cartography, Geodetic Surveying, G.P.S., and conventional surveying disciplines. Mr. McKinney's experience and knowledge can be offered as a resource to any project team.

**RELEVANT PROJECTS INCLUDE:**

- Field Surveying and construction stakeout of Roads and Highways
- Layout of large scale buildings and utilities (Honda Plant Lincoln, AL)
- Drafting of Civil Site Plans
- Project Management
- Subdivision Layouts
- Topographic Mapping and Surveying
- Supervision of Field and Office Personnel
- GPS Field Operation, Office Processing and Adjustment
- Quantity Surveys
- ALTA and Boundary Surveys
- Airfield Surveys
- Setting Aerial grids and computation of coordinates
- Construction stakeout and as-built drawings
- NOAA 1-A and 2-C Letters, and Flood Certification Letters
- Plot plans and engineered septic system design

- Telecommunications tower site survey



## GRAHAM M. ANDRES, P.E., P.ENG.

384 Tarragon Trail  
Wendell, NC 27603  
(919) 661-6351  
[gandres@tepgroup.net](mailto:gandres@tepgroup.net)

**EDUCATION** North Carolina State University, Raleigh, NC  
B.S. in Civil Engineering, 05/2002

**EXPERIENCE** Vice President, 05/2007 - Current  
Tower Engineering Professionals, Inc., 326 Tryon Road, Raleigh, NC

- Manage Civil and Survey divisions as well as remote offices
- Client management and business development
- Budgeting, ERP implementation, management development
- Work with others in senior management to define company goals, strategy and assess overall company health
- Work with other Managers in the company help carriers successfully complete large-scale LTE overlay projects.

**Civil Division Manager, 05/2002 – 05/2007**

Tower Engineering Professionals, Inc., 3703 Junction Blvd, Raleigh, NC

- Performed Structural Analysis of Steel Structures, Design of Foundations, and Foundation Analysis.
- Duties also include Civil Site Design of proposed Telecommunications
- Facilities and Field Inspections
- Project Management of new cell site builds, including project budgets, site design, zoning meetings, managing subcontractors and other engineers.

**Civil Engineering Intern, 08/2000 – 05/2002**

Tower Engineering Professionals, Inc., 3703 Junction Blvd, Raleigh, NC

- Trained to perform Structural Analysis, Civil Site Design, & Field Inspections
- Trained in Foundation Analysis and Design

**OTHER** Licensed Professional Engineer in:

Canadian Provinces:

New Brunswick, Prince Edward Island, Ontario, British Columbia, Saskatchewan, Nova Scotia, Alberta, Manitoba

States:

AL, AR, AZ, CO, CT, FL, GA, IA, ID, IL, IN, KS, KY, LA, MD, ME, MI, MN, MO, MS, MT, NC, ND, NE, NH, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, WA, WV, WY

**PROJECT SUMMARY**

**SITE NAME:** BONITA  
**SITE I.D.:** KY02114  
**SITE ADDRESS:** 4995 BUCK HAVEN COURT  
 CATLETTSBURG, KY 41129  
**JURISDICTION:** BOYD COUNTY  
**LAND USE:** TELECOMMUNICATION FACILITY  
**PROPERTY OWNER:** FRED & CARLA FAULKNER  
**APPLICANT:** SBA COMMUNICATIONS CORPORATION  
 8051 CONGRESS AVENUE  
 BOCA RATON, FL 33487-1307  
 OFFICE: (561) 226-9457  
**PARCEL ID:** 033-00-00-0178.02  
**ZONING CLASS:** UNKNOWN  
**1-A CERTIFICATION:**  
**LATITUDE:** N 38° 22' 57.882" (NAD '83)  
**LONGITUDE:** W 82° 39' 17.582" (NAD '83)  
**GROUND ELEVATION:** 954.0'± (NAVD '88)  
**OCCUPANCY TYPE:** TELECOMMUNICATIONS FACILITY  
**CONSTRUCTION TYPE:** PROPOSED MONOPOLE TOWER  
**DRIVING DIRECTIONS:** FROM HUNTINGTON TRI-STATE AIRPORT:  
 HEAD EAST ON CO ROUTE TO US-52N FOR 1.8 MILES. TURN RIGHT ONTO US-52N FOR .3 MILES. MERGE LEFT ONTO I-64 AND FOLLOW IT FOR 1.7 MILES. AFTER .3 MILES, TAKE EXIT 191. TURN RIGHT ONTO US-23 AFTER ANOTHER .3 MILES. TURN LEFT IN 3.4 MILES ONTO KY-538. IN .5 MILES TURN LEFT ONTO KY-3294. TURN LEFT ONTO LAUREL RIDGE RD AND FOLLOW IT FOR 1.4 MILES. TAKE A LEFT ONTO BUCK HAVEN CT. THE DESTINATION IS ON THE LEFT.

**HANDICAPPED REQUIREMENTS**  
 FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAP ACCESS NOT REQUIRED.  
**PLUMBING REQUIREMENTS**  
 FACILITY HAS NO PLUMBING.

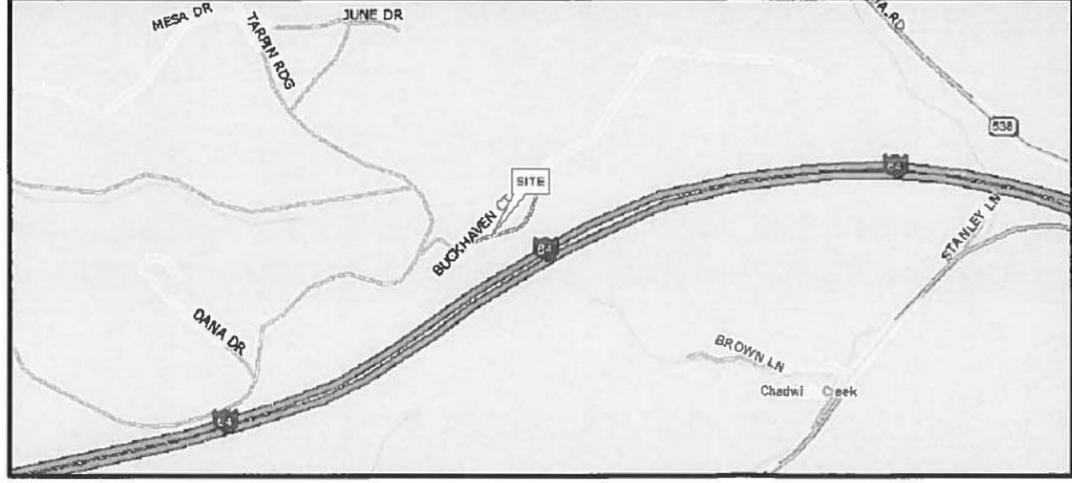
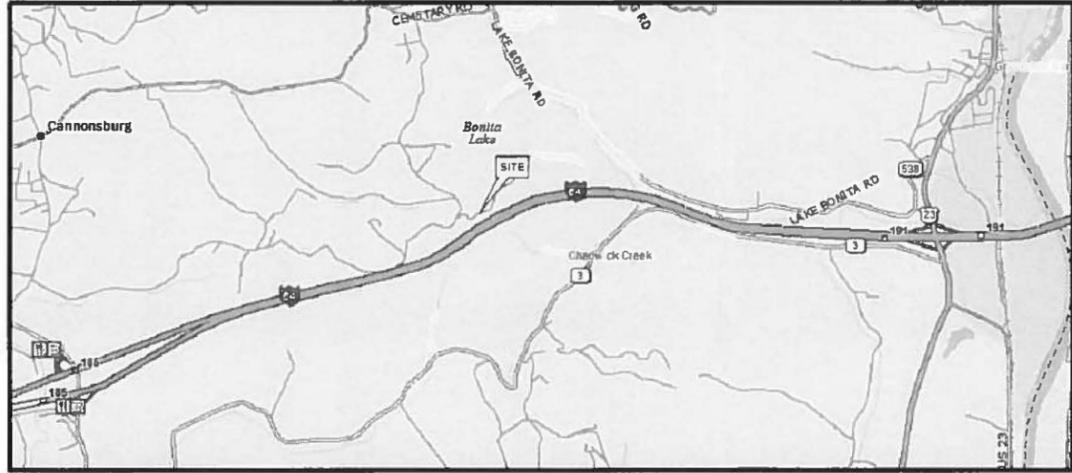
**CONSULTING TEAM**

**ARCHITECTURAL - ENGINEERING FIRM:**  
 TOWER ENGINEERING PROFESSIONALS, INC.  
 326 TRYON ROAD, RALEIGH, NC 27603  
 CONTACT: GRAHAM M. ANDRES, P.E.  
 PHONE: (919) 661-6351 FAX: (919) 661-6350  
**SURVEYING FIRM:**  
 SMW ENGINEERING GROUP, INC  
 158 BUSINESS CENTER DR, BIRMINGHAM, AL 35244  
 CONTACT: DAVID MCKINNEY  
 PHONE: (205) 252-6985  
**APPLICANT/LESSEE CONTACTS:**  
 SBA COMMUNICATIONS CORPORATION  
 DWAYNE LYERLY - (919) 803-3427 EXT 104  
**POWER COMPANY:** KENTUCKY POWER CUSTOMER SERVICE  
 PHONE: (606) 929-1517  
**TELCO COMPANY:** WINDSTREAM CUSTOMER SERVICE  
 PHONE: 1 (800) 866-5880  
**ELECTRICAL ENGINEER:**  
 TOWER ENGINEERING PROFESSIONALS, INC.  
 326 TRYON ROAD, RALEIGH, NC 27603  
 CONTACT: GRAHAM M. ANDRES, P.E.  
 PHONE: (919) 661-6351 FAX: (919) 661-6350



**SITE NAME**  
**BONITA**  
**SBA SITE I.D.**  
**KY02114**  
**ADDRESS**  
**4995 BUCK HAVEN COURT**  
**CATLETTSBURG, KY 41129**  
**PROJECT TYPE**  
**PROPOSED MONOPOLE TOWER**

**LOCATION & VICINITY MAPS**



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**APPROVALS**

LANDLORD	DATE
PROPERTY	DATE
CONSTRUCTION	DATE
RSM	DATE
TENANT	DATE
ZONING	DATE



CALL BEFORE YOU DIG - DRILL - BLAST  
 800-752-6007  
 OR  
 811

KENTUCKY ONE CALL SYSTEM, INC.

THE UTILITIES SHOWN HEREON ARE FOR THE CONTRACTORS CONVENIENCE ONLY THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER/SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

APPLICANT/LESSEE:



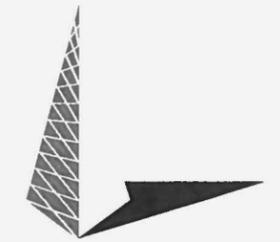
8051 CONGRESS AVENUE  
 BOCA RATON, FL 33487-1307  
 OFFICE: (561) 226-9457

PROJECT INFORMATION:

**BONITA**  
**(KY02114)**

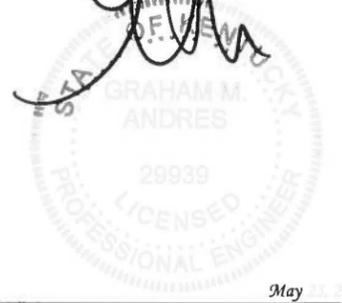
4995 BUCK HAVEN COURT  
 CATLETTSBURG, KY 41129  
 (BOYD COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-5263  
 OFFICE: (919) 661-6351  
 www.tepgroup.net

SEAL:



REV	DATE	ISSUED FOR:

DRAWN BY: CN CHECKED BY: JAS

SHEET TITLE:  
**TITLE SHEET**

SHEET NUMBER:  
**T-1**  
 REVISION:  
**3**  
 TEP #:

**ABBREVIATIONS:**

AB	ANCHOR BOLT	GR	GRADE	SIM	SIMILAR
AC	ASPHALTIC CONCRETE	GYP	GYP SUM	SPECS	SPECIFICATIONS
A/C	AIR CONDITIONING	GFCI	GROUND FAULT CIRCUIT	SS	STAINLESS STEEL
ADJ	ADJUSTABLE		INTERRUPT	STL	STEEL
A.F.F.	ABOVE FINISH FLOOR	GND	GROUND	STOR	STORAGE
ARCH	ARCHITECTURAL	HC	HOLLOW CORE	STRUCT	STRUCTURAL
APPROX	APPROXIMATELY	HDW	HARDWARE	SUSP	SUSPENDED
A.G.L.	ABOVE GRADE LEVEL	HTR	HEATER	SW	SWITCH
A.M.S.L.	ABOVE MEAN SEA LEVEL	HM	HOLLOW METAL	SWBO	SWITCHBOARD
BD	BOARD	HORIZ	HORIZONTAL	THK	THICK
BLDG	BUILDING	HR	HOUR	TI	TENANT IMPROVEMENT
BLKG	BLOCKING	HT	HEIGHT	TMA	TOWER MOUNTED AMPLIFIER
BOT	BOTTOM	HV	HIGH VOLTAGE	TOS	TOP OF SURFACE
BSMT	BASEMENT	ID	INSIDE DIMENSION	TS	TUBE STEEL
BTS	BASE TRANSCIEVER STATION	INS	INSULATION	TYP	TYPICAL
		INT	INTERIOR	U	UNDERGROUND
C	COURSE(S)	JT	JOINT	UNO	UNLESS NOTED OTHERWISE
CEM	CEMENT	LAM	LAMINATED	VCT	VINYL COMPOSITION TILE
CL	CHAIN LINK	LBS	POUNDS		
CLG	CEILING	LT	LIGHT	VERT	VERTICAL
CLR	CLEAR	LA	LIGHTNING ARRESTOR	V.I.F.	VERIFY IN FIELD
COL	COLUMN	LNA	LOW NOISE AMPLIFIER	VG	VERTICAL GRAIN
CONC	CONCRETE	MFR	MANUFACTURER	W/	WITH
CONST	CONSTRUCTION	MAT	MATERIAL	WD	WOOD
CONT	CONTINUOUS	MAX	MAXIMUM	WR	WATER RESISTANT
CORR	CORRIDOR	MECH	MECHANICAL	WT	WEIGHT
CO	CONDUIT ONLY	MIN	MINIMUM	XFMR	TRANSFORMER
DIA	DIAMETER	MISC	MISCELLANEOUS	⊙	AT
DBL	DOUBLE	ML	METAL LATH	[	CHANNEL
DEPT	DEPARTMENT	MO	MASONRY OPENING	⊥	CENTERLINE
DEMO	DEMOLITION	MS	MACHINE SCREW	∠	ANGLE
DIM	DIMENSION	MTD	MOUNTED	⊥	PROPERTY LINE
DN	DOWN	MTL	METAL		
DR	DOOR	(N)	NEW		
DTL	DETAIL	NIC	NOT IN CONTRACT NUMBER		
DWG	DRAWING	NO	NUMBER		
(E)	EXISTING	NTS	NOT TO SCALE		
EA	EACH	O	OVERHEAD		
ELEC	ELECTRIC	OA	OVERALL		
ELEV	ELEVATION	O.C.	ON CENTER		
EQUIP	EQUIPMENT	OPNG	OPENING		
EXP	EXPANSION	OPP	OPPOSITE		
EXT	EXTERIOR	PARTN	PARTITION		
FA	FIRE ALARM	PL	PLATE		
FB	FLAT BAR	PLAS	PLASTER		
FF	FINISH FLOOR	PLYWD	PLYWOOD		
FH	FLAT HEAD	POC	POINT OF CONNECTION		
FIN	FINISH(ED)	PROP	PROPERTY		
FLR	FLOOR	PT	PRESSURE TREATED		
FOS	FACE OF STUDS	R	RISER		
FS	FINISH SURFACE	REQD	REQUIRED		
FT	FOOT, FEET	RD	ROOF DRAIN		
FTG	FOOTING	RM	ROOM		
FW	FINISH WALL	RMS	ROOMS		
F.G.	FINISH GRADE	RO	ROUGH OPENING		
FUT	FUTURE	SC	SOLID CORE		
GA	GAUGE	SCHED	SCHEDULE		
GALV	GALVANIZED	SECT	SECTION		
GL	GLASS	SHT	SHEET		

**SYMBOLS:**

	SECTION NUMBER		MASONRY
	SHEET NUMBER		BRICK
	BUILDING SECTION REFERENCE		CONCRETE
			EARTH
			STEEL
			GRAVEL
			CENTER LINE
			PROPERTY LINE
			LEASE LINE
			EASEMENT LINE
			RIGHT-OF-WAY
			CHAIN LINK FENCE
			WOOD FENCE
			SILT FENCE
			BELOW GRADE ELECTRIC
			BELOW GRADE TELEPHONE
			OVERHEAD ELECTRIC/TELEPHONE
			OVERHEAD TELEPHONE
			OVERHEAD ELECTRIC
			CONTOUR
			TREE PROTECTION FENCE
			TREE LINE
			TREES, SHRUBS, BUSHES
			SANITARY SEWER LINE
			WATER LINE
			NATURAL GAS LINE
	KEY NOTE REFERENCE		
	DOOR NUMBER		
	AREA AND/OR ROOM NUMBER		
	MECHANICAL UNIT		
	UTILITY POLE		
	WORK POINT		
	REVISION OR CONTROL POINT		
	(REFERENCE POINT) ELEVATION REFERENCE		

APPLICANT/LESSEE:



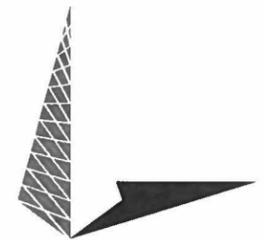
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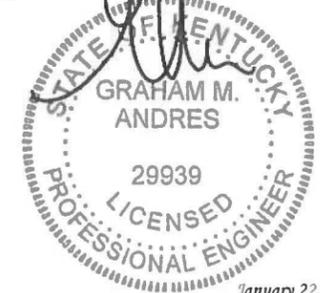
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(BOYD COUNTY)

PLANS PREPARED BY:



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326 TRYON ROAD  
RALEIGH, NC 27603-5263  
OFFICE: (919) 661-6351  
www.tepgroup.net

SEAL:



1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: EJW CHECKED BY: JAS

SHEET TITLE:

**ABBREVIATIONS  
& SYMBOLS**

SHEET NUMBER: <b>N-1</b>	REVISION: <b>1</b> TEP #: 64593
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**ABBREVIATIONS & SYMBOLS**

SCALE: N.T.S.

**GENERAL NOTES:**

1. ALL REFERENCES MADE TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED SBA COMMUNICATIONS OR IT'S DESIGNATED REPRESENTATIVE.
2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF KENTUCKY.
3. WORK SHALL BE COMPLETED IN ACCORDANCE WITH TIA/EIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES AND THE KENTUCKY BUILDING CODE, 2013 EDITION.
4. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
5. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
6. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND IT'S COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
7. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATION. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
8. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, PROVINCIAL, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
10. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE SBA PROJECT MANAGER.
11. BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR/OWNER. CONTRACTOR/OWNER SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
12. THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN ITS PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUBGRADES SHALL BE PROOF-ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFT MATERIAL SHALL BE REWORKED OR REPLACED.
13. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PIPES, DITCHES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
14. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.
15. ALL BUILDING/TOWER DIMENSIONS SHALL BE VERIFIED WITH THE PLANS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED. THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.
16. ANY BUILDINGS ON THIS SITE ARE INTENDED TO SHELTER EQUIPMENT WHICH WILL ONLY BE PERIODICALLY MAINTAINED, AND ARE NOT INTENDED FOR HUMAN OCCUPANCY.
17. TEMPORARY FACILITIES FOR PROTECTION OF TOOLS AND EQUIPMENT SHALL CONFORM TO LOCAL REGULATIONS AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
18. RENTAL CHARGES, SAFETY, PROTECTION AND MAINTENANCE OF RENTED EQUIPMENT SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
19. THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL CARRY LIABILITY INSURANCE IN THE AMOUNTS AND FORM IN ACCORDANCE WITH GLOBALIVE SPECIFICATIONS. CERTIFICATES DEMONSTRATING PROOF OF COVERAGE SHALL BE PROVIDED TO GLOBALIVE PRIOR TO THE START OF THE WORK ON THE PROJECT.

20. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. SAFETY, CARE OF ADJACENT PROPERTIES, AND COMPLIANCE WITH PROVINCIAL AND FEDERAL REGULATIONS REGARDING SAFETY, SHALL BE THE CONTRACTOR'S RESPONSIBILITY, AND THIS, PER THE INTERNATIONAL CODE - REGULATORS RESPECTING OCCUPATIONAL SAFETY & HEALTH THE SUCCESSFUL CONTRACTOR WILL SUBMIT HIT SAFETY MANUAL AT THE PROJECT SITE.
21. THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITY SERVICES TO VERIFY LOCATIONS OF EXISTING UTILITIES AND REQUIREMENTS FOR NEW UTILITY CONNECTIONS PRIOR TO EXCAVATING.
22. THE CONTRACTOR SHALL MAINTAIN THE JOB CLEAR OF TRASH AND DEBRIS. ALL WASTE MATERIALS SHALL BE REMOVED FROM THE SITE PRIOR TO SUBSTANTIAL COMPLETION AND PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL FURNISH ONE 55 GALLON BARREL, AND TRASH BAGS, AND SHALL REMOVE TRASH, DEBRIS, ETC., ON A DAILY BASIS.
23. COSTS FOR BUILDING PERMITS, LANDFILL TAXES, USE TAXES, SALES TAXES AND OTHER CHARGES RELATIVE TO CONSTRUCTION OF THIS PROJECT SHALL BE INCLUDED IN THE CONTRACT PRICE.
24. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS PRIOR TO SUBMITTING HIS PROPOSAL. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS WITH THOSE AT THE SITE. ANY VARIATION WHICH REQUIRES PHYSICAL CHANGE SHALL BE BROUGHT TO THE ATTENTION OF THE SBA PROJECT ENGINEER FOR FACILITIES/CONSTRUCTION.
25. THE CONTRACTOR SHALL GUARANTEE THE WORK PERFORMED ON THE PROJECT BY THE CONTRACTOR AND ANY OR ALL OF THE SUBCONTRACTORS WHO PERFORMED WORK FOR THE CONTRACTOR ON THIS PROJECT. THE GUARANTEE SHALL BE FOR A FULL YEAR FOLLOWING ISSUANCE OF THE FINAL PAYMENT OF HOLDBACK.
26. AWARDED CONTRACTOR WILL BE REQUIRED TO SIGN AND RETURN A COPY OF AN AWARD LETTER FOR SBA'S FILE.
27. CONTRACTOR WILL BE REQUIRED TO PROVIDE PROOF OF LICENSE TO PERFORM WORK IN JURISDICTION AT TIME OF BID AWARD.
28. CONTRACTOR WILL PROVIDE A CONSTRUCTION SCHEDULE PRIOR TO CONSTRUCTION STARTING AND WILL PROVIDE UPDATE/CHANGES (WITH EXPLANATIONS) TO THAT SCHEDULE WHEN/IF ITEMS ARE DELAYED OR PUSHED OUT.
29. CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE SBA PROJECT MANAGERS WITH PHOTOS OF THE MAJOR CONSTRUCTION MILESTONES AS THEY OCCUR.
30. CONTRACTOR WILL BE RESPONSIBLE TO ASSIST IN COORDINATING AND OBTAINING PRIMARY POWER TO THE SITE PRIOR TO TOWER ERECTION BEFORE PROJECT COMPLETION. (ON SITE VISITS WITH UTILITY COMPANY REPRESENTATIVES AS NECESSARY, ETC...)
31. CONTRACTOR SHOULD BE PREPARED FOR RANDOM SBA SAFETY INSPECTIONS AT ALL TIMES.
32. CONTRACTOR IS EXPECTED TO MAINTAIN PROPER WORKING CONDITIONS AND PROCEDURES PER KENTUCKY STANDARDS AT ALL TIMES.
33. CONTRACTOR WILL BE REQUIRED TO OBTAIN THE NECESSARY ELECTRICAL PERMITS AND INSPECTIONS AS REQUIRED BY JURISDICTION.
34. CONTRACTOR IS EXPECTED TO CLOSE-OUT THE JOB SITE AS QUICKLY AS POSSIBLE (OBTAINING A CERTIFICATE OF OCCUPANCY AS REQUIRED BY LOCAL MUNICIPALITY AND GETTING SBA'S REGIONAL SITE MANAGER'S SIGN-OFF/CHECKLIST APPROVAL ON THE SITE).
35. CONTRACTOR WILL PROVIDE A COMPLETED TOWER HEIGHT VERIFICATION FORM AND TAPE DROP WITHIN 24 HOURS OF REACHING OVERALL HEIGHT.
36. CONTRACTOR WILL UTILIZE ALL OF THE SBA PROVIDED DOCUMENTATION INCLUDING BUT NOT LIMITED TO: TOWER CONSTRUCTION ACCEPTANCE CHECKLIST, CONSTRUCTION SCHEDULE, CONSTRUCTION CLOSE-OUT LIST & TOWER HEIGHT VERIFICATION.
37. CONTRACTOR IS RESPONSIBLE FOR CONCRETE COMPRESSION TESTING.
38. CONTRACTOR IS RESPONSIBLE FOR GROUND MEG TESTING AND PROVIDING PROOF OF RESULT.
39. WHEN REQUESTED, PROVIDE 3 COPIES OF FABRICATION AND ERECTION DRAWINGS PRIOR TO FABRICATION. ALLOW UP TO 1 WEEK FOR REVIEW BY CONSULTANT.
40. IN ADDITION TO CONTRACTOR'S QUALITY CONTROL PROGRAM, INDEPENDENT TESTING AND INSPECTION MAY BE PERFORMED BY OWNER OR OWNER'S REPRESENTATIVE.
41. SUBMIT RED-LINES COPY OF CONSTRUCTION DRAWINGS UPON COMPLETION OF CONSTRUCTION HIGHLIGHTING CHANGES IN THE STAMPED AND SIGNED AS-BUILT CONDITION FROM SHOWN ON THE DRAWINGS.
42. CONTRACTOR WILL BE RESPONSIBLE FOR ALL GRADING AND FILL COMPACTION TESTING REQUIRED AS SET FORTH IN THE GEO TECHNOLOGICAL REPORT PROVIDED BY OWNER.

**CONCRETE:**

1. ALL CONCRETE AND CONCRETE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF KENTUCKY BUILDING CODE, 2013 EDITION.
2. THE CONTRACTOR SHALL TAKE SAMPLES OF THE CONCRETE POURED UNDER THE CONDITIONS OUTLINED IN THE KENTUCKY BUILDING CODE, 2013 EDITION.
3. ANY FAILURE OF A CONCRETE TEST CYLINDER TO MEET THE SPECIFIED STRENGTH REQUIREMENTS MUST BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY. CORRECTIVE ACTION MUST BE APPROVED BY THE ENGINEER AND ALL RELATED COSTS SHALL BE AT THE CONTRACTOR'S EXPENSE.

APPLICANT/LESSEE:



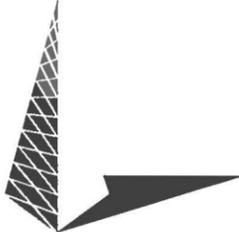
8051 CONGRESS AVENUE  
BOCA RATON, FL 33487-1307  
OFFICE: (561) 226-9457

PROJECT INFORMATION:

**BONITA  
(KY02114)**

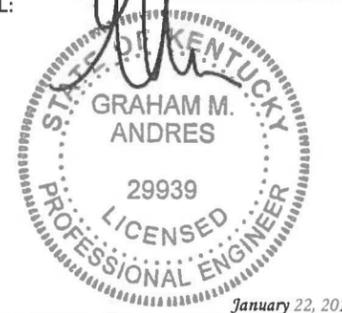
4995 BUCKHAUN COURT  
CATLETTSBURG, KY 41129  
(BOYD COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
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www.tepgroup.net

SEAL:



REV	DATE	ISSUED FOR:
1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY

DRAWN BY: EJW CHECKED BY: JAS

SHEET TITLE:

**GENERAL  
NOTES I**

SHEET NUMBER: **N-2**

REVISION: **1**

TEP #: 64593

## CONCRETE (CONTINUED):

- THE MINIMUM 28-DAY COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE A MINIMUM OF 30 MPA, EXCEPT AS NOTED OR DIRECTED IN THE SOIL REPORT. THE CONCRETE, WHEN POURED, SHALL CONTAIN 7% AIR ENTRAINMENT WITH AN ALLOWABLE VARIATION OF +2%.
- CONTRACTOR MUST TAKE SLUMP TEST AT LEAST ONCE FROM EACH TRANSIT MIXER AFTER A MINIMUM OF 5% CONCRETE LOAD HAD BEEN DISCHARGED. SLUMP, UNLESS NOTED OTHERWISE ON THE DRAWINGS, SHALL BE 75 MM.
- MIXED CONCRETE ON SITE (REMOTE AREAS) WITH THE CORRECT PROPORTION OF CEMENT, SAND, GRAVEL, AND AIR-ENTRAINING AGENT ALREADY ADDED, THE DRY PREMIX IS TO BE MIXED IN A CONCRETE BATCHER IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- BEFORE POURING CONCRETE, THE TRANSPORTING EQUIPMENT AND FORMS SHALL BE CLEANED AND ALL DEBRIS AND ICE SHALL BE REMOVED FROM PLACES TO BE OCCUPIED BY THE CONCRETE. ANY WATER THAT HAS ACCUMULATED IN THE FORMS SHALL BE REMOVED.
- ALL CONCRETE SHALL BE VIBRATED AND WORKED AROUND THE REINFORCEMENTS, EMBEDDED FIXTURES AND INTO THE CORNERS OF THE FORMS. ANY EXCESS WATER THAT ACCUMULATES WHILE THE CONCRETE IS BEING POURED SHALL BE REMOVED.
- THE DESIGN ENGINEER SHALL RECEIVE A MINIMUM OF 24 HOURS NOTICE OF EVERY POUR.
- THE CONCRETE IN FOUNDATIONS MUST BE POURED IN CONTINUOUS POURS BETWEEN CONSTRUCTION JOINTS. NO CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON SITE SPECIFIC DRAWINGS WILL BE PERMITTED. THE CONTRACTOR SHALL PROVIDE EFFICIENT EQUIPMENT TO COMPLETE THE POURING OF EACH SECTION IN ONE CONTINUOUS POUR.
- ALL FRAMEWORK SHALL BE BUILT IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE SHALL BE THOROUGHLY BRACED AND PLUMBED SO THAT THE FINISHED CONCRETE WILL CONFORM TO THE SHAPES, LINES, GRADES, AND DIMENSIONS INDICATED ON THE SITE DRAWINGS.
- FORMS AND SHORING SHALL NOT BE REMOVED UNTIL THE CONCRETE IS ADEQUATELY SET. THEIR REMOVAL SHALL BE DONE IN SUCH A MANNER AS TO ENSURE THE COMPLETE SAFETY OF THE STRUCTURE.
- FORMS WHICH SUPPORT THE WEIGHT OF THE CONCRETE, OR OF SUPERIMPOSED LOADS, SHALL NOT BE REMOVED UNTIL THE CONCRETE IS STRONG ENOUGH TO CARRY ITS OWN WEIGHT, AND SUCH SUPERIMPOSED LOADS AS MAY BE PLACED UPON IT.
- THE CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR AT LEAST 5 DAYS AFTER IT HAS BEEN POURED.
- ALL SURFACES WHICH ARE NOT PROTECTED BY FORMS OR A SEALED WATERPROOF COATING SHALL BE KEPT MOIST BY CONTINUOUS SPRINKLING, OR OTHER MEANS SUCH AS COVERING WITH MOIST SAND, SAWDUST, OR BURLAP.
- WHERE NECESSARY, THE CONCRETE SHALL BE PROTECTED AGAINST THE WEATHER BY A FRAMED HOUSING, TARPAULINS, OR OTHER SUITABLE COVERING.

## REINFORCING STEEL (REBAR):

- REINFORCING STEEL SHALL MEET CODE AND BE PLACED ACCORDING TO THE APPLICABLE DRAWINGS. THE MINIMUM THICKNESS OF CONCRETE OVER THE STEEL SHALL BE AT LEAST 3".
- ALL REINFORCEMENTS THAT ARE REQUIRED FOR A DAYS POUR ON CONCRETE SHALL BE SECURELY FIXED IN PLACE IN SUFFICIENT TIME TO PERMIT INSPECTION BEFORE CONCRETING BEGINS.
- THE DESIGN ENGINEER SHALL BE GIVEN 24 HOURS NOTICE BEFORE THE CONCRETE IS TO BE POURED. FAILURE TO COMPLY MAY NECESSITATE, BUT NOT BE LIMITED TO, THE REMOVAL OF THE POURED CONCRETE AT THE CONTRACTOR'S EXPENSE.

## GROUTING:

- WHERE GROUT IS INDICATED ON THE DRAWINGS UNDER STRUCTURAL BASE PLATES, THIS SHALL BE A NON-SHRINK, NON-FERROUS TYPE. METHODS OF MIXING AND PLACING MUST BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

## COLD WEATHER CONCRETING:

- THE CONTRACTOR SHALL PROVIDE AND HAVE ON THE SITE READY FOR USE, ADEQUATE EQUIPMENT FOR HEATING CONCRETE MATERIALS AND PROTECTING FRESH CONCRETE DURING FREEZING OR NEAR FREEZING WEATHER CONDITIONS, ACCORDING TO THE KENTUCKY BUILDING CODE, 2013 EDITION.
- ALL CONCRETE MATERIALS, REBAR, FORMS, FILLERS, AND THE EARTH WITH WHICH THE CONCRETE IS TO COME INTO CONTACT WITH, SHALL BE FREE FROM FROST AND ICE.
- WHENEVER THE SURROUNDING TEMPERATURE IS BELOW 39°F, ALL CONCRETE POURED IN THE FORMS SHALL HAVE A TEMPERATURE OF 68°F FOR 4 DAYS.
- THE HOUSING, COVERING, OR OTHER PROTECTION USED FOR THE CURING SHALL REMAIN IN PLACE AND INTACT FOR AT LEAST 24 HOURS AFTER THE ARTIFICIAL HEATING IS DISCONTINUED.

- SALT, CALCIUM CHLORIDE, OR OTHER CHEMICALS SHALL NOT BE USED IN THE CONCRETE MIX TO PREVENT THE WATER CONTENT FROM FREEZING.

## UTILITIES:

- CONTRACTOR SHALL CONTACT A SUBSURFACE UTILITY LOCATOR FOR LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. LOCATION OF EXISTING SEWER, WATER LINES, GAS LINES, CONDUITS OR OTHER STRUCTURES ACROSS, UNDERNEATH, OR OTHERWISE ALONG THE LINE OF PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS, AND IF SHOWN ARE ONLY APPROXIMATELY CORRECT. CONTRACTOR ASSUMES SOLE RESPONSIBILITY FOR VERIFYING LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES (INCLUDING TEST PITS BY HAND IF NECESSARY) IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION OF ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLANS, OR IF THERE APPEARS TO BE A CONFLICT.
- CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS WITH APPROPRIATE UTILITY OWNERS AND CONSTRUCTION MANAGER.
- DAMAGE BY THE CONTRACTOR TO UTILITIES OR PROPERTY OF OTHERS, INCLUDING EXISTING PAVEMENT AND OTHER SURFACES DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CLIENT. FOR GRASSES AREAS, SEED AND MULCH SHALL BE ACCEPTABLE.
- THE CONTRACTOR SHALL COORDINATE WITH THE OWNER THE REQUIREMENTS FOR AND LIMITS OF OVERHEAD AND/OR UNDERGROUND ELECTRICAL SERVICE.
- THE CONTRACTOR SHALL COORDINATE THE LOCATION OF NEW UNDERGROUND TELEPHONE SERVICE WITH THE TELEPHONE UTILITY AND THE OWNER'S REQUIREMENTS.
- ALL UNDERGROUND UTILITIES SHALL BE INSTALLED AND TESTED SATISFACTORY PRIOR TO COMMENCING ANY PAVING OPERATIONS WHERE SUCH UTILITIES ARE WITHIN THE LIMITS OF PAVEMENT.

## GRADING:

- THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC...) ALL MATERIAL NOT SUITABLE FOR SUB GRADE IN ITS PRESENT STATE. IF THE MATERIAL, AFTER REWORKING, REMAINS UNSUITABLE THEN THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL AT HIS EXPENSE. ALL SUB GRADES SHALL BE PROOF ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFT MATERIAL SHALL BE REWORKED OR REPLACED.
- THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL DITCHES, PIPES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTABLE BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURES IN OPERABLE CONDITION.
- ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE.

## GROUNDING:

- CONTRACTOR SHALL VERIFY THAT GROUNDING ELECTRODES SHALL BE CONNECTED IN A RING USING #2 SOLID TINNED COPPER WIRE. THE TOP OF THE GROUND RODS AND THE RING CONDUCTOR SHALL BE 2 FEET BELOW FINISHED GRADE. GROUNDING ELECTRODES SHALL BE DRIVEN ON 15'-0" CENTERS (PROVIDE AND INSTALL AS REQUIRED PER TYPICAL GROUNDING PLAN ON SHEET E-4).
- BONDING OF THE GROUNDING CONDUCTOR (NEUTRAL) AND THE GROUNDING CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS. BONDING JUMPER SHALL BE INSTALLED PER CSA.
- GROUND RING CONNECTION CONDUCTORS SHALL BE OF EQUAL LENGTH, MATERIAL, AND BONDING TECHNIQUE.
- CONTRACTOR SHALL ENSURE GROUND RING IS WITHIN 12 TO 36 INCHES OF THE EQUIPMENT PAD. PROVIDE AND INSTALL GROUNDING CONNECTIONS SHOWN IN DETAILS AS NEEDED PER EXISTING SITE GROUNDING SYSTEM. CONTRACTOR SHALL VERIFY ALL EXISTING SITE GROUNDING CONDITIONS BEFORE STARTING WORK OR PURCHASING EQUIPMENT.
- BOND CIGBE TO EXTERNAL GROUND RING WITH 2 RUNS OF #2 SOLID TINNED COPPER CONDUCTOR IN PVC. CONNECT BAR END WITH 2 HOLE LUG, AND "CADWELD" THE OTHER END TO THE EXTERNAL GROUND ROD.
- THE PREFERRED LOCATION FOR COAX GROUNDING IS AT THE BASE OF THE TOWER PRIOR TO THE COAX BEND. BONDING IS SHOWN ON THE ICE BRIDGE DUE TO DIFFICULTY WITH WELDING OR ATTACHING TO TOWER LEGS. CONTRACTOR SHALL ADVISE CONSTRUCTION MANAGER PRIOR TO PLACING CIGBE ON ICE BRIDGE IF MOUNTING TO TOWER LEG IS POSSIBLE.
- CONTRACTOR SHALL VERIFY EXISTING GROUNDING BOND TO THE FENCE POST OR EXTERNAL GROUND RING IN AT (2) PLACES. PROVIDE AND INSTALL GROUNDING CONNECTIONS AS REQUIRED TO MEET THESE CONDITIONS.

APPLICANT/LESSEE:



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BOCA RATON, FL 33487-1307  
OFFICE: (561) 226-9457

PROJECT INFORMATION:

**BONITA**  
**(KY02114)**

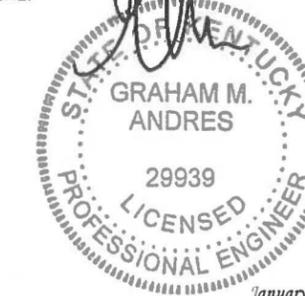
4995 BUCKHAUN COURT  
CATLETTSBURG, KY 41129  
(BOYD COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-5263  
OFFICE: (919) 661-6351  
www.tepgroup.net

SEAL:



1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: EJW CHECKED BY: JAS

SHEET TITLE:

**GENERAL**  
**NOTES II**

SHEET NUMBER:

**N-3**

REVISION:

**1**

TEP #: 64593

**NOTES:**

1. THE BASIS OF THE MERIDIANS AND COORDINATES FOR THIS PLAT IS THE KENTUCKY STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (KYSPCS NAD 83), BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON NOVEMBER 11, 2015.
2. VERTICAL INFORMATION SHOWN, BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) IN US SURVEY FEET.
3. ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.
4. THE TOWER IS LOCATED IN ZONE "X," AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #21019C0069D, DATED AUGUST 5, 2013.
5. BUILDINGS, STREETS, AND EXISTING TREE LINES SHOWN BELOW TAKEN FROM AERIAL PHOTOGRAPHS BY GOOGLE EARTH.

PROPOSED MONOPOLE TOWER TO REPLACE EXISTING WOOD TOWER. SEE SHEET C-3 FOR ELEVATION.

EXISTING SBA LEASE AREA (800 SQ FT). SEE SHEET C-1A FOR DETAILS.

500' RADIUS FROM RELOCATED TOWER IN WHICH ALL EXISTING STRUCTURES AND ALL OWNERS OF REAL ESTATE ARE IDENTIFIED.

200' OFFSET FROM EXISTING ACCESS EASEMENT IN WHICH ALL OTHER EASEMENTS AND EXISTING STRUCTURES ARE IDENTIFIED.

EXISTING ACCESS EASEMENT STARTING AT END OF COUNTY MAINTAINED PORTION OF BUCK HAVEN COURT

N/F  
PARCEL ID# 033-00-00-017.01  
WHITT, CLAUDE  
VOL. 702, PG. 244

N/F  
PARCEL ID# 033-00-00-018.03  
ADAMS, ROBERT JR. & JANET MARIE  
VOL. 717, PG. 508

N/F  
PARCEL ID# 033-00-00-018.04  
DANIEL, JAMES & LESLIE  
VOL. 560, PG. 78

N/F  
PARCEL ID# 033-00-00-018.01  
KENTUCKY TAX BILL SERVICING INC  
VOL. 780, PG. 589

N/F  
PARCEL ID# 033-00-00-019.01  
CLEVINGER CEMETERY

N/F  
PARCEL ID# 033-00-00-017.00  
WHITT, CLAUDE R & JANET M  
VOL. 717, PG. 505

N/F  
PARCEL ID# 033-00-00-018.00  
SLONE, SARA STANLEY  
VOL. 678, PG. 257

N/F  
PARCEL ID# 033-00-00-018.02  
FAULKNER, FRED & CARLA R.  
VOL. 526, PG. 24

N/F  
PARCEL ID# 033-00-00-019.00  
FAULKNER, FRED & CARLA R  
VOL. 478, PG. 928

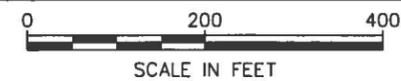
N/F  
PARCEL ID# 034-04-00-019.00  
JACKSON, RALPH & TAMMY  
VOL. 754, PG. 662

N/F  
PARCEL ID# 034-01-00-037.00  
BRUMFIELD, MICHAEL C & CHRISTIE L  
VOL. 717, PG. 563

LEGEND	
	EXIST. PROPERTY LINE
	EXIST. UTILITY POLE
	EXIST. TELCO PEDESTAL
	PROPERTY CORNER
	EXIST. CONTOUR LINE
	EDGE OF PAVEMENT
	OVERHEAD WIRE
	RIGHT-OF-WAY
	CHAIN LINK FENCE
	EXISTING TREE LINE

**SITE PLAN**

SCALE: 1" = 200'



APPLICANT/LESSEE:



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BOCA RATON, FL 33487-1307  
OFFICE: (561) 226-9457

PROJECT INFORMATION:

**BONITA  
(KY02114)**

4995 BUCK HAVEN COURT  
CATLETTSBURG, KY 41129  
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PLANS PREPARED BY:



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SEAL:



REV	DATE	ISSUED FOR:
3	05-23-16	CONSTRUCTION
2	02-01-16	CONSTRUCTION
1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY

DRAWN BY: EJW CHECKED BY: JAS

SHEET TITLE:

**SITE PLAN**

SHEET NUMBER:

**C-1**

REVISION:

**3**

TEP #: 64593

**NOTES:**

1. THE BASIS OF THE MERIDIANS AND COORDINATES FOR THIS PLAT IS THE KENTUCKY STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (KYSPCS NAD 83), BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON NOVEMBER 11, 2015.
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3. ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.
4. THE TOWER IS LOCATED IN ZONE "X," AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #21019C00690, DATED AUGUST 5, 2013.

APPLICANT/LESSEE:



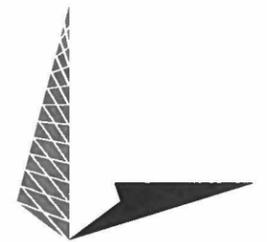
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SEAL:



REV	DATE	ISSUED FOR:
2	02-01-16	CONSTRUCTION
1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY

DRAWN BY: CAJ | CHECKED BY: JAS

SHEET TITLE:

**SITE LAYOUT**

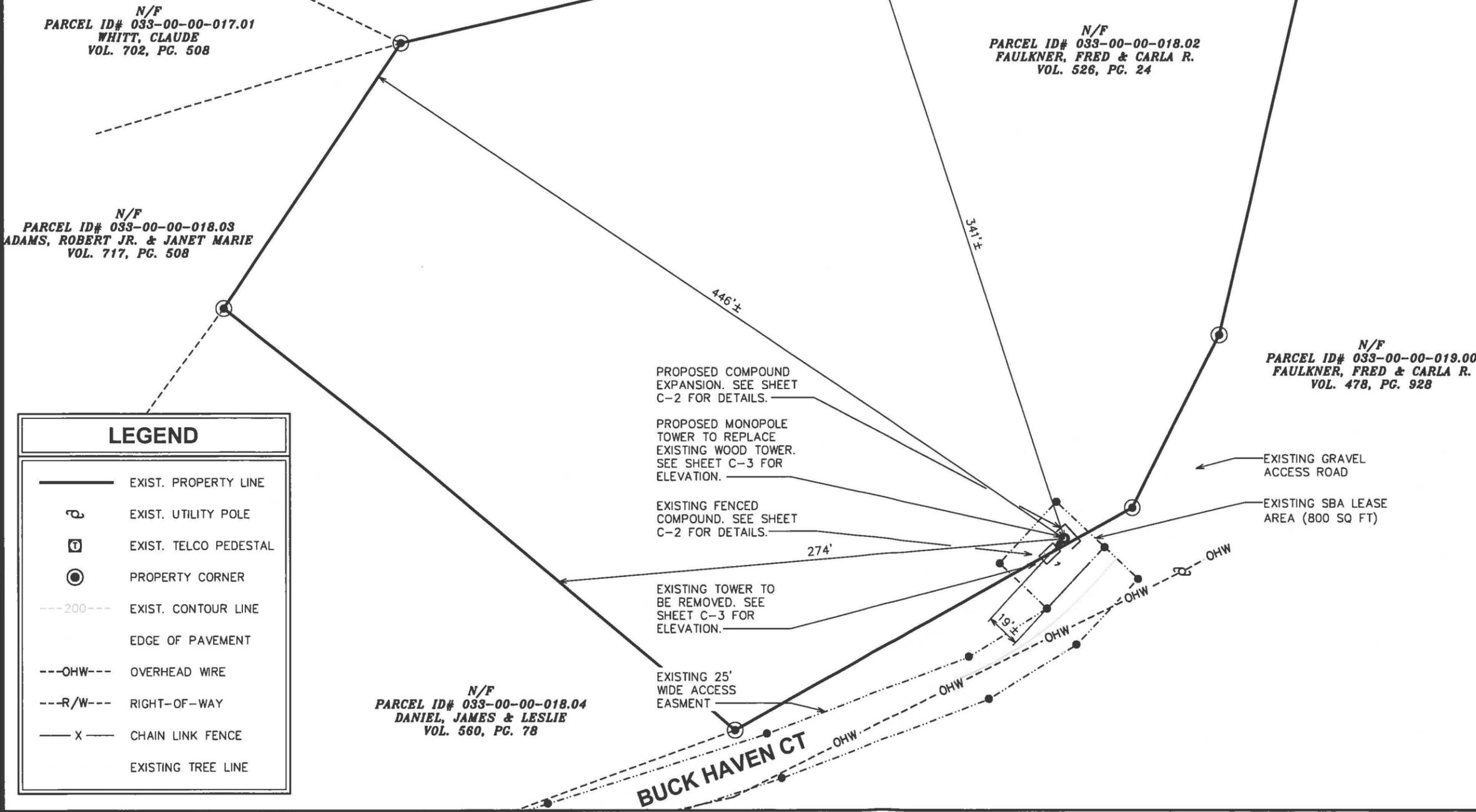
SHEET NUMBER:

**C-1A**

REVISION:

**2**

TEP #: 64593



**LEGEND**

- EXIST. PROPERTY LINE
- ⊕ EXIST. UTILITY POLE
- ⊕ EXIST. TELCO PEDESTAL
- PROPERTY CORNER
- - - 200 - - - EXIST. CONTOUR LINE
- EDGE OF PAVEMENT
- - - OHW - - - OVERHEAD WIRE
- - - R/W - - - RIGHT-OF-WAY
- X - CHAIN LINK FENCE
- EXISTING TREE LINE

**SITE LAYOUT**

SCALE: 1" = 60'



**NOTE:**

CONTRACTOR TO VERIFY THAT EXISTING GRAVEL IS SUFFICIENT FOR COMPOUND EXPANSION. ADD #57 STONE TO CREATE A DEPTH OF 4" ACROSS COMPOUND EXPANSION WHERE GRAVEL IS SPARSE.

N/F  
 PARCEL ID# 033-00-00-018.02  
 FAULKNER, FRED & CARLA R.  
 VOL. 526, PG. 24

N/F  
 PARCEL ID# 033-00-00-019.00  
 FAULKNER, FRED & CARLA R.  
 VOL. 478, PG. 928

PROPOSED MONOPOLE TOWER TO REPLACE EXISTING WOOD TOWER. SEE SHEET C-3 FOR ELEVATION.

PROPOSED 2' WIDE ICE BRIDGE. SEE SHEET C-5 FOR DETAILS.

EXISTING COVERED CONCRETE PAD WITH EQUIPMENT

EXISTING 90' WOOD TOWER TO BE REMOVED. SEE SHEET C-3 FOR ELEVATION.

EXISTING GROUND ROD

EXISTING SBA LEASE AREA (800 SQ FT)

PROPOSED 4" #57 STONE ABOVE GEOTEXTILE FABRIC INSIDE COMPOUND AND EXTENDING 12" OUTSIDE FENCE. SEE NOTE.

PROPOSED SBA CHAINLINK FENCE EXTENSION. SEE SHEET C-6 FOR DETAILS.

EXISTING FENCE SECTION TO BE REMOVED

EXISTING GRAVEL ACCESS ROAD

EXISTING 4' WIDE ACCESS GATE

EXISTING FENCED COMPOUND

**BUCK HAVEN CT**

NAD 83

LEGEND	
	EXIST. PROPERTY LINE
	EXIST. UTILITY POLE
	EXIST. TELCO PEDESTAL
	PROPERTY CORNER
	EXIST. CONTOUR LINE
	EDGE OF PAVEMENT
	OVERHEAD WIRE
	RIGHT-OF-WAY
	CHAIN LINK FENCE
	EXISTING TREE LINE

**COMPOUND DETAIL**

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



APPLICANT/LESSEE:



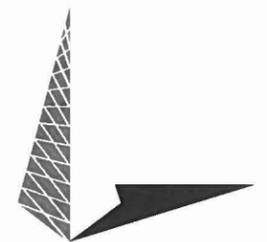
8051 CONGRESS AVENUE  
 BOCA RATON, FL 33487-1307  
 OFFICE: (561) 226-9457

PROJECT INFORMATION:

**BONITA  
 (KY02114)**

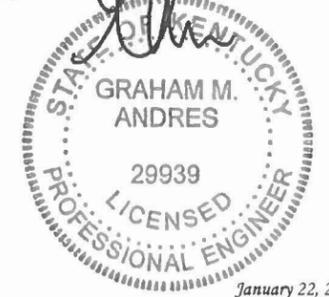
4995 BUCKHAUN COURT  
 CATLETTSBURG, KY 41129  
 (BOYD COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-5263  
 OFFICE: (919) 661-6351  
 www.tepgroup.net

SEAL:



REV	DATE	ISSUED FOR:
1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY

DRAWN BY: CAJ | CHECKED BY: JAS

SHEET TITLE:

**COMPOUND DETAIL**

SHEET NUMBER:

**C-2**

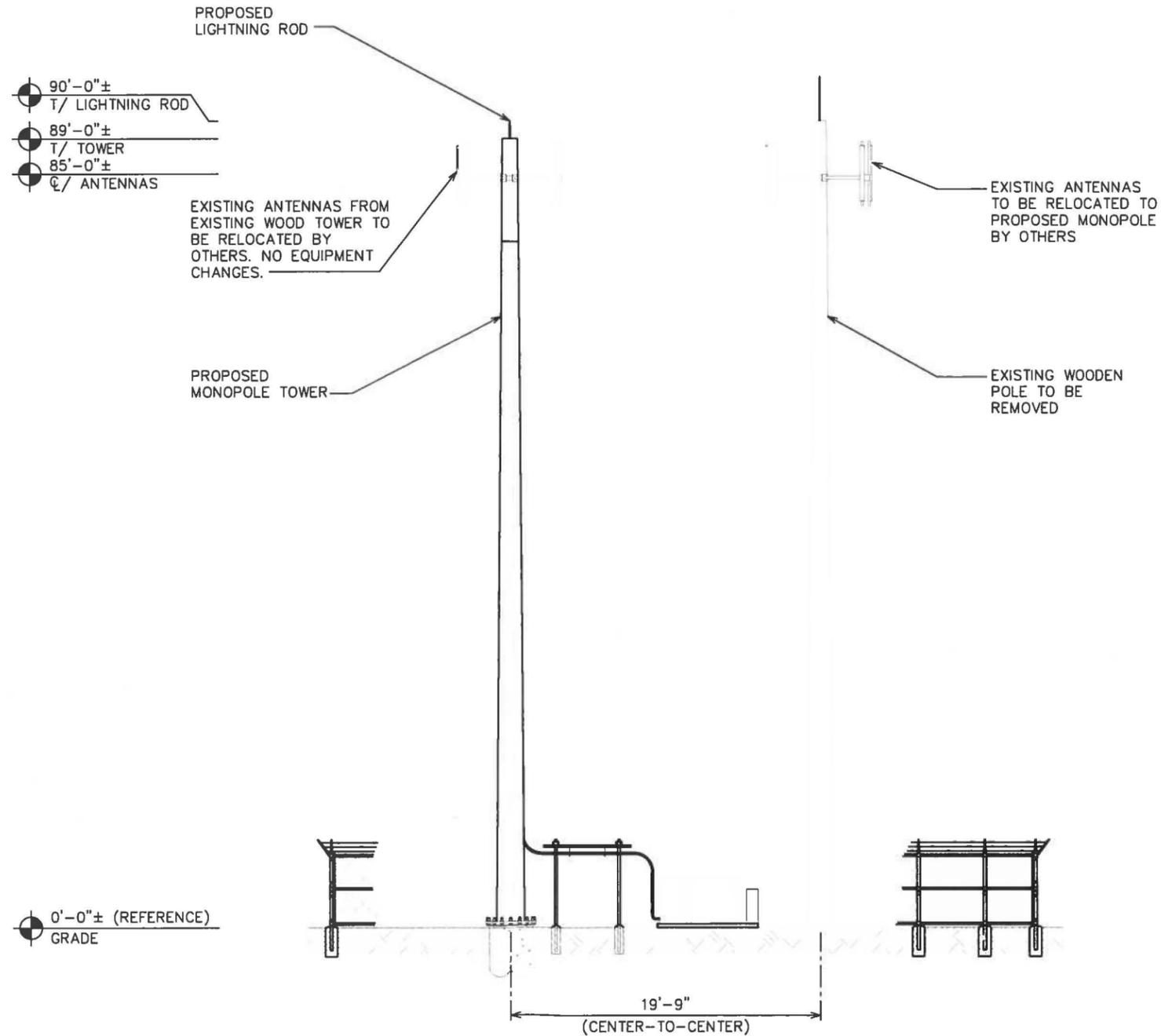
REVISION:

**1**

TEP #: 64593

**NOTES:**

1. PROPOSED COAX TO BE RUN INSIDE MONOPOLE USING HOISTING GRIPS (AS DIRECTED BY TOWER MANUFACTURER)
2. LIGHTNING ROD AND CLIMBING PEGS TO BE PROVIDED BY TOWER MANUFACTURER.
3. TOWER SHALL BE CONSTRUCTED OF GALVANIZED STEEL OR PAINTED PER APPLICABLE STANDARDS OF THE FAA OR OTHER APPLICABLE FEDERAL OR STATE AGENCY.
4. TOWER ELEVATION SHOWN FOR REFERENCE ONLY. VERIFY ACTUAL TOWER DESIGN & LOADING WITH TOWER DRAWINGS FROM MANUFACTURER AND/OR PASSING STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION.



APPLICANT/LESSEE:



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BOCA RATON, FL 33487-1307  
OFFICE: (561) 226-9457

PROJECT INFORMATION:

**BONITA  
(KY02114)**

4995 BUCKHAUN COURT  
CATLETTSBURG, KY 41129  
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1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY

DRAWN BY: CAJ CHECKED BY: JAS

SHEET TITLE:

**TOWER  
ELEVATION**

SHEET NUMBER:

**C-3**

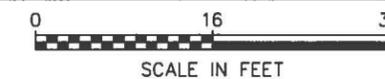
REVISION:

**1**

TEP #: 64593

**TOWER ELEVATION**

SCALE: 1/6" = 1'-0"



**NOTE:**

CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ACROSS COMPOUND.

N/F  
PARCEL ID# 033-00-00-018.02  
FAULKNER, FRED & CARLA R.

N/F  
PARCEL ID# 033-00-00-019.00  
FAULKNER, FRED & CARLA R.

PROPOSED SILT FENCE.  
SEE PAGE C-6 FOR  
DETAILS.

BUCK HAVEN CT

1/4" = 1'-0"  
N

**LEGEND**

SILT FENCE 

**SILT FENCE DETAILS**

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



APPLICANT/LESSEE:



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PROJECT INFORMATION:

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(KY02114)**

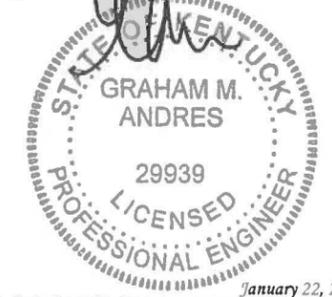
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(BOYD COUNTY)

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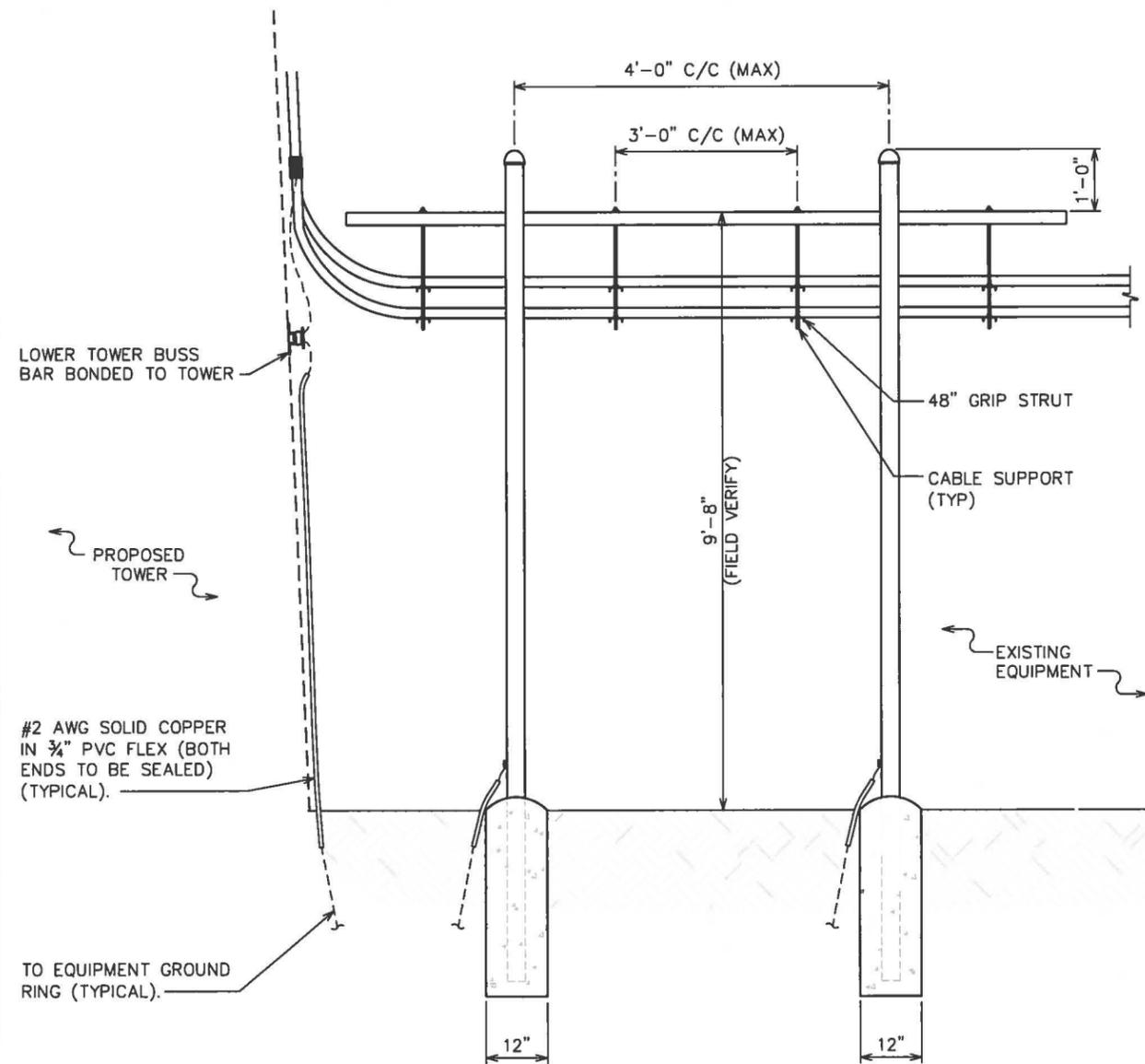


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0	01-08-16	PRELIMINARY

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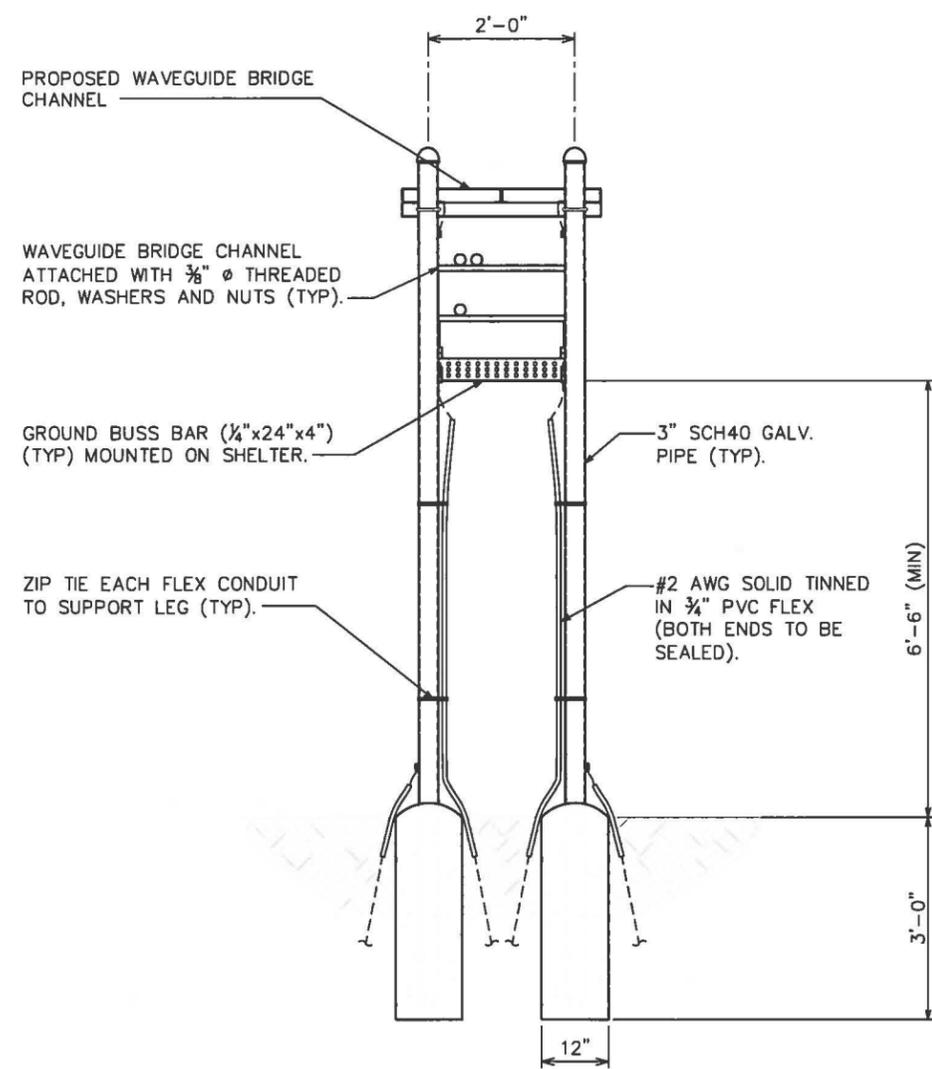
SHEET TITLE:  
**GRADING PLAN**

SHEET NUMBER: **C-4** | REVISION: **1**  
TEP #: 64593



**ICE BRIDGE DETAIL (SIDE VIEW)**

SCALE: N.T.S

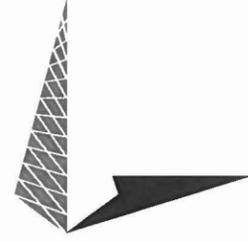


**ICE BRIDGE DETAIL (FRONT VIEW)**

SCALE: N.T.S

APPLICANT/LESSEE:  
**SBA**  
 8051 CONGRESS AVENUE  
 BOCA RATON, FL 33487-1307  
 OFFICE: (561) 226-9457

PROJECT INFORMATION:  
**BONITA (KY02114)**  
 4995 BUCKHAUN COURT  
 CATLETTSBURG, KY 41129  
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PLANS PREPARED BY:  
  
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 www.tepgroup.net

SEAL:  
  
 GRAHAM M. ANDRES  
 29939  
 LICENSED PROFESSIONAL ENGINEER  
 January 22, 2016

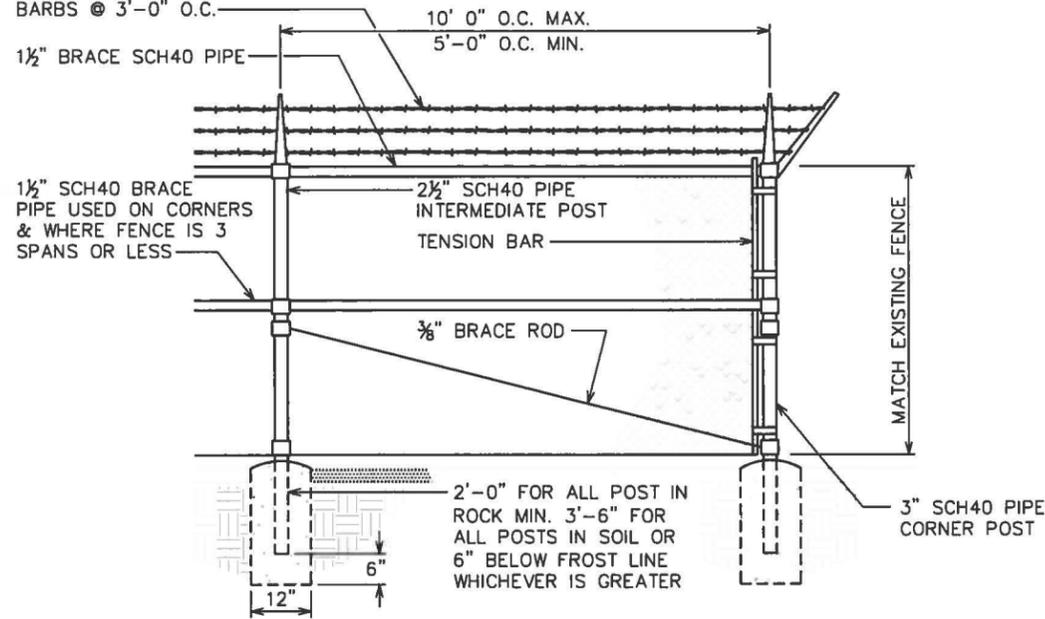
REV	DATE	ISSUED FOR:
1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_

SHEET TITLE:  
**ICE BRIDGE DETAILS**

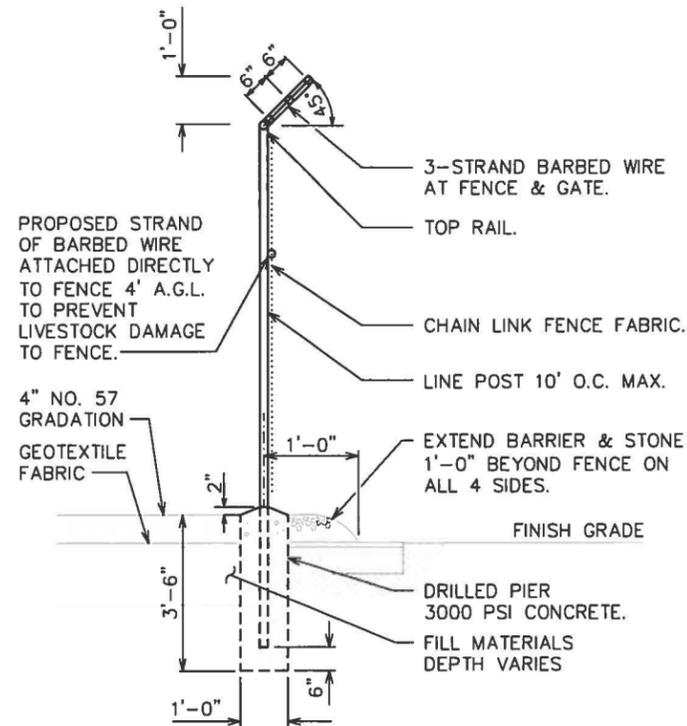
SHEET NUMBER: **C-5** REVISION: **1**  
 TEP #: 64593

GALV/ 3 STRANDS OF 12 GA. BARBED WIRE WITH 4 POINT BARBS @ 3'-0" O.C.



**PROPOSED FENCE ELEVATION**

SCALE: N.T.S.

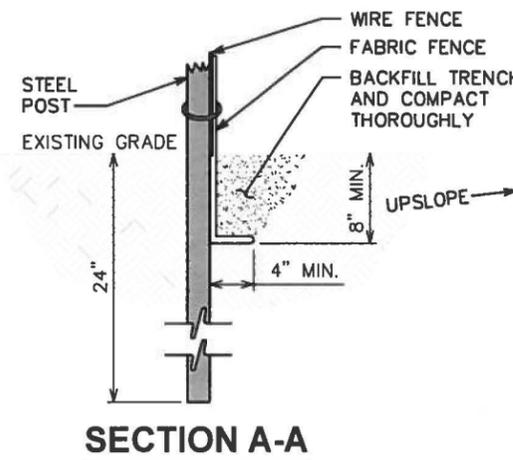
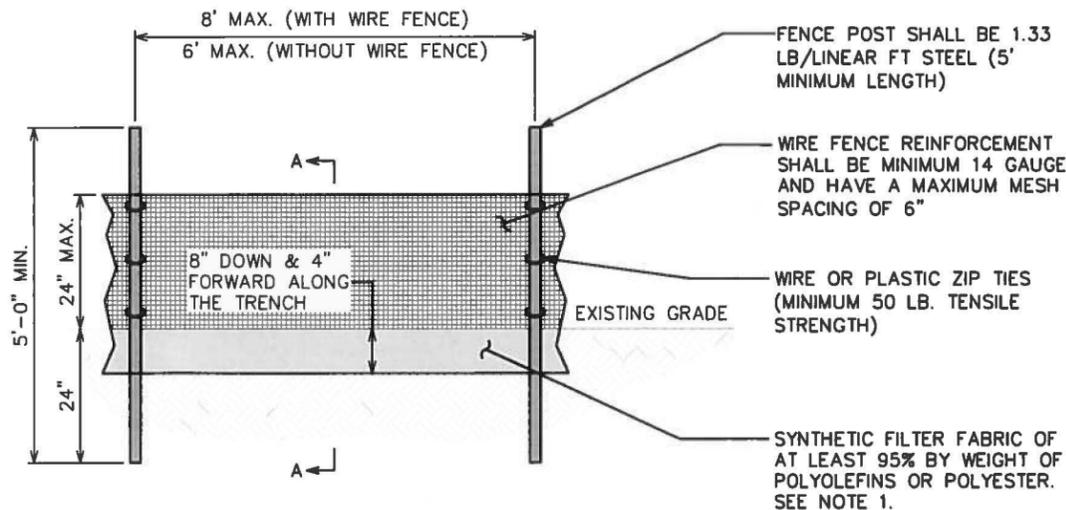


**FENCE / BARBED WIRE ARM DETAIL**

SCALE: N.T.S.

**NOTES:**

1. FILTER FABRIC SHALL CONFORM TO THE REQUIREMENTS LISTED IN ASTM D 6461.
2. ENDS OF INDIVIDUAL FILTER FABRIC SHALL BE SECURELY FASTENED AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
3. PACE 12 INCHES OF FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
4. INSPECT SEDIMENT FENCE(S) AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL.
5. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE.
6. AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE AND PROPERLY STABILIZE THE SITE.



**SILT FENCE DETAILS**

SCALE: N.T.S.

APPLICANT/LESSEE:



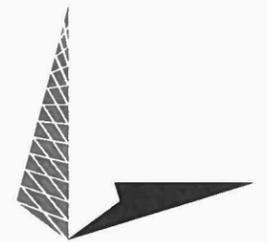
8051 CONGRESS AVENUE  
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OFFICE: (561) 226-9457

PROJECT INFORMATION:

**BONITA  
(KY02114)**

4995 BUCKHAUN COURT  
CATLETTSBURG, KY 41129  
(BOYD COUNTY)

PLANS PREPARED BY:



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DRAWN BY: EJW CHECKED BY: JAS

SHEET TITLE:

**PROPOSED FENCE  
DETAILS**

SHEET NUMBER:

**C-6**

REVISION:

**1**

TEP #: 64593

**NOTES:**

1. SIGNS TO BE INSTALLED ON COMPOUND FENCE PANEL TO THE LEFT ON THE GATE. NOT ON ACTUAL GATE.
2. SIGN ① SHALL BE POSTED AT THE PUBLIC ROW WHERE THE ACCESS TO THE SITE SHALL BE AND ON THE COMPOUND FENCE PANEL TO THE LEFT OF THE GATE.

18" x 24" .040 Aluminum

18" x 12" .040 Aluminum \$9.00

4" x 18" .040 Aluminum \$5.00

18" x 12" .040 Aluminum \$9.00

1" FCC or Site ID Decal only \$2.50

24" x 48" .063 Aluminum

24" x 18" SF C-X Plastic Temp \$4.00

18" x 24" SF C-X Plastic Temp \$3.50

APPLICANT/LESSEE:



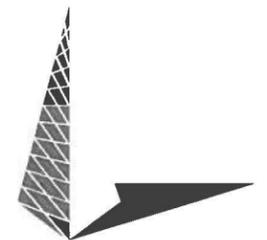
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4995 BUCKHAUN COURT  
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0	01-08-16	PRELIMINARY

DRAWN BY: EJW CHECKED BY: JAS

SHEET TITLE:

**SIGNAGE  
DETAILS**

SHEET NUMBER:	REVISION:
<b>C-7</b>	<b>2</b>
	TEP #: 64593

**SIGNAGE DETAILS**

SCALE: N.T.S.

**ELECTRICAL NOTES:**

**SCOPE:**

1. SHALL INCLUDE ALL LABOR, MATERIALS AND APPLIANCES REQUIRED FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR OPERATION OF ALL WORK SHOWN ON THE DRAWING AS SPECIFIED HEREIN:

- |                        |                               |
|------------------------|-------------------------------|
| 1. ELECTRIC SERVICE    | 4. MISCELLANEOUS MATERIALS    |
| 2. CONDUIT AND RACEWAY | 5. TELEPHONE CONDUITS         |
| 3. CONDUCTORS          | 6. LIGHTNING ARRESTING SYSTEM |

**CODES:**

- THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LAWS AND CODES. THESE INCLUDE BUT ARE NOT LIMITED TO THE LATEST EDITIONS OF:
  - THE NATIONAL ELECTRIC CODE – NEC
  - LOCAL AND STATE AMENDMENTS
  - REGULATIONS OF THE SERVING UTILITY COMPANY
- ALL PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR.
- AFTER COMPLETION AND FINAL INSPECTION OF THE WORK, THE OWNER SHALL BE FURNISHED A ESA CERTIFICATE OF COMPLETION AND APPROVAL.

**TESTING:**

- UPON COMPLETION OF THE INSTALLATION, OPERATE AND ADJUST ALL EQUIPMENT AND SYSTEMS TO MEET SPECIFIED PERFORMANCE REQUIREMENTS. ALL TESTING SHALL BE DONE BY QUALIFIED PERSONNEL.

**GUARANTEE:**

- IN ADDITION TO THE GUARANTEE OF THE EQUIPMENT BY THE MANUFACTURER, EACH PIECE OF EQUIPMENT SPECIFIED HEREIN SHALL ALSO BE GUARANTEED FOR DEFECTS OF MATERIAL OR WORKMANSHIP OCCURRING DURING A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE OWNER. WITHOUT EXPENSE TO THE OWNER ALL WARRANTEE CERTIFICATES & GUARANTEES FURNISHED BY THE MANUFACTURERS SHALL BE TURNED OVER TO THE OWNER.

**CO-ORDINATION:**

- CONTRACTOR SHALL COORDINATE ALL WORK WITH THE POWER AND TELEPHONE COMPANIES AND SHALL COMPLY WITH ALL SERVICE REQUIREMENTS OF EACH UTILITY COMPANY.

**EXAMINATION OF SITE:**

- PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL VISIT THE SITE OF THE JOB AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED ELECTRICAL INSTALLATION AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. FAILURE TO COMPLY WITH THE INTENT OF THIS PARAGRAPH WILL IN NO WAY RELIEVE THE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM OR SYSTEMS.

**CUTTING, PATCHING AND EXCAVATION:**

- COORDINATION OF ALL SLEEVES, CHASES, ETC., WILL BE REQUIRED PRIOR TO THE CONSTRUCTION OF ANY PORTION OF THE WORK. ALL CUTTING AND PATCHING OF WALLS, PARTITIONS, FLOORS, AND CHASES IN CONCRETE, WOOD, STEEL OR MASONRY SHALL BE DONE AS PROVIDED ON THE DRAWINGS.
- ALL NECESSARY EXCAVATIONS AND BACKFILLING INCIDENTAL TO THE WORK UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWING SHALL BE PROVIDED BY THIS CONTRACTOR.
- SEAL ALL PENETRATION THROUGH WALL AND FLOORS WITH APPROVED GROUT.

**EXTERIOR CONDUIT:**

- ALL EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL.

**RACEWAYS:**

- ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT. ALL CONDUIT SHALL BE RIGID STEEL, EMT OR SCH40 PVC AS INDICATED ON THE DRAWINGS.
- WHERE INSTALLED ON EXTERIORS AND EXPOSED TO DAMAGE, ALL CONDUIT SHALL BE RIGID STEEL. ALUMINUM CONDUIT SHALL NOT BE ALLOWED.
- CONCEALED CONDUIT IN WALLS OR INTERIOR SPACES ABOVE GRADE MAY BE EMT.
- UNDERGROUND CONDUITS SHALL BE RIGID STEEL OR SCHEDULE 40 PVC AS INDICATED ON THE DRAWINGS.
- ALL CONDUIT RUNS SHALL USE APPROVED COUPLINGS AND CONNECTORS. PROVIDE INSULATED BUSHING FOR ALL CONDUIT TERMINATIONS. ALL CONDUIT RUNS IN A WET LOCATION SHALL HAVE WATERPROOF FITTINGS.
- PROVIDE SUPPORTS FOR ALL CONDUITS IN ACCORDANCE WITH CEC REQUIREMENTS. ALL CONDUITS SHALL BE SIZED AS REQUIRED BY NEC.
- BURIAL DEPTH OF ALL CONDUITS SHALL BE AS REQUIRED BY CODE FOR EACH SPECIFIC CONDUIT TYPE AND APPLICATION.

- CONDUIT ROUTES ARE SCHEMATIC. CONTRACTOR SHALL FIELD VERIFY BEFORE BID. COORDINATE ROUTE WITH WIRELESS CARRIER AND BUILDING OWNER.

**EQUIPMENT:**

- ALL DISCONNECT SWITCHES SHALL BE SERVICE ENTRANCE RATED, HEAVY DUTY TYPE.
- NEW CIRCUIT BREAKERS SHALL BE RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AS DETERMINED BY THE LOCAL UTILITY. CONTRACTOR SHALL VERIFY MAXIMUM AVAILABLE FAULT CURRENT, AND COORDINATE INSTALLATION WITH THE LOCAL UTILITY BEFORE STARTING WORK.

**CONDUCTORS:**

- FURNISH AND INSTALL CONDUCTORS CALLED FOR IN THE DRAWINGS. ALL CONDUCTORS SHALL HAVE TYPE THWN (MIN) (75°C) INSULATION, RATED FOR 600 VOLTS.
- ALL CONDUCTORS SHALL BE COPPER, THE USE OF ALUMINUM CONDUCTORS SHALL NOT BE ALLOWED. ALL CONDUCTORS SHALL BE UL LISTED AND SHALL BE PROVIDED AND INSTALLED AS FOLLOWS:
  - MINIMUM WIRE SIZE SHALL BE #12 AWG.
  - ALL CONDUCTORS SIZE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS SIZED #10 AND SMALLER MAY BE SOLID OR STRANDED.
  - CONNECTION FOR #10 AWG AND SMALLER SHALL BE BY TWISTING TIGHT AND INSTALLING INSULATED PRESSURE OR WIRE NUT CONNECTIONS.
  - CONNECTION FOR #8 AWG AND LARGER SHALL BE BY USE OF STEEL CRIMP-ON SLEEVES WITH NYLON INSULATOR.
- ALL CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH CEC STANDARDS.
- THE RACEWAY SYSTEM SHALL BE COMPLETE BEFORE INSTALLING CONDUCTORS

**PENETRATIONS:**

- CONTRACTOR SHALL COMPLY WITH ULC PENETRATION DETAILS FOR PENETRATIONS OF ALL RATED WALLS, ROOF, ETC.

APPLICANT/LESSEE:



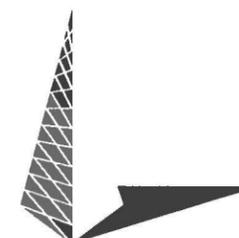
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OFFICE: (561) 226-9457

PROJECT INFORMATION:

**BONITA  
(KY02114)**

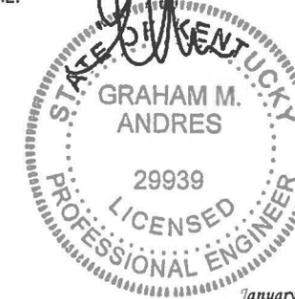
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PLANS PREPARED BY:



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1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: EJW CHECKED BY: JAS

SHEET TITLE:  
**ELECTRICAL  
NOTES**

SHEET NUMBER: <b>E-1</b>	REVISION: <b>1</b> TEP #: 64593
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# ELECTRICAL LEGEND:

## ABBREVIATIONS:

A - AMPERE  
 AFG - ABOVE FINISHED GRADE  
 ATS - AUTOMATIC TRANSFER SWITCH  
 AWG - AMERICAN WIRE GAUGE  
 BCW - BARE COPPER WIRE  
 BFG - BELOW FINISHED GRADE  
 BKR - BREAKER  
 BTS - BASE TRANSCEIVER STATION  
 C - CONDUIT  
 C/W - COMPLETE WITH  
 CKT - CIRCUIT  
 DISC - DISCONNECT  
 EC - EMPTY CONDUIT  
 EGR - EXTERNAL GROUND RING  
 EMT - ELECTRIC METALLIC TUBING  
 F/A - FIRE ALARM  
 FSC - FLEXIBLE STEEL CONDUIT  
 GEN - GENERATOR  
 GPS - GLOBAL POSITIONING SYSTEM  
 GRD - GROUND  
 IGB - ISOLATED GROUND BAR  
 IGR - INTERIOR GROUND RING (HALO)  
 KW - KILOWATTS  
 MGB - MAIN GROUND BAR  
 CEC - CANADIAN ELECTRIC CODE  
 PCS - PERSONAL COMMUNICATION SYSTEM  
 PH - PHASE  
 PNL - PANEL  
 PNLBD - PANELBOARD  
 PVC - SCH40 RIGID NON-METALLIC CONDUIT  
 RBS - RADIO BASE STATION  
 REL - RELOCATED  
 RGS - RIGID GALVANIZED STEEL CONDUIT  
 S/C - SEPERATE CONDUIT  
 SES - SITE ENGINEERING SPECIFICATIONS  
 SW - SWITCH  
 TGB - TOWER GROUND BAR  
 U/F - UNFUSED  
 ULC - UNDERWRITERS LABORATORIES, CANADA  
 V - VOLTAGE  
 W - WATTS  
 WP - WEATHERPROOF  
 XFMR - TRANSFORMER  
 XMTR - TRANSMITTER

—E— UNDERGROUND ELECTRICAL CONDUIT  
 —T— UNDERGROUND TELEPHONE CONDUIT  
 KILOWATT-HOUR METER  
 — — UNDERGROUND BONDING AND GROUNDING CONDUCTOR  
 ● CADWELD  
 GROUND ROD WITH INSPECTION WELL  
 EXISTING M/W DISH ANTENNA  
 FUTURE M/W DISH ANTENNA  
 EXISTING ROOF DRAIN  
 EXISTING ROOF HATCH  
 \$ 15A 120V SPST SWITCH  
 15A 120V DUPLEX RECEPTACLE  
 120V, 1Ø DIRECT CONNECTION TO EQUIPMENT SUPPLIED BY OTHER DIVISIONS  
 208V, 1Ø DIRECT CONNECTION TO EQUIPMENT SUPPLIED BY OTHER DIVISIONS  
 CIRCUIT BREAKER  
 DISCONNECT SWITCH. F DENOTES FUSED  
 SURFACE MOUNTED PANELBOARD  
 TRANSFORMER  
 CHECK METER  
 DENOTES CABLE OR CONDUIT TURNING UP IN PLAN VIEW  
 CHANGE IN ELEVATION OF CABLE OR CONDUIT IN PLAN VIEW  
 DENOTES CABLE OR CONDUIT TURNING DOWN IN PLAN VIEW  
 GROUND ROD  
 LIGHTNING PROTECTION AIR TERMINAL  
 —EC— ETHERNET CABLE  
 —F— FIBRE CABLE  
 —DC— DC CABLE

APPLICANT/LESSEE:



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BOCA RATON, FL 33487-1307  
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PROJECT INFORMATION:

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4995 BUCKHAUN COURT  
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PLANS PREPARED BY:



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1	01-22-16	CONSTRUCTION
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DRAWN BY: EJW CHECKED BY: JAS

SHEET TITLE:

**ELECTRICAL  
LEGEND**

SHEET NUMBER:

**E-2**

REVISION:

**1**

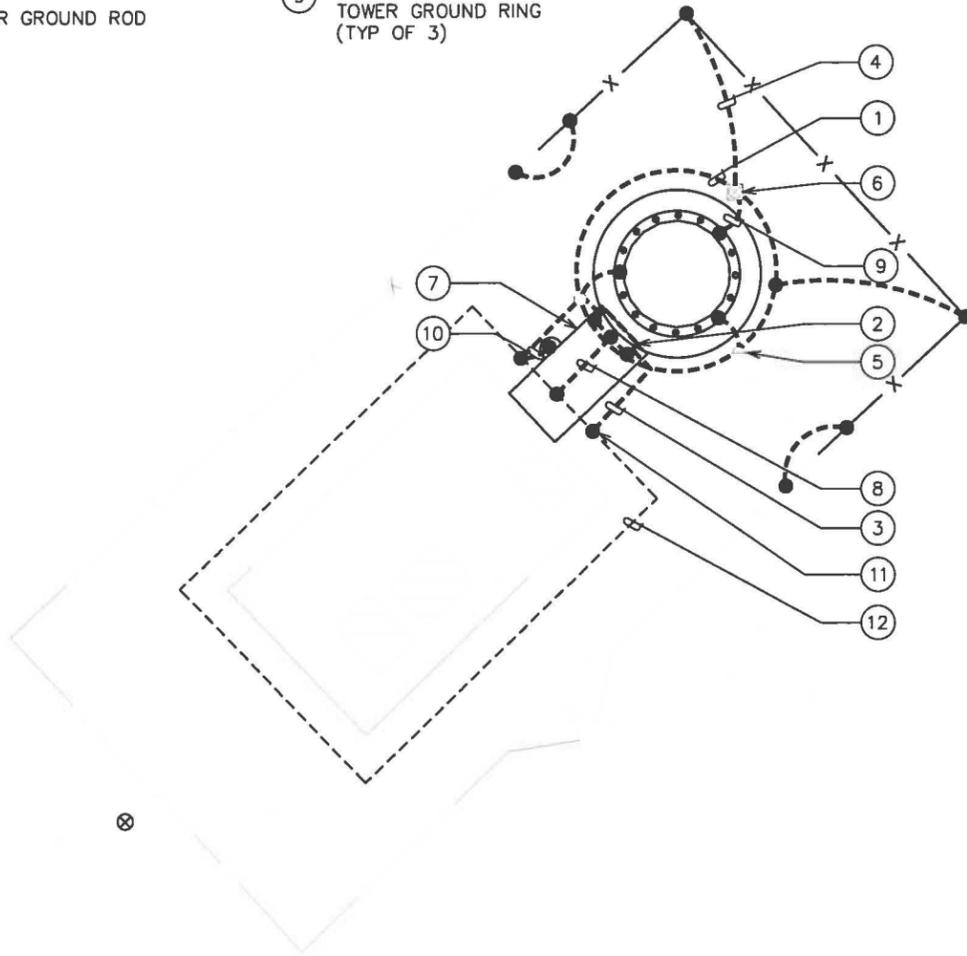
TEP #: 64593

**GROUNDING NOTES:**

- GROUNDING ELECTRODES SHALL BE CONNECTED IN A RING USING #2 AWG BARE TINNED COPPER WIRE. THE TOP OF THE GROUND RODS AND THE RING CONDUCTOR SHALL BE 30" BELOW FINISHED GRADE. GROUNDING ELECTRODES SHALL BE DRIVEN ON 15'-0"
- BONDING OF THE GROUNDED CONDUCTOR (NEUTRAL) AND THE GROUNDING CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS. BONDING JUMPER SHALL BE INSTALLED PER N.E.C. ARTICLE 250.30.
- CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNDING SYSTEM IS COMPLETE. THE CONSTRUCTION MANAGER SHALL INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.

**DRAWING NOTES:**

- |  |   |   |
|--|---|---|
| ① PROPOSED TOWER GROUND RING                         | ⑥ GROUND ROD WITH INSPECTION WELL                       | ⑩ #2 AWG BOND TO PROPOSED ICE BRIDGE POST (TYP)   |
| ② PROPOSED TOWER BUS BAR                             | ⑦ ICE BRIDGE  | ⑪ PROPOSED GROUND TO CONNECT TO EXISTING EQUIPMENT GROUND RING. CONTRACTOR TO VERIFY LOCATION OF EXISTING GROUNDING SYSTEM (TYP). |
| ③ #2 AWG ICE BRIDGE GROUND RING BURIED 30" BFG (TYP) | ⑧ #2 AWG BARE SOLID TINNED COPPER WIRE BETWEEN BUS BARS | ⑫ EXISTING EQUIPMENT GROUND RING  |
| ④ #2 AWG BOND TO PROPOSED FENCE POST (TYP)           | ⑨ BOND TOWER STEEL TO TOWER GROUND RING (TYP OF 3)      |   |
| ⑤ 5/8" x 10' COPPER GROUND ROD                       |   |   |



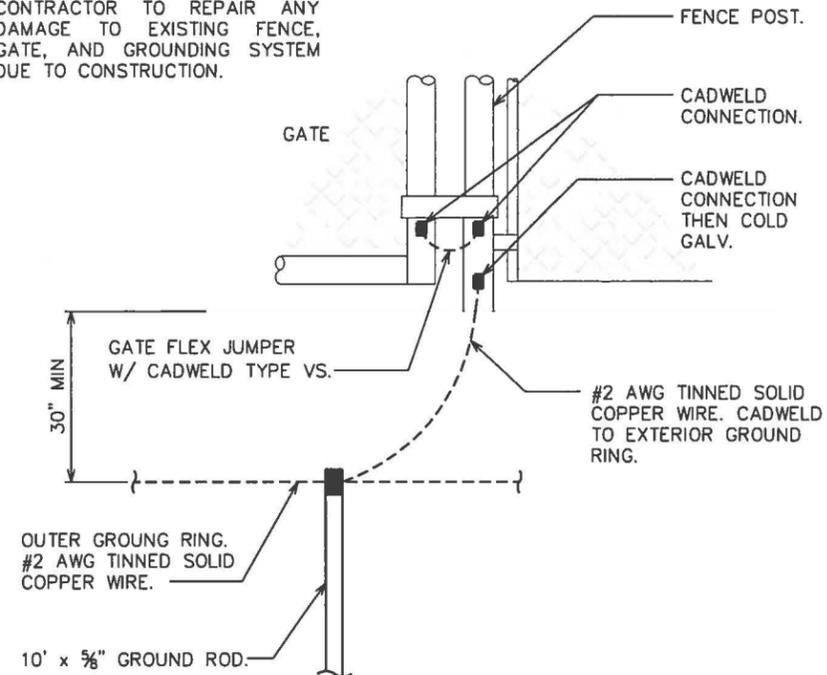
**TOWER GROUNDING PLAN**

SCALE: 3/16" = 1'-0"



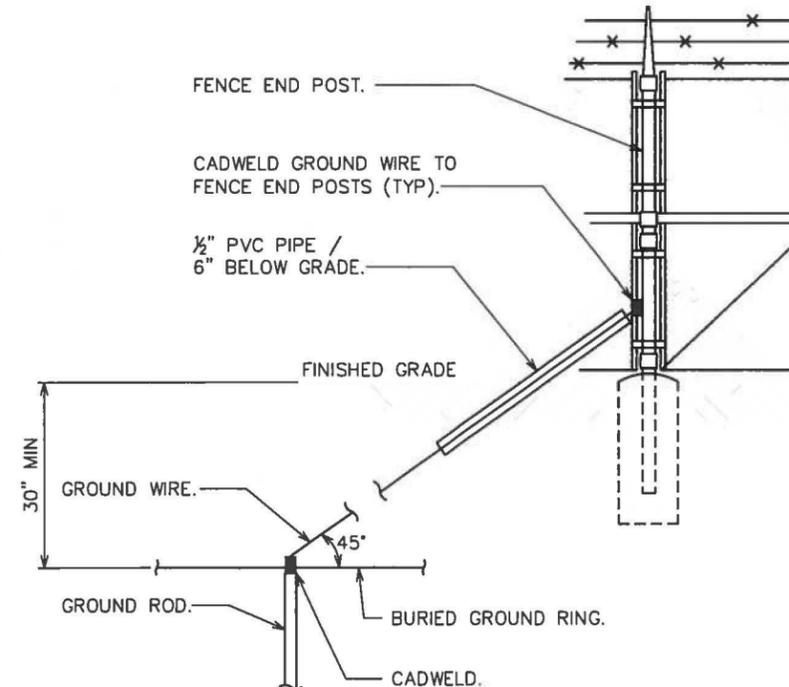
**NOTE:**

CONTRACTOR TO REPAIR ANY DAMAGE TO EXISTING FENCE, GATE, AND GROUNDING SYSTEM DUE TO CONSTRUCTION.



**GATE GROUNDING DETAILS**

SCALE: N.T.S.



**FENCE GROUNDING**

SCALE: N.T.S.

APPLICANT/LESSEE:



8051 CONGRESS AVENUE  
BOCA RATON, FL 33487-1307  
OFFICE: (561) 226-9457

PROJECT INFORMATION:

**BONITA  
(KY02114)**

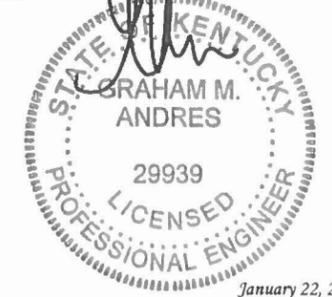
4995 BUCKHAUN COURT  
CATLETTSBURG, KY 41129  
(BOYD COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-5263  
OFFICE: (919) 661-6351  
www.tepgroup.net

SEAL:



REV	DATE	ISSUED FOR:
1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY

DRAWN BY: EJW CHECKED BY: JAS

SHEET TITLE:

**GROUNDING  
PLAN**

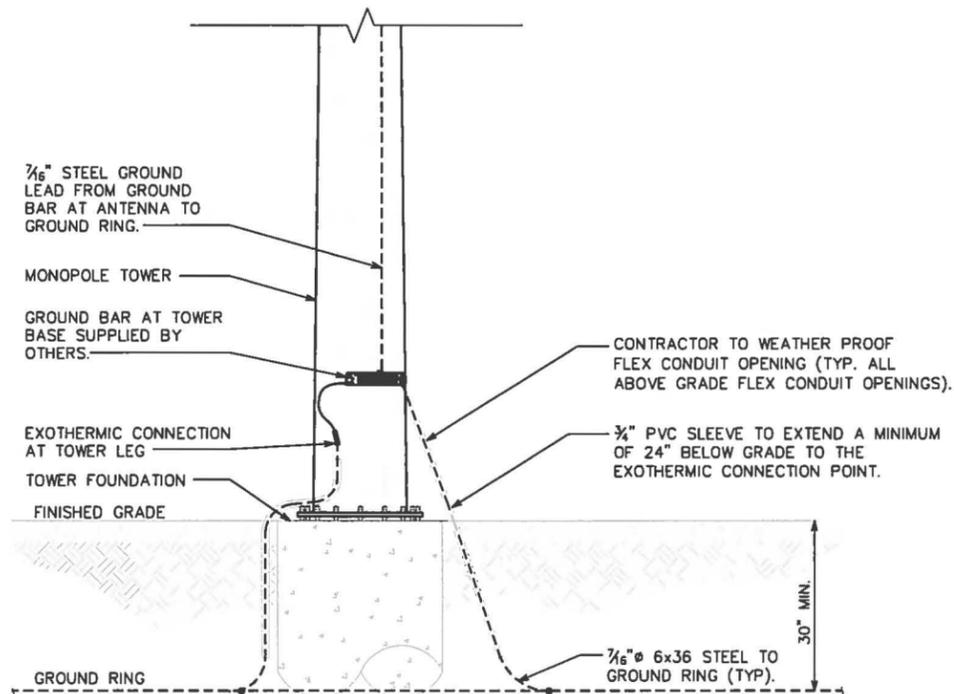
SHEET NUMBER:

**E-3**

REVISION:

**1**

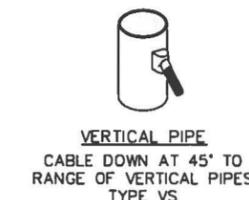
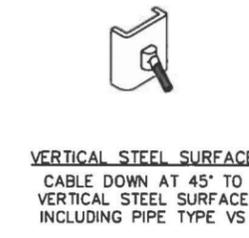
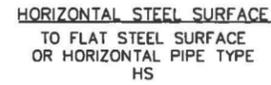
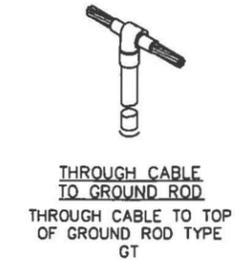
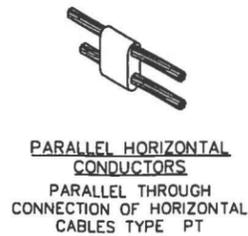
TEP #: 64593



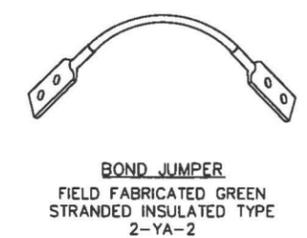
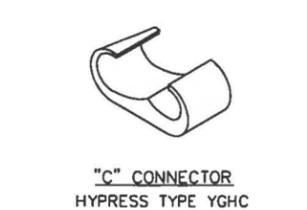
### GROUNDING AT TOWER BASE

SCALE: N.T.S.

### CADWELD CONNECTIONS (OR APPROVED EQUAL)

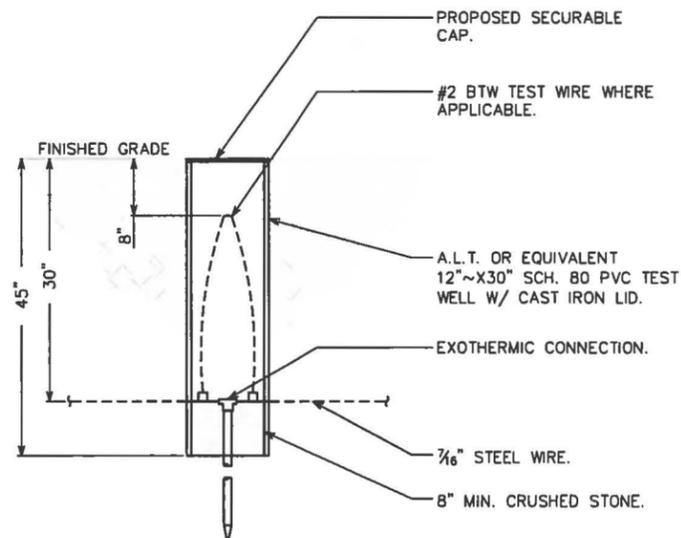


### BURNDY CONNECTIONS (OR APPROVED EQUAL)



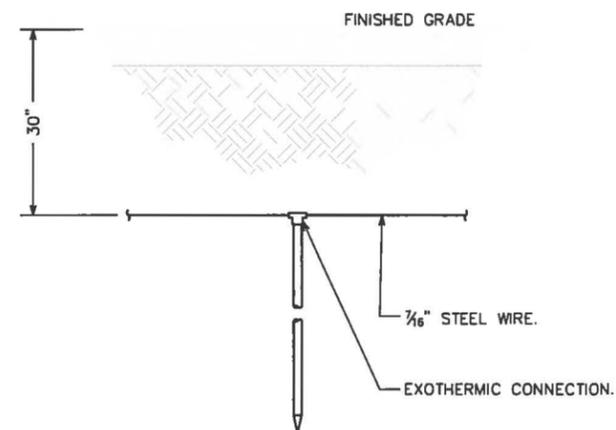
### TYPICAL WELDING CONNECTIONS

SCALE: N.T.S.



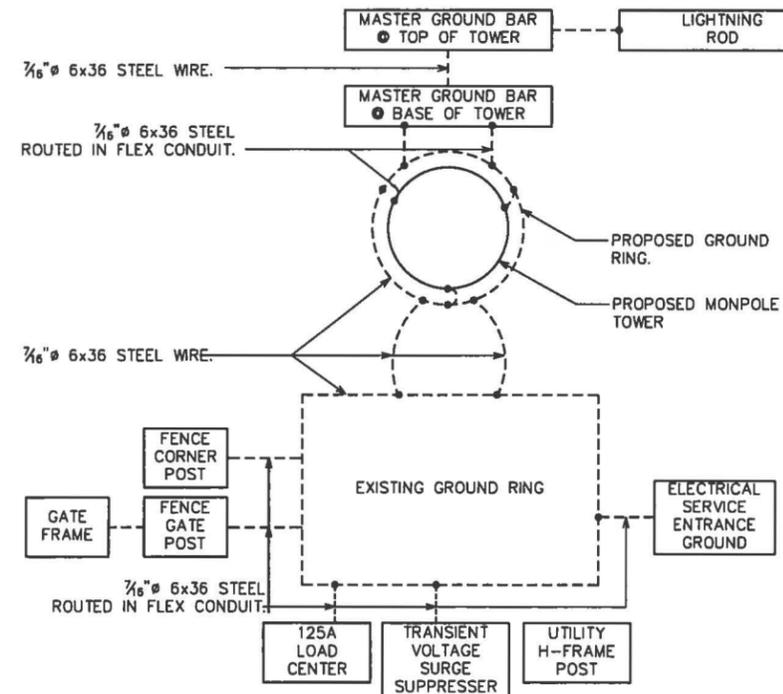
### ACCESS WELL DETAIL

SCALE: N.T.S.



### GROUND ROD DETAIL

SCALE: N.T.S.



### GROUNDING DIAGRAM

SCALE: N.T.S.

APPLICANT/LESSEE:



8051 CONGRESS AVENUE  
BOCA RATON, FL 33487-1307  
OFFICE: (561) 226-9457

PROJECT INFORMATION:

**BONITA  
(KY02114)**

4995 BUCKHAUN COURT  
CATLETTSBURG, KY 41129  
(BOYD COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-5263  
OFFICE: (919) 661-6351  
www.tepgroup.net

SEAL:



REV	DATE	ISSUED FOR:
1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY

DRAWN BY: CHECKED BY:

SHEET TITLE:

**GROUNDING  
DETAILS I**

SHEET NUMBER:

**E-4**

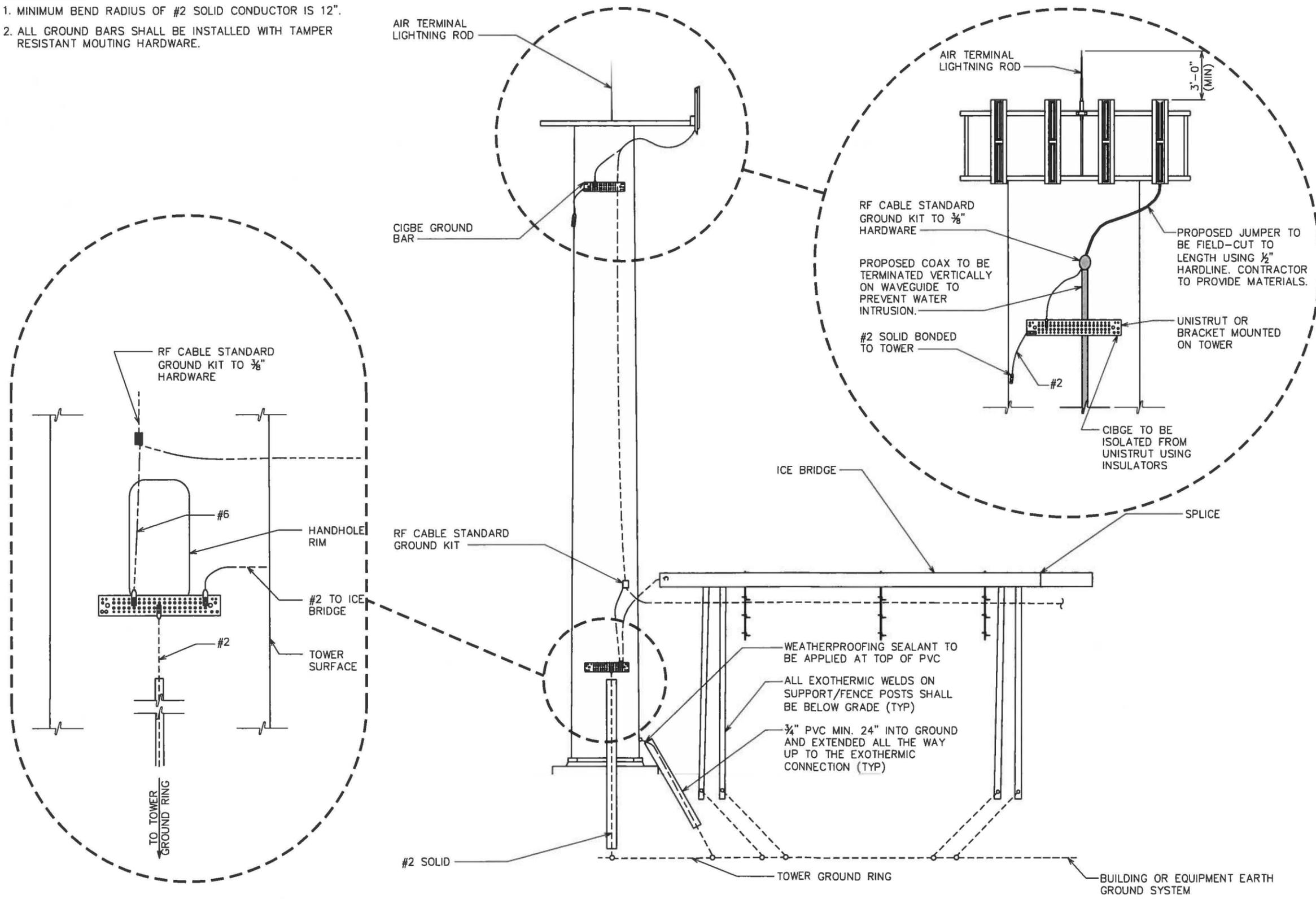
REVISION:

**1**

TEP #: 64593

**NOTES:**

1. MINIMUM BEND RADIUS OF #2 SOLID CONDUCTOR IS 12".
2. ALL GROUND BARS SHALL BE INSTALLED WITH TAMPER RESISTANT MOUNTING HARDWARE.



APPLICANT/LESSEE:

**SBA**

8051 CONGRESS AVENUE  
BOCA RATON, FL 33487-1307  
OFFICE: (561) 226-9457

PROJECT INFORMATION:

**BONITA  
(KY02114)**

4995 BUCKHAUN COURT  
CATLETTSBURG, KY 41129  
(BOYD COUNTY)

PLANS PREPARED BY:

**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-5263  
OFFICE: (919) 661-6351  
www.tepgroup.net

SEAL:

GRAHAM M. ANDRES  
29939  
LICENSED PROFESSIONAL ENGINEER  
January 22, 2016

REV	DATE	ISSUED FOR:
1	01-22-16	CONSTRUCTION
0	01-08-16	PRELIMINARY

DRAWN BY: EJW CHECKED BY: JAS

SHEET TITLE:

**SBA GROUNDING  
DETAILS II**

SHEET NUMBER: **E-5**

REVISION: **1**

TEP #: 64593

**ICE BRIDGE, COAX, STANCHION, AND TOWER GROUNDING DETAIL**

SCALE: N.T.S.

**Exhibit D**  
**Structural Design and Foundation Design**

**RECEIVED**

**OCT 3 2016**

**Public Service  
Commission**

1201 S. Sheridan St.  
South Bend, IN 46619

Phone 800-806-3556  
Fax 574-288-5860  
E-mail jlambert@nelloinc.com

# Jason Lambert, P.E.

---

## Professional experience

08/02 to Present      Nello Corporation      South Bend, IN

### **Vice President of Engineering**

- Responsible for design of all self-supporting, guyed, and pole towers.
- Responsible for design of all self-supporting, guyed, and pole foundations.
- Manage all engineering functions included design, CAD, and BOM creation

02/00 to 08/02      Valmont Industries      Plymouth, IN

### **Design Engineer**

- Calculated member capacities for new pipe leg tower line.
- Tested new tower design analysis software and compared results to existing software to confirm agreement between calculations and compliance to TIA code
- Calculated capacities of antenna mounts.

## Education

08/94 to 05/98      University of Kansas      Lawrence, KS

### **BS Civil Engineering**

08/98 to 05/00      Texas A&M University      College Station, TX

### **ME Civil Engineering**

## Registered Professional Engineer

06/04 to Present      Registered in 35 states

11587 W ATLANTIC BLVD  
CORAL SPRINGS, FL  
954-592-0727.AGREDO86@GMAIL.COM

## MAURICIO AGREDO

### TELECOMMUNICATIONS PROJECT MANAGER

---

- 9 years of wireless/wireline telecommunications experience.
- Improved quality of operations through on-site monitoring and direct supervising.
- Advanced skills with leading knowledge on site development and milestone completion.
- Internal and external resource coordinator for the purpose of streamline operations, functions and support activities.
- Recognized by management for job knowledge, judgment/decision making and adaptability to the industry.

### PROFESSIONAL EXPERIENCE

---

SBA Communications Corporation, Boca Raton, FL (July 2013 – present)

#### **Construction Project Manager-New Tower Development.**

- Successfully managed over 65 new cellphone tower development projects across the US.
- Manage up to 10 sub-contractors working in different new tower builds.
- Order and coordinate utilities to bring power and Telco to raw land sites.
- Quote/ purchase towers from multiple suppliers for new cell site development.
- Interface with customers, subcontractors/ consultants and internal staff members on selected candidate sites within specific geographic areas, which meet engineering and company standards.
- Perform zoning activities and collect required documentation for cellular antennas and communication towers based on municipal codes.
- Obtain all necessary permits needed for tower construction (building/ electrical).
- Handle the RFQ/RFP process for each project.
- Manage the bid call/award/Budgets/PO's/ Job Close – Out) procedures for each job.
- Ensure quality construction is being performed within established budget and schedule while retaining customer standards of performance.

Skyhook Telecom, Inc. Coral Springs, FL (August 2011 – July 2012)

### **Wireless Construction Manager.**

- Direct supervision of electrical, civil and tower crews on multiple cell sites through different markets.
- Involved with the Nokia Siemens-T-Mobile modernization project in the Chicago market.
- Managed all aspects of the Sprint Vision RAN upgrade for over 180 Sprint PCS collocated sites in the FL market.
- In charge of the first and second carrier “4G LTE” equipment installation for over 350 AT&T Wireless sites in the South Florida and North Carolina market.
- Determine materials, labor and construction requirements in order to successfully complete projects.
- Responsible for implementation of company policy for staff supervisors and field personnel required to maintain a safe and clean working environment.
- Direct point of contact with the customer and property owners.
- Review and create spreadsheets in order to track material, job status, personnel to present to customers and senior management during daily updates.
- Provide technical know-how to field crews for the installation of RF equipment as well as termination of power connections, Fiber optic and copper communication cable.

Unitek Global Services, Pompano Beach, FL (February 2008 - August 2011)

### **Project Manager of the Florida Specialty Services Division.**

- Managed Construction Managers and field personnel to accomplish weekly and quarterly goals.
- Developed the specialty services division in order to manage the “Fiber to the Cell Site” project for FPL FiberNet, over 1000 sites for cell phone carriers including: Verizon Wireless, T-Mobile, MetroPCS and Sprint. Exceeding customer forecasted numbers while maintaining an average of 30% GPM.
- Managed the “Florida Fiber Expansion Project” for FPL FiberNet, completing over 30 Riser build outs (Cat5e, Fiber Optic Cable and equipment) in high profile buildings throughout Florida.
- Managed all aspects of the “4G Repeater Project” for 45 Sprint/ClearWire to optimize their 4G signal inside commercial buildings, malls and Sprint Stores.
- Directed the Hilton HSIA (High Speed Internet Access) project, over 150+ Hotels throughout the US.
- Review and create spreadsheets in order to track material, job status, personnel and P&L to present to Senior Management and customers in weekly meetings.

## EDUCATION

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2014-2016(expected) Florida Atlantic University Boca Raton, FL

### **B.B.A in Management and Marketing.**

- Comprehensive course work in Management and Organizational Behavior, Corporate Finance, Communicating Business Information and Operations Management.

2009-2013 Broward College Coconut Creek, FL

### **Associates in Business Administration**

- Accomplished coursework in Statistics, Accounting and Economics with emphasis on Business Administration.
- Graduated with a 3.15 GPA.

## SKILLS

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- Strong interpersonal, communication and organizational skills
- Solid data collection, analysis and decision-making skills.
- Ability to work simultaneously on multiple tasks with attention to detail and follow up.
- Familiar with internal and external vendor interfaces used for project reporting and forecasting (SharePoint, SRM (Ericsson), CRM, OneVision).
- Fluent in English and Spanish.

## **Robert E. Beacom, P.E., S.E.**

*Senior Design Engineer*

*Sabre Towers & Poles (Division of Sabre Industries)*

*Sioux City, IA*

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### PROFESSIONAL REGISTRATION

#### **Registered Professional Engineer or Structural Engineer in 41 states**

- Passed Civil Engineering (P.E.) examination in 2010
- Passed Vertical Component of Structural Engineering (S.E.) examination in 2014
- Passed Lateral Component of Structural Engineering (S.E.) examination in 2015

### PROFESSIONAL EXPERIENCE

#### **Sabre Industries**

*9/05 to Present*

Sioux City, IA

Senior Design Engineer

- Full responsibility for the design of communication tower and foundations.
- Designed thousands of self-supporting and guyed towers and their foundations (including seismic design, when necessary), for sites in the United States and foreign countries.
- Trained and mentored three entry-level engineers.
- Helped develop spreadsheets to design foundations.

### EDUCATION

#### **Iowa State University**

Ames, IA

Bachelor of Science in Civil Engineer, 2005

---

88'

39'

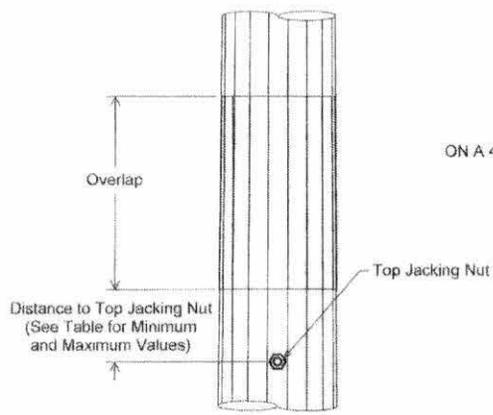
35'

0'



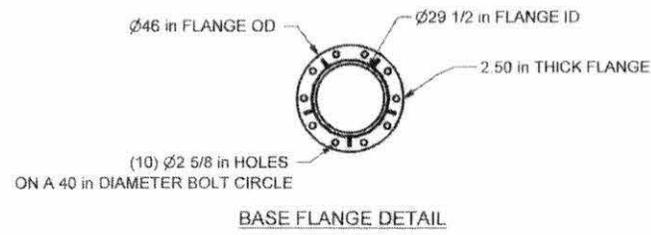
**Pole Section Data**

Section	Bottom Height (ft)	Top Height (ft)	Length (ft)	Number of Sides	Bottom OD (in)	Top OD (in)	Wall Thickness (in)	Material	Approximate Weight (lb)	Design Overlap (in)	Minimum Overlap (in)	Maximum Overlap (in)	Design Distance to Top Jacking Nut (in)	Maximum Distance to Top Jacking Nut (in)	Minimum Distance to Top Jacking Nut (in)
1	35	88	53	18	27.5129	18.0000	0.2500	A572-65	3850	48	40 3/8	52 13/16	15	22 5/8	10 3/16
2	0	39	39	18	33.1075	26.1074	0.3125	A572-65	4970			0			



A jacking nut is placed near the top of each section which will have another section placed on top. The distance from this nut to the bottom of the next section must not exceed the value given in the column labeled "Maximum Distance to Top Jacking Nut."

**Pole Splice Detail**



**BASE FLANGE DETAIL**

Tower Reactions

No Ice  
 Shear: 21.1 kips  
 Moment: 1583.0 ft-kips  
 Weight: 17.8 kips

With Ice  
 Shear: 2.7 kips  
 Moment: 213.7 ft-kips  
 Weight: 32.3 kips

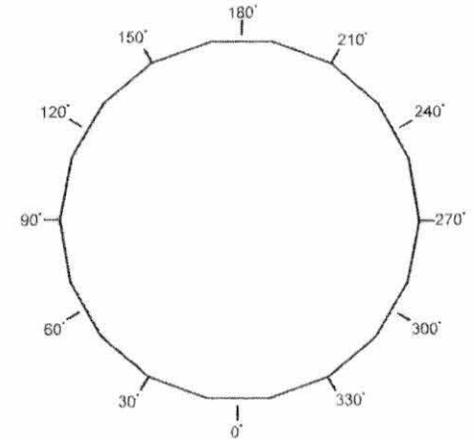
TITLE SBA Towers II, LLC. NTP 33" X 88" Bonita - KY02114 Boyd Co., KY	1201 S Sheridan St. South Bend, IN 46619 Bus: (574)289-3632 Fax: (574)289-5860
---	---

REV	BY	DATE	DESCRIPTION
1	DF	1/25/2016	Revised height and loading per customer per ECO 6020

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--	-----------------------	----------------	------------------	--------------

**Portholes**

Elevation (ft)	Qty	Size (in)	Azimuth (deg)
82	3	6 x 12	60, 180, 300
72	3	6 x 12	60, 180, 300
7.5	1	9 x 24	0
7.5	1	9 x 24	90



Step Bolts on This Side of Pole

Note:  
The azimuths referenced here are only to illustrate where the pole features are in relation to each other. The azimuths are not to indicate which cardinal direction the anchor bolts or the pole should be positioned.

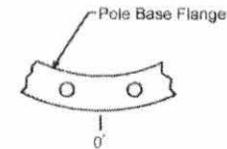
**Pole Reference Azimuths**

**Antenna Loading**

Height	Qty	Description
85'	1	200 R2 (EPA)
75'	1	200 R2 (EPA)

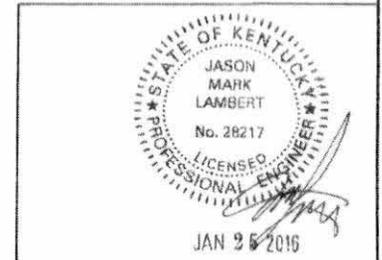
**Feedline Loading**

Height	Qty	Description
0' - 85'	12	LDF5-50A (7/8 FOAM)
0' - 75'	12	LDF7-50A (1-5/8 FOAM)



Anchor Bolt Holes Are on Either Side of the 0 Degree Azimuth

**Anchor Bolt Azimuth**

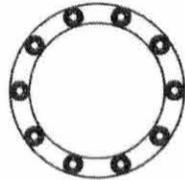


TITLE  
SBA Towers II, LLC  
NTP 33" X 88"  
Bonita - KY02114  
Boyd Co., KY

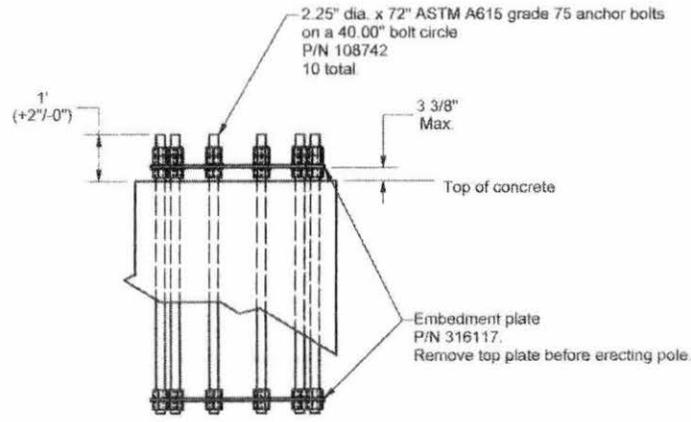
**NELLO**  
1201 S. Sheridan St.  
South Bend, IN 46619  
Bus: (574)288-3632  
Fax: (574)288-5860

REV	BY	DATE	DESCRIPTION
1	DF	1/25/2016	Revised height and loading per customer per ECO 6020

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	DWG PROG: v2.05	SHEET: 2 OF 4



PLAN VIEW



ANCHOR BOLT DETAIL

**Note:**  
Anchor bolt embedment depth shall be verified by foundation engineering.



TITLE SBA Towers II, LLC NTP 33" X 88' Bonita - KY02114 Boyd Co., KY	 1201 S. Shendan St South Bend, IN 46619 Bus: (574)288-3632 Fax: (574)288-5860
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	DWG. PROG. v2.05	SHEET 3 OF 4

REV	BY	DATE	DESCRIPTION
1	DF	1/29/2016	Revised height and loading per customer per ECO 6020

**Tower Notes:**

1. Tower is designed per TIA-222-G, "Structural Standard for Antenna Supporting Structures and Antennas," for the following loading conditions:  
 90 mph 3-second gust basic wind speed with no ice (Equivalent to 116 mph 3-second gust ultimate design wind speed)  
 30 mph 3-second gust basic wind speed with 3/4 inch basic ice thickness  
 Structure Class: II  
 Exposure Category: C  
 Topographic Category: 1
2. A tower field inspection shall be performed in order to verify that design exposure and topographic parameters are consistent with the existing tower site conditions.
3. Tower design includes the antennas, dishes, and/or lines listed in the appurtenance loading tables on sheet 2.
4. Antenna mounting pipes may need to be field cut to match the lengths listed in the appurtenance loading tables on sheet 2.
5. Tower member design does not include stresses due to erection since erection equipment and procedures are unknown. Tower installation shall be performed by competent and qualified erectors in accordance with TIA-222-G and OSHA standards and all applicable building codes.
6. Field connections shall be bolted. No field welds shall be allowed unless otherwise noted.
7. Structural bolts shall conform to ASTM A325, except for 1/2 inch diameter and smaller bolts, which shall conform to ASTM A449 or SAE J429 Grade 5.
8. Structural steel and connection bolts shall be galvanized after fabrication in accordance with TIA-222-G.
9. All high strength bolts shall be tightened to a "snug tight" condition as defined in the RCSC "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
10. Tower shall be marked and lighted in conformance with local building codes, FAA regulations, and TIA-222-G.
11. Tower shall be grounded in conformance with local building codes and TIA-222-G.
12. Allowable tolerance on as-built tower steel height is plus 1% or minus 1/2%.
13. Maintenance and inspection shall be performed over the life of the structure in accordance with TIA-222-G.
14. Material specifications:  
 NTP 18-Sided Pole - ASTM A572 Grade 65  
 Pole Flange - ASTM A572 Grade 50  
 Pole Porthole Rim - ASTM A572 Grade 65
15. A jacking nut is placed near the top of each section which will have another section placed on top. The distance from this top jacking nut to the bottom of the next section must not exceed the value given in the column labeled "Maximum Distance to Top Jacking Nut." Jacking may be required to achieve the proper overlap.
16. The horizontal distance between the vertical centerlines at any two elevations shall not exceed 0.25 percent of the vertical distance between the two elevations. Measure early in the morning before the sunward side of the pole expands.
17. Sections must be erected with the 0 degree azimuth lined up to ensure proper fit.
18. Remove anchor bolt template before erecting pole.
19. Concrete contractor shall be responsible for properly aligning anchor bolts and materials before and after placing concrete, regardless of whether an anchor bolt template is provided.
20. Foundation design by others.



TITLE  
 SBA Towers II, LLC  
 NTP 33" X 88'  
 Bonita - KY02114  
 Boyd Co., KY



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	DWG PROG v2.05	SHEET: 4 OF 4

REV	BY	DATE	DESCRIPTION
1	DF	1/25/2016	Revised height and loading per customer per ECO 6020



# FI CHECKLIST

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY EOR)	REPORT ITEM
<b>PRE-CONSTRUCTION</b>	
<b>X</b>	FI CHECKLIST DRAWING
<b>X</b>	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
<b>CONSTRUCTION</b>	
<b>X</b>	CONSTRUCTION INSPECTIONS
<b>X</b>	CONTINUOUS FOUNDATION INSPECTIONS
<b>X</b>	CONCRETE COMP. STRENGTH AND SLUMP TESTS
<b>NA</b>	GROUT COMP. STRENGTH (ASTM C109)
<b>NA</b>	POST INSTALLED ANCHOR ROD VERIFICATION
<b>NA</b>	BASE PLATE GROUT VERIFICATION
<b>NA</b>	EARTHWORK: LIFT AND DENSITY
<b>X</b>	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
<b>POST-CONSTRUCTION</b>	
<b>X</b>	FI INSPECTOR REDLINE OR RECORD DRAWING(S)
<b>NA</b>	POST INSTALLED ANCHOR ROD PULL-OUT TESTING
<b>X</b>	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE REPORT  
 NA DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE REPORT

## FOUNDATION INSPECTION NOTES:

### GENERAL

THE FOUNDATION INSPECTION (FI) IS A VISUAL INSPECTION OF THE FOUNDATION AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE FOUNDATION DESIGN DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE FI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE FOUNDATION DESIGN ITSELF, NOR DOES THE FI INSPECTOR TAKE OWNERSHIP OF THE FOUNDATION DESIGN. OWNERSHIP OF THE FOUNDATION DESIGN DRAWINGS EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.

ALL FI'S SHALL BE CONDUCTED BY AN OWNER APPROVED ENGINEERING VENDOR THAT IS APPROVED TO PERFORM WORK FOR THE OWNER.

TO ENSURE THAT THE REQUIREMENTS OF THE FI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE FI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT THE PROJECT CONTACT LISTED ON SHEET T-1.

### FI INSPECTOR

THE FI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE FI TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE FI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE FOR ON-SITE FOUNDATION INSPECTIONS.

THE FI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GC INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE FI REPORT TO THE OWNER.

### GENERAL CONTRACTOR

THE GC IS REQUIRED TO CONTACT THE FI INSPECTOR AS SOON AS RECEIVING A PO FOR THE FOUNDATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE FI CHECKLIST.
- WORK WITH THE GC TO DEVELOP A SCHEDULE FOR ON-SITE FOUNDATION INSPECTIONS.
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS.

THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE FI CHECKLIST.

### RECOMMENDATIONS

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING A FI REPORT:

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE FI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE FI TO BE CONDUCTED.
- THE GC AND FI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND FI INSPECTOR ON-SITE DURING THE FI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL FI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE FI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE FI INSPECTOR IS ON SITE.

### CANCELLATION OR DELAYS IN SCHEDULED FI

IF THE GC AND FI INSPECTOR AGREE TO A DATE ON WHICH THE FI WILL BE CONDUCTED, AND EITHER PARTY CANCELS OR DELAYS, THE OWNER SHALL NOT BE RESPONSIBLE FOR ANY COSTS, FEES, LOSS OF DEPOSITS, AND/OR OTHER PENALTIES RELATED TO THE CANCELLATION OR DELAY INCURRED BY EITHER PARTY FOR ANY TIME (E.G. TRAVEL AND LODGING, COSTS OF KEEPING EQUIPMENT ON-SITE, ETC.). IF THE OWNER CONTRACTS DIRECTLY FOR A THIRD PARTY FI, EXCEPTIONS MAY BE MADE IN THE EVENT THAT THE DELAY/CANCELLATION IS CAUSED BY WEATHER OR OTHER CONDITIONS THAT MAY COMPROMISE THE SAFETY OF THE PARTIES INVOLVED.

### CORRECTION OF FAILING FI'S

IF THE FOUNDATION INSTALLATION WOULD FAIL THE FI ("FAILED FI"), THE GC SHALL WORK WITH THE OWNER TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:

- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT FI.
- OR, WITH THE OWNER'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE FOUNDATION USING THE AS-BUILT CONDITION.

### FI VERIFICATION INSPECTIONS

THE OWNER RESERVES THE RIGHT TO CONDUCT A FI VERIFICATION INSPECTION TO VERIFY THE ACCURACY AND COMPLETENESS OF PREVIOUSLY COMPLETED FI INSPECTION(S) ON FOUNDATION PROJECTS.

ALL VERIFICATION INSPECTIONS SHALL BE HELD TO THE SAME SPECIFICATIONS AND REQUIREMENTS IN THE CONTRACT DOCUMENTS.

VERIFICATION INSPECTION MAY BE CONDUCTED BY AN INDEPENDENT INSPECTION FIRM AFTER A FOUNDATION PROJECT IS COMPLETED, AS MARKED BY THE DATE OF AN ACCEPTED "PASSING FI" OR "PASS AS NOTED FI" REPORT FOR THE ORIGINAL PROJECT.

### REQUIRED PHOTOS

BETWEEN THE GC AND THE FI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE FI REPORT:

- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE CONSTRUCTION AND FOUNDATION INSPECTION:
  - RAW MATERIALS
  - PHOTOS OF ALL CRITICAL DETAILS
  - REINFORCING BAR SIZES AND CONFIGURATIONS
  - ALL RELEVANT MEASUREMENTS
  - FORM WORK DIMENSIONS AND LOCATIONS
  - PRE-CONCRETE INSTALLATION PHOTOS
  - DURING CONCRETE INSTALLATION PHOTOS
- POST CONSTRUCTION PHOTOGRAPHS
  - FINAL IN FIELD CONDITION

PLANS PREPARED FOR:



8051 CONGRESS AVENUE  
 BOCA RATON, FL 33487-1307  
 OFFICE: (800) 487-7483

PROJECT INFORMATION:

**BONITA**  
**SITE #: KY02114**

4995 BUCKHAUN COURT  
 CATLETTSBURG, KY 41129  
 (BOYD COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603  
 OFFICE: (919) 661-6351  
 www.tepgroup.net

SEAL:



0	02-16-16	FOUNDATION DESIGN
REV	DATE	ISSUED FOR:

DRAWN BY: EAJ CHECKED BY: JTF

SHEET TITLE:  
**FOUNDATION INSPECTION CHECKLIST & NOTES**

SHEET NUMBER: **N-1** REVISION: **0**  
 TEP #: 64593.39915

## GENERAL NOTES:

- ALL REFERENCES TO THE OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED SBA COMMUNICATION CORPORATION OR ITS DESIGNATED REPRESENTATIVE.
- ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF KENTUCKY.
- WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE.
- UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
- ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
- ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATION. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
- ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
- ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
- BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR/OWNER. CONTRACTOR/OWNER SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
- CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS FOR THIS PROJECT FROM ALL APPLICABLE GOVERNMENTAL AGENCIES.
- ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
- 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.
- THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUB-GRADE IN ITS PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUB-GRADES SHALL BE PROOF-ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFT MATERIAL SHALL BE REWORKED OR REPLACED.
- THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PIPES, DITCHES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
- ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.
- ALL TOWER DIMENSIONS SHALL BE VERIFIED WITH THE PLANS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED. THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.

## FOUNDATION NOTES:

### GENERAL NOTES:

- FOUNDATION INSTALLATION SHALL BE SUPERVISED BY PERSONNEL KNOWLEDGEABLE AND EXPERIENCED WITH THE PROPOSED FOUNDATION TYPE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH GENERALLY ACCEPTED PRACTICES AND IN A GOOD WORKMANLIKE MANNER.
- CONTRACTOR SHALL VERIFY DIMENSIONS WITH ORIGINAL DRAWINGS.
- FOR FOUNDATION AND ANCHOR TOLERANCES, SEE ORIGINAL DRAWINGS.
- FOUNDATION DESIGN ASSUMES LEVEL GRADE AT THE SITE.
- THE FOUNDATION DESIGN IS IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRINCIPLES AND PRACTICES WITHIN THE LIMITS OF THE SUBSURFACE DATA PROVIDED.
- FOUNDATION DESIGN MODIFICATIONS MAY BE REQUIRED IN THE EVENT THE DESIGN PARAMETERS ARE NOT APPLICABLE FOR THE SUBSURFACE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
- THE FOUNDATION DESIGN ASSUMES FIELD INSPECTIONS WILL BE PERFORMED TO VERIFY THAT CONSTRUCTION MATERIALS, INSTALLATION METHODS, AND ASSUMED DESIGN PARAMETERS ARE ACCEPTABLE BASED ON THE CONDITIONS AT THE SITE.
- THE FOUNDATION DESIGN ASSUMES NO CONSTRUCTION JOINTS. HOWEVER, CONSTRUCTION JOINTS SHALL BE PERMITTED UPON APPROVAL BY THE OWNER/ENGINEER.

### EXCAVATION:

- WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND SAFETY REGULATIONS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION, AND UTILITIES SHALL BE ESTABLISHED PRIOR TO BEGINNING WORK.
- INTIMATE CONTACT BETWEEN THE CONCRETE AND THE SOIL WALLS OF THE DRILLED SHAFT IS ESSENTIAL. THE CONCRETE SHALL BE APPROPRIATELY VIBRATED DURING CONSTRUCTION.
- THE SIDES OF THE EXCAVATION SHALL BE ROUGH AND FREE OF LOOSE CUTTINGS.
- LOOSE MATERIAL TO BE REMOVED FROM THE BOTTOM OF EXCAVATION PRIOR TO CONCRETE PLACEMENT.
- DRILLING FLUID, IF USED, SHALL BE FULLY DISPLACED BY CONCRETE AND SHALL NOT BE DETRIMENTAL TO THE CONCRETE OR SURROUNDING SOIL. CONTAMINATED CONCRETE SHALL BE REMOVED AND REPLACED WITH FRESH CONCRETE.

### REINFORCING STEEL:

- THE REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615, GRADE 60. IT SHALL BE DEFORMED AND SPLICES SHALL NOT BE ALLOWED UNLESS OTHERWISE NOTED.
- WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.
- REINFORCING CAGES SHALL BE BRACED TO RETAIN PROPER DIMENSIONS DURING HANDLING AND THROUGHOUT PLACEMENT OF CONCRETE. WHEN TEMPORARY CASING IS UTILIZED, BRACING SHALL BE ADEQUATE TO RESIST FORCES OCCURRING FROM FLOWING CONCRETE DURING CASING EXTRACTION.
- SPACERS SHALL BE ATTACHED INTERMITTENTLY THROUGHOUT THE ENTIRE LENGTH OF TIEBACK REINFORCING TO INSURE CONCENTRIC PLACEMENT OF CAGES IN EXCAVATIONS.
- CLASS B LAP SPLICES PER ACI 318, SHALL BE USED TO SPLICE VERTICAL REINFORCING BARS.
- MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE 3" UNLESS OTHERWISE NOTED. APPROVED SPACERS SHALL BE USED TO INSURE A 3" MINIMUM COVER ON REINFORCEMENT.
- THE CONCRETE COVER FROM THE TOP OF THE FOUNDATION TO THE ENDS OF THE VERTICAL REINFORCEMENT SHALL NOT EXCEED 4" NOR BE LESS THAN 2".
- THE CONCRETE COVER FROM THE BOTTOM OF THE FOUNDATION TO THE ENDS OF THE VERTICAL REINFORCEMENT SHALL NOT EXCEED 4" NOR BE LESS THAN 3".

### CONCRETE:

- WORK SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE ACI-318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
- THE CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28-DAYS.
- PROPORTIONS OF CONCRETE MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION METHOD UTILIZED AND SHALL RESULT IN DURABLE CONCRETE FOR RESISTANCE TO LOCAL ANTICIPATED AGGRESSIVE ACTIONS. THE DURABILITY REQUIREMENTS OF ACI-318 SHALL BE SATISFIED BASED ON THE CONDITIONS EXPECTED AT THE SITE.
- CONCRETE SHALL BE PLACED IN A MANNER THAT WILL PREVENT SEGREGATION OF CONCRETE MATERIALS, INFILTRATION OF WATER OR SOIL, AND OTHER OCCURRENCES THAT MAY DECREASE THE STRENGTH OR DURABILITY OF THE FOUNDATION.
- FREE FALL CONCRETE MAY BE USED PROVIDED FALL IS VERTICAL DOWN WITHOUT HITTING THE SIDES OF THE EXCAVATION, FORMWORK, REINFORCING BARS, FORM TIES, CAGE BRACING, OR OTHER OBSTRUCTIONS. UNDER NO CIRCUMSTANCES SHALL CONCRETE FALL THROUGH WATER.
- THE MAXIMUM SIZE OF THE AGGREGATE SHALL NOT EXCEED A SIZE SUITABLE FOR THE INSTALLATION METHOD UTILIZED OR 1/3-CLEAR DISTANCE BEHIND OR BETWEEN REINFORCING. THE MAXIMUM SIZE MAY BE INCREASED TO 2/3-CLEAR DISTANCE PROVIDED WORKABILITY AND METHODS OF CONSOLIDATION SUCH AS VIBRATING WILL PREVENT HONEYCOMBS AND VOIDS.
- A TEMPORARY PROTECTIVE STEEL CASING WILL BE REQUIRED TO KEEP THE SHAFT OPEN DURING CONSTRUCTION AND INSPECTIONS PRIOR TO PLACING CONCRETE. THIS CASING SHOULD BE EXTRACTED AS THE CONCRETE IS PLACED.

PLANS PREPARED FOR:



8051 CONGRESS AVENUE  
BOCA RATON, FL 33487-1307  
OFFICE: (800) 487-7483

PROJECT INFORMATION:

**BONITA  
SITE #: KY02114**

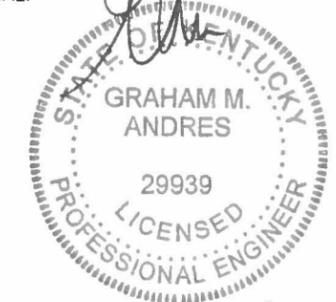
4995 BUCKHAUN COURT  
CATLETTSBURG, KY 41129  
(BOYD COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603  
OFFICE: (919) 661-6351  
www.tepgroup.net

SEAL:



February 16, 2016

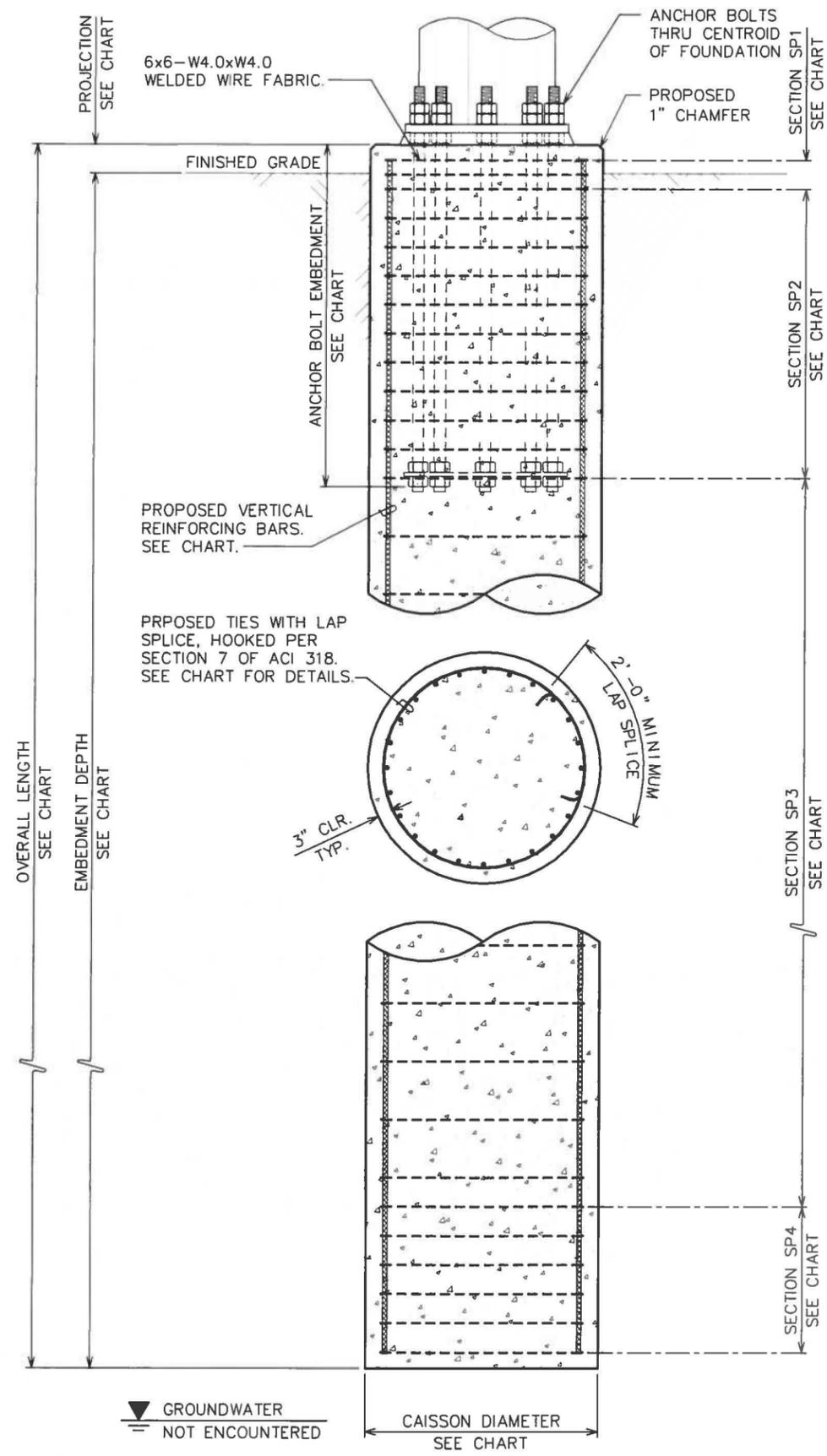
0	02-16-16	FOUNDATION DESIGN
REV	DATE	ISSUED FOR:

DRAWN BY: EAJ CHECKED BY: JTF

SHEET TITLE:

**PROJECT NOTES**

SHEET NUMBER:	REVISION:
<b>N-2</b>	0
	TEP #: 64593.39915



### FOUNDATION DESIGN

DIAM.	EMBEDMENT DEPTH	PROJECTION ABOVE GRADE	OVERALL LENGTH	CONCRETE VOLUME (CU. YDS.)	VERTICAL R/F		#5 TIES		
					SIZE	QTY.	SECTION	QTY.	SPACING
6'-0"	15'-0"	0'-6"	15'-6"	16.2	#9	32	SP1	3	0'-3"
							SP2	8	0'-6"
							SP3	8	1'-0"
							SP4	5	0'-6"

**NOTES:**

- ANCHOR BOLT SIZE, LENGTH, QUANTITY, AND OTHER BOLT AND BASE PLATE DETAILS ARE SPECIFIED IN THE TOWER MFG'S DRAWINGS. VERIFY PRIOR TO CONSTRUCTION.
- ANCHOR BOLTS AND TEMPLATE BY TOWER MANUFACTURER TO BE EMBEDDED THROUGH FOUNDATION CENTROID.

### FACTORED DESIGN REACTIONS

AXIAL	17.8 KIPS
SHEAR	21.1 KIPS
MOMENT	1,583 KIP-FT

DESIGN REACTIONS TAKEN FROM THE TOWER DESIGN CALCULATIONS REFERENCED ON SHEET T-1. VERIFY PRIOR TO CONSTRUCTION.

### ANCHOR BOLT DESIGN

SIZE	QTY.	BOLT CIRCLE	EMBED. (MIN.)	PROJ.
2 1/4" $\phi$ x 6'-0" LONG	10	3'-4"	5'-0"	1'-0"

ANCHOR BOLT INFORMATION TAKEN FROM THE TOWER DESIGN DRAWINGS REFERENCED ON SHEET T-1. VERIFY PRIOR TO CONSTRUCTION.

PLANS PREPARED FOR:



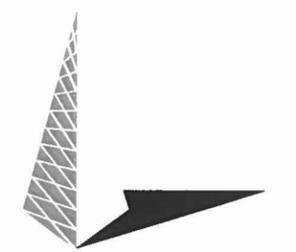
8051 CONGRESS AVENUE  
BOCA RATON, FL 33487-1307  
OFFICE: (800) 487-7483

PROJECT INFORMATION:

**BONITA**  
**SITE #: KY02114**

4995 BUCKHAUN COURT  
CATLETTSBURG, KY 41129  
(BOYD COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603  
OFFICE: (919) 661-6351  
www.tepgroup.net

SEAL:



REV	DATE	ISSUED FOR:
0	02-16-16	FOUNDATION DESIGN

DRAWN BY: EAJ CHECKED BY: JTF

SHEET TITLE:

**FOUNDATION DESIGN DETAILS**

SHEET NUMBER:	REVISION:
<b>F-1</b>	0
	TEP #: 64593.39915

**FOUNDATION DETAIL**  
SCALE: N.T.S.

**Exhibit E**  
**Competing Utilities, Corporations, or Persons List**

RECEIVED

OCT 3 2016

Public Service  
Commission

## EXHIBIT E

### List of Utilities, Corporations, or Persons with Whom the Proposed WCF is Likely to Compete

#### Specified Search

Market  
Code =  
BTA197

	Call Sign/Lease ID	Name	FRN	Radio Service	Status	Expiration Date
Pending Application	B197	NSAC, LLC	3768553	BR	Active	3/28/2026
	KNLH252	Cellco Partnership (Verizon)	3290673	CW	Active	4/28/2017
Pending Application	KNLH537	SPRINTCOM, INC. (Sprint)	2315950	CW	Active	4/28/2017
	KNLH538	SunCom Wireless License Company, LLC	3246055	CW	Active	4/28/2017
	WPOJ803	Cellco Partnership (Verizon)	3290673	CW	Active	6/30/2019

**Exhibit F**

**FAA**



Federal Aviation Administration

OE/AAA

Notice of Proposed Construction or Alteration - Off Airport

Add a New Case Off Airport - Desk Reference Guide V\_2015 4.0

Add a New Case Off Airport for Wind Turbines - Met Towers - Desk Reference Guide V\_2015 4.0

Project Name: SBA T-000356127-16 Sponsor: SBA Towers

Details for Case : KY 02114-A

Show Project Summary

Case Status		Date Accepted: 02/02/2016				
ASN:	2016-ASO-2527-OE	Date Determined:				
Status:	Work In Progress	Letters:	None			
Public Comments:	None	Documents:	02/02/2016 KY 02114-A 1A 5u			
		Project Documents:	None			
Construction / Alteration Information		Structure Summary				
Notice Of:	Construction	Structure Type:	Antenna Tower			
Duration:	Permanent	Structure Name:	KY 02114-A			
	<i>if Temporary</i> : Months: Days	FDC NOTAM:				
Work Schedule - Start:		NOTAM Number:				
Work Schedule - End:		FCC Number:				
*For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.		Prior ASN:				
State Filing:						
Structure Details		Common Frequency Bands				
Latitude:	38° 22' 57.38" N	Low Freq	High Freq	Freq Unit	ERP	ERP Unit
Longitude:	82° 39' 17.58" W	698	806	MHz	1000	W
Horizontal Datum:	NAD83	806	824	MHz	500	W
Site Elevation (SE):	954 (nearest foot)	824	849	MHz	500	W
Structure Height (AGL):	90 (nearest foot)	851	866	MHz	500	W
Current Height (AGL):	(nearest foot)	869	894	MHz	500	W
* For notice of alteration or existing provide the current AGL height of the existing structure. Include details in the Description of Proposal		896	901	MHz	500	W
Minimum Operating Height (AGL):	(nearest foot)	901	902	MHz	?	W
* For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.		930	931	MHz	3500	W
		971	972	MHz	3500	W
		972	972.5	MHz	1*	dBW
		940	941	MHz	1000	W
		1350	1910	MHz	3500	W
		1930	1990	MHz	1640	W
		2305	2310	MHz	2000	W
		2345	2360	MHz	2000	W
Nacelle Height (AGL):	(nearest foot)	Specific Frequencies				
* For Wind Turbines 500ft AGL or greater						
Requested Marking/Lighting:	None					
	<i>Other</i> :					
Recommended Marking/Lighting:						
Current Marking/Lighting:	N/A Proposed Structure					
	<i>Other</i> :					
Nearest City:	Cattlettsburg					
Nearest State:	Kentucky					
Description of Location:	See attached 1A and the FAA map.					
Description of Proposal:	Proposed drop and swap to replace the existing wooden monopole (1997-ASO-5513-OE) with a steel monopole					

Previous Back to Search Result Next

**Exhibit G**

**Kentucky Airport Zoning Commission**



*Think outside the triangle.*

3/2/16

Kentucky Airport Zoning Administrator  
John Houlihan  
90 Airport Road Building 400  
Frankfort, KY 40601  
[John.houlihan@ky.gov](mailto:John.houlihan@ky.gov) / 502-564-4480

RE: SBA Tower Airport Zoning Exemption Confirmation (SBA Site KS02114 Bonita)

Site Location:  
4995 Buckhaun Court  
Catlettsburg, KY 41129  
Lat: 38° 22' 57.5000" Long: -82° 39' 17.7400"  
Site Elevation: 954 Feet AMSL  
Proposal to replace the existing 90' wood pole with a 90' steel monopole

Dear John,

Per our conversation, this letter requests the Kentucky Airport Zoning Administrator confirm and verify that SBA or its contractors is not required to go through a Kentucky Airport Zoning permit process to replace the existing wireless communication tower at the above-referenced coordinates.

If the above information is correct regarding the Kentucky Airport Zoning permit process please sign below, scan and email back to me at [pnichols@pbmws.com](mailto:pnichols@pbmws.com), or fax a copy attn: Paul Nichols to 317-203-0735. If you have any questions or need additional information please call me direct at 513-233-1884.

Sincerely,

Paul Nichols  
Site Specialist  
PBM Wireless Services

*Based on the above information SBA or its contractors are not required to go through any additional Zoning permit process for replacing the existing wireless tower as described.*

Sign:   
Print Name: John Houlihan

3-3-16  
Date

## Paul Nichols

---

**From:** Houlihan, John (KYTC) <John.Houlihan@ky.gov>  
**Sent:** Thursday, March 3, 2016 1:33 PM  
**To:** Paul Nichols  
**Subject:** RE: Greenup and Bonita Towers Airport Zoning Exemption  
**Attachments:** PBM Wireless Services.pdf

Please see above attachment. Thank you

### Aeronautical Study Result for Bonita

The structure is not in KAZC's jurisdiction and does not require a permit.

Structure's Coordinates: 38°22'57.50"N, 82°39'17.74"W

Structure's Height :90ft

User-submitted ground elevation is 954 ft.

DEM's ground elevation is 951.91 ft (KYAPED 5-FT DEM).

### Aeronautical Study Result for Greenup

The structure is not in KAZC's jurisdiction and does not require a permit.

Structure's Coordinates: 38°34'19.42"N, 82°50'27.58"W

Structure's Height :150ft

User-submitted ground elevation is 651 ft.

DEM's ground elevation is 650.73 ft (KYAPED 5-FT DEM).

### Kentucky Airport Zoning Commission (KAZC)

John Houlihan, Administrator

90 Airport Road, Building 400

Frankfort, KY 40601

Direct Line 502-564-0310, Cell 502-330-3955, Office 502-564-4480, Fax 502-564-7953

KAZC webpage: <http://transportation.ky.gov/Aviation/Pages/Zoning-Commission.aspx>

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---

**From:** Paul Nichols [mailto:pnichols@pbmws.com]  
**Sent:** Thursday, March 03, 2016 11:48 AM  
**To:** Houlihan, John (KYTC) <John.Houlihan@ky.gov>  
**Subject:** RE: Greenup and Bonita Towers Airport Zoning Exemption

Hello John

Per our conversation, please see the attached 2 documents.

Please sign both documents and returning to me preferably via email.

Please reach out with any questions

Thanks

Paul

Paul Nichols  
PBM Wireless Services  
513-233-1884

**Exhibit H**

**Geotechnical Report**

Date: **February 10, 2016**

Dwayne Lyerly  
SBA Communications Corporation  
5640 Dillard Drive, Suite 101  
Cary, NC 27518  
Office: (919) 803-3427 Ext. 104



Tower Engineering Professionals, Inc.  
326 Tryon Road  
Raleigh, NC 27603  
(919) 661-6351  
[Geotech@tepgroup.net](mailto:Geotech@tepgroup.net)

**Subject: Subsurface Exploration Report**

**SBA Communications Designation:** **Site Number:** KY02114  
**Site Name:** Bonita

**Engineering Firm Designation:** **TEP Project Number:** 64593.39915

**Site Data:** **4995 Buckhaun Court, Catlettsburg, KY 41129 (Boyd County)**  
**Latitude N38° 22' 57.73", Longitude W82° 39' 17.62"**  
**90 Foot - Proposed Monopole Tower**

Dear Mr. Lyerly,

*Tower Engineering Professionals, Inc. (TEP)* is pleased to submit this "**Subsurface Exploration Report**" to evaluate subsurface conditions in the tower area as they pertain to providing support for the tower foundation.

This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. The conclusions in this report are based on the applicable standards of TEP's practice in this geographic area at the time this report was prepared. No other warranty, express or implied, is made.

TEP assumes the current ground surface elevation; tower location and subsequent centerline provided are correct and are consistent with the elevation and centerline to be used for construction of the structure. Should the ground surface elevation be altered and/or the tower location be moved or shifted TEP should be contacted to determine if additional borings are necessary.

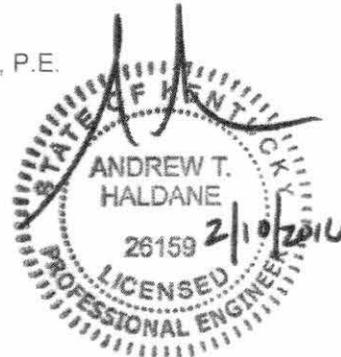
The analyses and recommendations submitted herein are based, in part, upon the data obtained from the subsurface exploration. The soil conditions may vary from what is represented in the boring log. While some transitions may be gradual, subsurface conditions in other areas may be quite different. Should actual site conditions vary from those presented in this report, TEP should be provided the opportunity to amend its recommendations as necessary.

We at *Tower Engineering Professionals, Inc.* appreciate the opportunity of providing our continuing professional services to you and SBA Communications Corporation. If you have any questions or need further assistance on this or any other projects please give us a call.

Report Prepared/Reviewed by: Tyrel A. DeShong / John D. Longest, P.E.

Respectfully submitted by:

Andrew T. Haldane, P.E.



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## 1) PROJECT DESCRIPTION

Based on the preliminary drawings, it is understood a monopole communications tower will be constructed at the referenced site. The structure loads will be provided by the tower manufacturer.

## 2) SITE EXPLORATION

The field exploration included the performance of one soil test boring (B-1) to the auger refusal depth of 17.5 feet (bgs) approximately 30 feet southwest of the proposed monopole tower. The boring was performed by an ATV mounted drill rig using continuous flight hollow stem augers to advance the hole. Split-spoon samples and Standard Penetration Resistance Values (N-values) were obtained in accordance with ASTM D 1586 at a frequency of four samples in the top 10 feet and one sample every 5 feet thereafter to auger refusal.

The Split-spoon samples were transported to the TEP laboratory where they were classified by a Geotechnical Engineer in general accordance with the Unified Soil Classification System (USCS), using visual-manual identification procedures (ASTM D 2488).

A Boring Location Plan showing the approximate boring location, a Boring Log presenting the subsurface information obtained and a brief guide to interpreting the boring log are included in the Appendix.

## 3) SITE CONDITIONS

The site is located at 4995 Buckhaun Court in Catlettsburg, Boyd County, Kentucky. The proposed tower and compound are to be located in a wooded area. The ground topography is lightly sloping to moderately sloping.

## 4) SUBSURFACE CONDITIONS

The following description of subsurface conditions is brief and general. For more detailed information, the individual Boring Log contained in Appendix B - Boring Log may be consulted.

### 4.1) Soil

The USCS classification of the materials encountered in the boring include CL, Weathered Shale, and Weathered Sandstone. The Standard Penetration Resistance ("N" Values) recorded in the materials ranged from 18 blows per foot of penetration to 50 blows per 0.0 inches of penetration.

### 4.2) Rock

Weathered Shale was encountered at a depth of 2.5 feet (bgs) in the boring. Weathered Sandstone was encountered at a depth of 10 feet (bgs) in the boring. Refusal of auger advancement was encountered at a depth of 17.5 feet (bgs) in the boring.

### 4.3) Subsurface Water

Subsurface water was not encountered in the boring at the time of drilling. It should be noted the subsurface water level will fluctuate during the year, due to seasonal variations and construction activity in the area.

### 4.4) Frost

The TIA frost depth for Boyd County, Kentucky is 30 inches.

## 5) TOWER FOUNDATION DESIGN

Based on the boring data, it is the opinion of TEP that a pier extending to a single large mat foundation or a single drilled shaft can be used to support the new tower. If the drilled shaft foundation option is utilized, design of the foundation should be adjusted to terminate in a known material. The following presents TEP's conclusions and recommendations regarding the foundation types.

### 5.1) Shallow Foundation

The foundation should bear a minimum of 30 inches below the ground surface to penetrate the frost depth and with sufficient depth to withstand the overturning of the tower. To resist the overturning moment, the weight of the concrete and any soil directly above the foundation can be used. The values are based on the current ground surface elevation.

Based on preliminary site information the site is located on lightly to moderately sloping, with approximately 1 foot of elevation change across the compound area. It is recommended that foundation designs account for site grades being raised with excavation spoils or that foundation drawings specify minimum embedment depths based on existing site elevations and factor in ground slopes.

**Table 1 - Shallow Foundation Analysis Parameters – Boring B-1**

Depth		Soil	Static Bearing <sup>1,3</sup> (psf)	Cohesion <sup>2</sup> (psf)	Friction Angle <sup>2</sup> (degrees)	Effective Unit Weight (pcf)	Friction Factor
Top	Bottom						
0	2.5	CL	7350	4500	-	110	0.30
2.5	5	Weathered Shale <sup>4</sup>	13675	-	40	125	0.50
5	7.5	Weathered Shale <sup>4</sup>	21100	-	40	125	0.50
7.5	10	Weathered Shale <sup>4</sup>	25850	-	40	125	0.50

Notes:

- 1) The bearing values provided are net allowable with a minimum factor of safety of 2 with anticipated settlement less than 1 inch. Bearing may be increased by 1/3 for transient loading (e.g. wind or earthquake loading)
- 2) These values should be considered ultimate soil parameters
- 3) The soil values are based on a maximum foundation size of 35 foot squared. If the foundation design size exceeds this dimension TEP should be contacted to re-evaluate soil parameters based on the actual foundation size
- 4) Due to the weathered nature of the rock, cohesion of the rock cannot be relied upon for strength parameters. Indicated layers have been evaluated as a granular material

## 5.2) Drilled Shaft Foundation

The following values may be used for design of a drilled shaft foundation. TEP recommends the side frictional and lateral resistance values developed in the top section of the caisson for a depth equal to the half the diameter of the caisson or the frost depth, whichever is greater, be neglected in the calculations. The values are based on the current ground surface elevation. If the drilled shaft foundation option is utilized, design of the foundation should be adjusted to terminate in a known material.

**Table 2 – Drilled Shaft Foundation Analysis Parameters**

Depth		Soil	Static Bearing <sup>1</sup> (psf)	Side Frictional Resistance <sup>2</sup> (psf)	Cohesion <sup>3</sup> (psf)	Friction Angle <sup>3</sup> (degrees)	Effective Unit Weight (pcf)
Top	Bottom						
0	2.5	CL	11550	840	4500	-	110
2.5	5	Weathered Shale <sup>4</sup>	14300	90	-	40	125
5	7.5	Weathered Shale <sup>4</sup>	21925	160	-	40	125
7.5	10	Weathered Shale <sup>4</sup>	29550	220	-	40	125
10	15	Weathered Sandstone <sup>4</sup>	55125	380	-	45	125
15	17.5	Weathered Sandstone <sup>4</sup>	64500	490	-	45	125

Notes:

- 1) The bearing values provided are net allowable with a minimum factor of safety of 2. Bearing may be increased by 1/3 for transient loading (e.g. wind or earthquake loading). If the bearing depth of the foundation is less than 5 diameters below the ground surface the bearing values listed in Table 1 – Shallow Foundation Analysis Parameters should be utilized
- 2) The side frictional resistance values provided are allowable with a minimum factor of safety of 2. Side frictional resistance values may be increased by 1/3 for transient loading (e.g. wind or earthquake loading)
- 3) These values should be considered ultimate soil parameters
- 4) Due to the weathered nature of the rock, cohesion of the rock cannot be relied upon for strength parameters. Indicated layers have been evaluated as a granular material

## 6) SOIL RESISTIVITY

Soil resistivity was performed at the TEP laboratory in accordance with ASTM G187-05 (Standard Test Method for Measurement of Soil Resistivity Using the Two Electrode Soil Box Method). Test results indicated a result of 15,000 ohms/cm.

## 7) CONSTRUCTION CONSIDERATIONS - SHALLOW FOUNDATION

### 7.1) Excavation

Prior to excavation, if the existing tower is to remain in place during construction, a structural engineer should determine whether or not it will need to be reinforced or guyed to remain upright during construction.

The boring data indicates excavation to the expected subgrade level for the shallow foundation will extend through clay and weathered shale. A large tracked excavator should be able to remove the materials with moderate to severe difficulty. A large tracked excavator with rock teeth and/or a pneumatic hammer will be necessary to remove the materials with difficulty. TEP anticipates the depth to the surface of the rock will vary outside of the boring location. Boulders and bedrock outcroppings are common to this geographic region and may also be encountered in the excavation area.

Excavations should be sloped or shored in accordance with local, state and federal regulations, including OSHA (29 CFR Part 1926) excavation trench safety standards. It is the responsibility of the contractor for site safety. This information is provided as a service and under no circumstance should TEP be assumed responsible for construction site safety.

### 7.2) Foundation Evaluation/Subgrade Preparation

After excavation to the design elevation for the footing, the materials should be evaluated by a Geotechnical Engineer or a representative of the Geotechnical Engineer prior to reinforcement and concrete placement. This evaluation should include probing, shallow hand auger borings and dynamic cone penetrometer testing (ASTM STP-399) to help verify that suitable residual material lies directly under the foundation and to determine the need for any undercut and replacement of unsuitable materials. Loose surficial material should be compacted in the excavation prior to reinforcement and concrete placement to stabilize surface soil that may have become loose during the excavation process. TEP recommends a 6-inch layer of compacted crushed stone be placed just after excavation to aid in surface stability.

### 7.3) Fill Placement and Compaction

Backfill materials placed above the shallow foundation to the design subgrade elevation should not contain more than 5 percent by weight of organic matter, waste, debris or any otherwise deleterious materials. To be considered for use, backfill materials should have a maximum dry density of at least 100 pounds per cubic foot as determined by standard Proctor (ASTM D 698), a Liquid Limit no greater than 40, a Plasticity Index no greater than 20, a maximum particle size of 4 inches, and 20 percent or less of the material having a particle size between 2 and 4 inches. Because small handheld or walk-behind compaction equipment will most likely be used, backfill should be placed in thin horizontal lifts not exceeding 6 inches (loose).

Fill placement should be monitored by a qualified Materials Technician working under the direction of a Geotechnical Engineer. In addition to the visual evaluation, a sufficient amount of in-place field density tests should be conducted to confirm the required compaction is being attained.

### 7.4) Reuse of Excavated Soil

The clay and weathered shale that meets the above referenced criteria can be utilized as backfill based on dry soil and site conditions at the time of construction.

## 8) CONSTRUCTION CONSIDERATIONS - DRILLED SHAFTS

Based on TEP's experience a conventional drilled shaft rig (Hughes Tool LDH or equivalent) can be used to excavate to the auger refusal depth of TEP's boring. An earth auger can typically penetrate the materials encountered to the auger refusal depth of the boring with moderate to severe difficulty. Materials below the auger refusal depth may require a coring bit or roller-bit to remove the material. Boulders and bedrock outcroppings are sometimes encountered in this geographic region and may be encountered outside of the boring location. Special excavation equipment may be necessary for a shaft greater than 60-inches in diameter. If hole collapse is encountered during construction, the design and geotechnical engineers should be contacted immediately to make any necessary adjustments.

The following are general procedure recommendations in drilled shaft construction using the "dry" method:

- 1) Drilling equipment should have cutting teeth to result in a hole with little or no soil smeared or caked on the sides; a spiral like corrugated side should be produced. The shaft diameter should be at least equal to the design diameter for the full depth.
- 2) The drilled shaft should be drilled to satisfy a plumbness tolerance of 1.5 to 2 percent of the length and an eccentricity tolerance of 2 to 3 inches from plan location.
- 3) Refer to Section 4.3 for subsurface water information. Water will fluctuate during the year and during rain events. Any subsurface water should be removed by pumping, leaving no more than 3 inches in the bottom of the shaft excavation.
- 4) A removable steel casing should be installed in the shaft to prevent caving of the excavation sides due to soil relaxation. Loose soils in the bottom of the shaft should be removed.
- 5) The drilled shaft should be evaluated by the Geotechnical Engineer or their representative to confirm suitable end bearing conditions and to verify the proper diameter and bottom cleanliness. The shaft should be evaluated immediately prior to and during concrete operations.
- 6) The drilled shaft should be concreted as soon as practical after excavation to reduce the deterioration of the supporting soils due to caving and subsurface water intrusion.
- 7) The slump of the concrete is critical for the development of side shear resistance. TEP recommends a concrete mix having a slump of 6 to 8 inches be used with the minimum compressive strength specified by the structural engineer. A mix design incorporating super plasticizer will likely be required to obtain this slump.
- 8) The concrete may be allowed to fall freely through the open area in the reinforcing steel cage provided it is not allowed to strike the reinforcing steel or the casing prior to reaching the bottom of the shaft excavation.
- 9) The protective steel casing should be extracted as concrete is placed. A head of concrete should be maintained above the bottom of the casing to prevent soil and water intrusion into the concrete below the casing.

The contractor may elect to utilize the "slurry" method for shaft construction. The following are general procedure recommendations in drilled shaft construction using the "slurry" method:

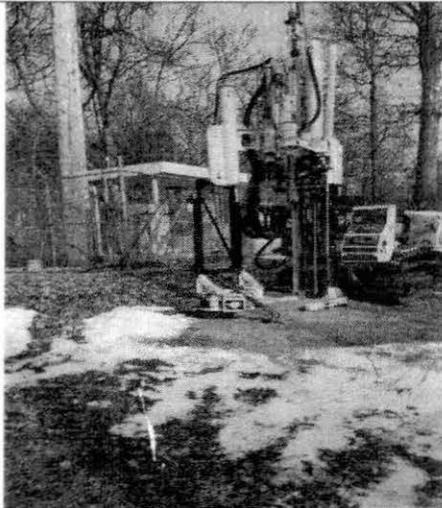
- 1) Slurry drilled shafts are constructed by conventional caisson drill rigs excavating beneath a drilling mud slurry. Typically, the slurry is introduced into the excavation after the groundwater table has been penetrated and/or the soils on the sides of the excavation are observed to be caving-in. When the design shaft depth is reached, fluid concrete is placed through a tremie pipe at the bottom of the excavation.
- 2) The slurry level should be maintained at a minimum of 5 feet or one shaft diameter, whichever is greater, above the subsurface water level.
- 3) Inspection during excavation should include verification of plumbness, maintenance of sufficient slurry head, monitoring the specific gravity, pH and sand content of the drilling slurry, and monitoring any changes in the depth of the excavation between initial approval and prior to concreting.
- 4) A removable steel casing should be installed to prevent caving of the excavation sides due to soil relaxation. Loose soils in the bottom of the shaft should be removed.
- 5) The specific gravity or relative density of the drilling mud slurry should be monitored from the initial mixing to the completion of the excavation. An increase in the specific gravity or density of the drilling slurry by as much as 10 percent is indicative of soil particles settling out of the slurry onto the bottom of the excavation. This settling will result in a reduction of the allowable bearing capacity of the bottom of the drilled shaft.
- 6) After approval, the drilled shaft should be concreted as soon as practical using a tremie pipe.
- 7) For slurry drilled shafts, the concrete should have a 6 to 8 inch slump prior to discharge into the tremie. The bottom of the tremie should be set at about one tremie pipe diameter above the excavation. A closure flap at the bottom of the tremie should be used, or a sliding plug introduced into the tremie before the concrete, to reduce the potential for the concrete being contaminated by the slurry. The bottom of the tremie must be maintained in concrete during placement, which should be continuous.
- 8) The protective steel casing should be extracted as concrete is placed. A head of concrete should be maintained above the bottom of the casing to prevent soil and water intrusion into the concrete below the casing.
- 9) Additional concrete should be placed via the tremie causing the slurry to overflow from the excavation in order to reduce the likelihood of slurry pockets remaining in the drilled shaft.

If variability in the subsurface materials is encountered, a representative of the Geotechnical Engineer should verify that the design parameters are valid during construction. Modification to the design values presented above may be required in the field.

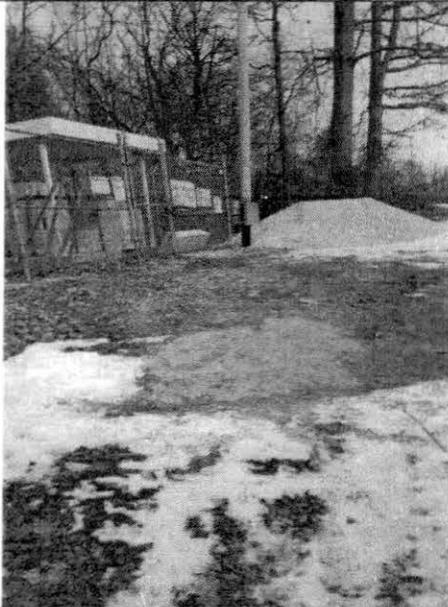
8) SITE PHOTOGRAPHS



Site Placard

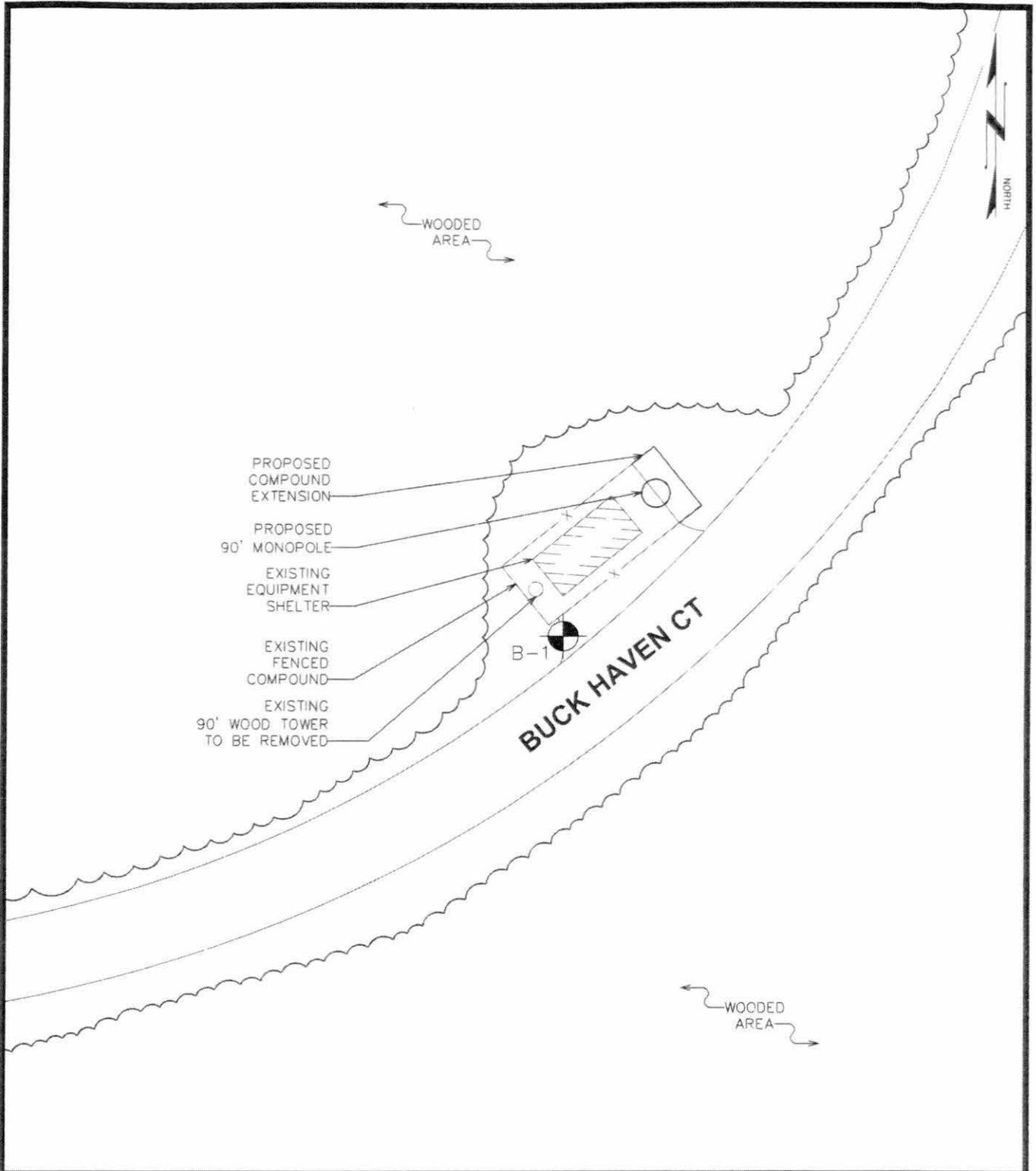


Boring Location in Relation to Tower



Boring Location After Drilling Activities Were Completed

**APPENDIX A**  
**BORING LAYOUT**



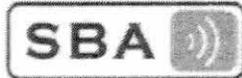
**BORING LAYOUT**

SCALE: N.T.S.

PREPARED BY:

**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-5263  
 (919) 661-6351  
 www.tepgroup.net

PREPARED FOR:



SBA COMMUNICATIONS CORPORATION  
 5000 VALLEYSTONE DRIVE  
 CARY, NC 27519  
 OFFICE: (919) 469-5559

PROJECT INFORMATION:

**BONITA**  
**SITE #: KY02114**  
 4995 BUCKHAUN COURT  
 CATLETTSBURG, KY 41129  
 (BOYD COUNTY)

REVISION: 0

TEP JOB #: 64593.39915

SHEET NUMBER:

**C-1**

**APPENDIX B**  
**BORING LOG**



Tower Engineering Professionals, Inc.  
 326 Tryon Road  
 Raleigh, NC 27603  
 Telephone: 919-661-6351  
 Email: geotech@tepgroup.net

# LOG OF BORING B-1

1 OF 1

PROJECT

Bonita

SITE ID:

KY02114

TEP NO.:

64593.39915

DATE STARTED <b>1/28/2016</b>	DRILLING METHOD <b>Hollow Stem Auger</b>	HOLE SIZE <b>3 1/4in</b>	CITY, STATE <b>Catlettsburg, Kentucky</b>
DATE COMPLETE <b>1/28/2016</b>	HAMMER WEIGHT/FALL <b>140lbs / 30in</b>	HAMMER TYPE <b>Auto Hammer</b>	TOTAL DEPTH <b>17.5 FT</b>
GROUND EL. <b>954.0</b>	LOGGED BY <b>JEL</b>	CHECKED BY <b>TAD</b>	DEPTH/EL. GROUNDWATER <b>Not Encountered</b>
BORING LOCATION <b>Approximately 30 feet southwest of the existing tower</b>			

SAMPLE NUMBER	SAMPLE LENGTH (INCHES)	BLOW COUNTS (N) REC% / ROD%	ELEVATION (FEET)	DEPTH (FEET)	SAMPLE GRAPHIC	USCS GRAPHIC	DESCRIPTION AND CLASSIFICATION	REMARKS	POCKET PEN TSF	UNCONFINED STRENGTH, PSF	UNIT WEIGHT PCF
S1	18	6-6-12 (18)	951.5				0.0-2.5: Medium Dense, brown, sandy lean CLAY (CL), with gravel, moist	Note: Could not take pocket pen due to the disturbed nature of sample			
S2	17.9	11-18-50/6"					2.5-10.0: Very dense, brown, weathered SHALE, sand seams, little silt, moist	Driller Note: Highly weathered fine grained brown sandstone from 4.0 feet to 17.5 feet			
S3	17	18-34-50/5"		5							
S4	17	35-39-50/5"									
S5	5	50/5"	944.0	10			10.0-17.5: Very dense, brown, weathered SANDSTONE, moist				
S6	3	50/3"		15							
S7	0	50/0"	936.5				17.5: Boring Terminated - Auger Refusal at 17.5 feet				



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 Telephone: 919-661-6351  
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## Key to Soil Symbols and Terms

### TERMS DESCRIBING CONSISTENCY OR CONDITION

**COARSE-GRAINED SOILS** (major portions retained on No. 200 sieve): includes (1) clean gravel and sands and (2) silty or clayey gravels and sands. Condition is rated according to relative density as determined by laboratory tests or standard penetration resistance tests.

<b>Descriptive Terms</b>	<b>SPT Blow Count</b>
--------------------------	-----------------------

Very Loose	< 4
Loose	4 to 10
Medium Dense	11 to 30
Dense	31 to 50
Very Dense	> 50

**FINE-GRAINED SOILS** (major portions passing on No. 200 sieve): includes (1) inorganic and organic silts and clays (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings, SPT blow count, or unconfined compression tests.

<b>Descriptive Terms</b>	<b>SPT Blow Count</b>
--------------------------	-----------------------

Very Soft	< 2
Soft	2 to 4
Medium Stiff	5 to 8
Stiff	9 to 15
Very Stiff	16 to 30
Hard	> 30

### GENERAL NOTES

1. Classifications are based on the Unified Soil Classification System and include consistency, moisture, and color. Field descriptions have been modified to reflect results of laboratory tests where deemed appropriate.

2. Surface elevations are based on topographic maps and estimated locations and should be considered approximate.

3. Descriptions on these boring logs apply only at the specific boring locations and at the time the borings were made. They are not guaranteed to be representative of subsurface condition at other locations or times.

Group Symbols	Typical Names	Sampler Symbols
	GW Well-graded gravels, gravel-sand mixtures, little or no fines	Split Spoon
	GP Poorly-graded gravels, little or no fines/sands	Standard Penetration Test (SPT)
	GM Silty gravels, gravel-sand-silt mixtures	Pushed Shelby Tube
	GC Clayey gravels, gravel-sand-silt mixtures	Auger Cuttings
	SW Well-graded sands, gravelly sands, little or no fines	Grab Sample
	SP Poorly-graded sands, little or no fines/sands/gravels	Dynamic Cone Penetrometer
	SM Silty sands, sand-silt mixtures	Hand Auger
	SC Clayey sands, sand-clay mixtures	Rock Core
	ML Inorganic silts and very fine sands, rock floor, silty or clayey fine sands or clayey silts with slight plasticity	<b>Log Abbreviations</b> ATD - At Time of Drilling AD - After Drilling EOD - End of Drilling RMR - Rock Mass Rating WOH - Weight of Hammer WOR - Weight of Rod REC - Rock Core Recovery RQD - Rock Quality Designation
	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	
	MH Inorganic silts, micaceous or distomaceous fine sandy or silty soils, elastic silts	
	CH Inorganic clays of high plasticity, fat clays	
	OH Organic clays of medium to high plasticity, organic silts	
	PT Peat and other highly organic soils	

## **Information Regarding This Subsurface Exploration Report**

The information contained in this report has been specifically tailored to the needs of the client at the time the report was provided, for the specific purpose of the project named in this report. The attached report may not address the needs of contractors, civil engineers, or structural engineers. Anyone other than the named client should consult with the geotechnical engineer prior to utilizing the information contained in the report.

It is always recommended that the full report be read. While certain aspects of the report may seem unnecessary or irrelevant; just as each project and site are unique, so are the subsurface investigation reports and the information contained in them. Several factors can influence the contents of these reports, and the geotechnical engineer has taken into consideration the specific project, the project location, the client's objectives, potential future improvements, etc. If there is any question about whether the attached report pertains to your specific project or if you would like to verify that certain factors were considered in the preparation of this report, it is recommended that you contact the geotechnical engineer.

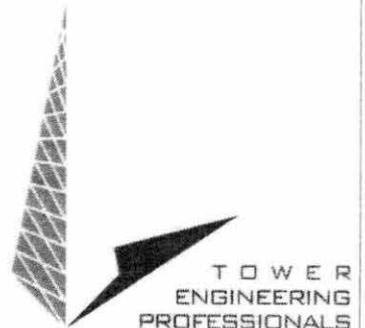
Geotechnical subsurface investigations often are prepared during the preliminary stages of a project and aspects of the project may change later on. Some changes may require a report revision or additional exploration. Some changes that often need to be brought to the attention of the geotechnical engineer include changes in location, size and/or type of structure, modifications to existing structures, grading around the project site, etc. Some naturally occurring changes can also develop that impact the information contained in this geotechnical report such as earthquakes, landslides, floods, subsurface water levels changing, etc. It is always recommended that the geotechnical be informed of known changes at the project site.

Subsurface exploration reports are generated based on the analysis and professional opinions of a geotechnical engineer based on the results of field and laboratory data. Often subsurface conditions can vary – sometimes significantly – across a site and over short distances. It often is helpful to retain the geotechnical engineer's services during the construction process. Otherwise, the geotechnical cannot assume responsibility or liability for report recommendations which may have needed to change based on changing site conditions or misinterpretation of recommendations.

Geotechnical engineers assemble testing and/or boring logs based on their interpretation of field and laboratory data. Testing and/or boring logs should always be coupled with the subsurface exploration report. The geotechnical engineer and Tower Engineering Professionals cannot be held reliable for interpretations, analyses, or recommendations based solely on the testing and/or boring log if it is independent of the prepared report.

The scope of the subsurface exploration report does not include an assessment or analysis of environmental conditions, determination of the presence or absence of wetlands or hazardous or toxic materials on or below the ground surface. Any notes regarding odors, fill, debris, or anything of that nature are offered as general information for the client, often to help identify or delineate natural soil boundaries.

For additional information, please contact the geotechnical engineer named in the attached report.



**Exhibit I**

**Directions to WCF Site**



**A** 2800 Louisa St, Catlettsburg, KY 41129

**B** 5000 Buck Haven Ct, Catlettsburg, KY 41129

Suggested routes

KY-3294/Cannonsburg Rd/Cemetery Rd E

6.8 miles, 16 min

KY-538

7.9 miles, 16 min

I-64 W

11.7 miles, 19 min

**A** 2800 Louisa St

1. Head south on **Louisa St** toward **Cs-1048**

0.2 mi

2. Slight right onto **Oakland Ave**

0.6 mi

3. Turn right onto **35th St**

0.1 mi

4. Turn left onto **Louisa St**

433 ft

5. Turn right at the 1st cross street onto **36th St**

0.3 mi

6. Slight left onto **KY-3294/Cannonsburg Rd/Cemetery Rd E**

3.9 mi

7. Turn left onto **Tarpin Ridge Rd**

1.4 mi

8. Sharp left onto **Buck Haven Ct**

0.2 mi

**B** 5000 Buck Haven Ct

**Exhibit J**

**Copy of Real Estate Agreement**

P.R.P.

KY02114-A

MEMORANDUM OF LEASE

THIS MEMORANDUM OF LEASE ("Memorandum") is executed this 2 day of Sept 1997, by and between Carl Frederick and Carla Rae Faulkner ("Lessor") and Horizon Personal Communications, Incorporated, an Ohio corporation ("Lessee") and evidences that on the 2nd day of Sept, 1997 an Option and Lease Agreement ("Lease") was entered into by and between Lessor and Lessee.

1. Lease Term. The terms of the Lease shall be Five (5) years commencing on the 6th day of March, 1998 ("Commencement Date") and terminating at midnight on the fifth (5th) anniversary of the Commencement Date ("Initial Term"). Lessee has the right under the terms of the Lease to extend the Lease for Four (4) additional Five (5) year terms ("Renewal Terms").

2. Property. Subject to the terms of the Lease Lessor has leased to Lessee the real property described in Exhibit "A" attached hereto ("Property") and Lessor has granted unto Lessee for the Initial Term and any Renewal Term an easement for ingress, egress and utilities over that property described in Exhibit "B" attached hereto ("Easement").

3. Notices. All notices, requests, demands, and other communications to the Lessor or Lessee shall be made at the following addresses:

Lessor:  
Fred Faulkner  
5000 Buckhaven Ct.  
Catlettsburg, KY 41129

Lessee:  
Horizon Personal Communications, Incorporated  
68 East Main Street  
P.O. Box 480  
Chillicothe, OH 45601-0480

IN WITNESS WHEREOF, the parties have executed this Memorandum as of the date first set forth above.

WITNESS:

\_\_\_\_\_  
\_\_\_\_\_

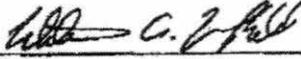
LESSOR  
x Carl F. Faulkner  
x Carla R. Faulkner

\$22<sup>50</sup>  
Boyd County, KY 8 Pages

This document prepared by:  
Carmen Mallard at SpectraSite Services,  
11 Corporate Hill Drive, Little Rock, AR  
72205, 501-866-1300 Carmen Mallard

**LESSEE:**

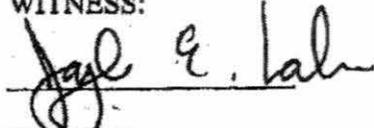
**Horizon Personal Communications, Incorporated**  
**an Ohio corporation**

By: 

William A. McKell

Title: President

WITNESS:



WITNESS:



ACKNOWLEDGMENT

State of Ohio )  
County of Row ) ss

Before me, a notary public, in and for said county in said state, personally appeared William A. McKell, known to me to be the person who, as president of Horizon Personal Communications Incorporated, an Ohio corporation, executed the foregoing instrument, signed the same, and acknowledged to me that he did so sign said instrument in the name and upon behalf of said corporation as such officer, and the free and corporate act and deed of said corporation; that he was duly authorized thereunto by its board of directors; and that the seal affixed to said instrument is the corporate seal of said corporation. In testimony whereof, I have hereunto subscribed my name, and affixed my official seal, at Chillicothe, this 8th day of Sept, 1997.

Marla L. Eberle  
Notary Public

My Commission Expires:



MARLA L. EBERLE  
NOTARY PUBLIC, STATE OF OHIO  
MY COMMISSION EXPIRES Jan. 16, 2002

X3

Exhibit A

September 25, 1997

Horizon-PCS  
Bonita Cell Site  
Boyd County, Kentucky  
Heritage Job No. 97-0151

DESCRIPTION FOR TOWER PROPERTY:..

Situated in the State of Kentucky, County of Boyd, and located on Buck Haven Court Road approximately 1300 feet from the intersection with Tarpin Ridge Road. Being part of the Fred and Carla Faulkner lands recorded as an 8.32 acre parcel in Volume 526 Page 24 and a 10.3 acre parcel in Volume 478 Page 928 in the office of the Clerk of County Court of Boyd County.

Commencing at a 5/8 inch diameter iron pin (found) at the northeast corner of the above mentioned 8.32 acre parcel.

Thence from said place of commencement and following the boundary line of said 8.32 acre parcel, South 15 degrees 07 minutes 04 seconds West 332.80 feet to a 5/8 inch diameter iron pin (found,

thence South 29 degrees 11 minutes 04 seconds West 59.32 feet,

thence South 61 degrees 25 minutes 04 seconds West 16.27 feet,

thence leaving the boundary line of said 8.32 acre parcel South 44 degrees 52 minutes 08 seconds East 7.26 feet to a 1/2 inch diameter iron pin (set) at the true place of beginning for the herein described parcel,

thence from said place of beginning South 45 degrees 07 minutes 52 seconds West 45.00 feet to a 1/2 inch diameter iron pin (set),

thence North 44 degrees 52 minutes 08 seconds West 35.00 feet to a 1/2 inch diameter iron pin (set),

thence North 45 degrees 07 minutes 52 seconds East 45.00 feet to a 1/2 inch diameter iron pin (set),

thence South 44 degrees 52 minutes 08 seconds East 35.00 feet to the place of beginning.

Containing 0.036 acre or 1,575 square feet and being 0.008 acre or 328.2 square feet out of Volume 526 Page 24 (Parcel #033-00-018.00) and 0.028 acre or 1,246.8 square feet out of Volume 478 Page 928 (Parcel #033-00-019.00).

Exhibit B

September 25, 1997

Horizon-PCS  
Bonita Cell Site  
Boyd County, Kentucky  
Heritage Job No. 97-0151

**DESCRIPTION FOR 25-FOOT WIDE ACCESS/UTILITY EASEMENT:**

Situated in the State of Kentucky, County of Boyd, and located on Buck Haven Court Road approximately 1300 feet from the intersection with Tarpin Ridge Road. Being part of the Fred Faulkner 10.3 acre parcel as recorded in Volume 478 Page 928 in the office of the Clerk of County Court of Boyd County.

Commencing at a 5/8 inch diameter iron pin (found) at the northeast corner of an 8.32 acre parcel as recorded in Volume 526 Page 24 in said office of the clerk of county court.

Thence from said place of commencement and following the boundary line of said 8.32 acre parcel, South 15 degrees 07 minutes 04 seconds West 332.80 feet to a 5/8 inch diameter iron pin (found),

thence South 29 degrees 11 minutes 04 seconds West 59.32 feet,

thence South 61 degrees 25 minutes 04 seconds West 16.27 feet,

thence leaving the boundary line of said 8.32 acre parcel South 44 degrees 52 minutes 08 seconds East 7.26 feet to a 1/2 inch diameter iron pin (set) at the true place of beginning for the herein described parcel.

Thence from said place of beginning South 44 degrees 52 minutes 08 seconds East 25.00 feet,

thence South 45 degrees 07 minutes 52 seconds West 48.36 feet,

thence South 60 degrees 27 minutes 31 seconds West 55.38 feet,

thence South 71 degrees 29 minutes 39 seconds West 119.76 feet,

thence South 74 degrees 19 minutes 23 seconds West 49.07 feet,

thence South 74 degrees 41 minutes 08 seconds West 75.69 feet,

thence South 74 degrees 45 minutes 54 seconds West 54.46 feet,

thence South 71 degrees 22 minutes 37 seconds West 48.38 feet,

thence South 64 degrees 25 minutes 49 seconds West 23.37 feet,  
thence South 58 degrees 56 minutes 32 seconds West 20.98 feet,  
thence South 50 degrees 24 minutes 33 seconds West 28.18 feet,  
thence South 45 degrees 58 minutes 01 second West 15.15 feet to a  
point on the end of the county maintained portion of Buck Haven  
Court Road,

thence North 44 degrees 01 minute 59 seconds West 25.00 feet,  
thence leaving the county maintained portion of Buck Haven Court  
Road North 45 degrees 58 minutes 01 second East 16.11 feet,  
thence North 50 degrees 24 minutes 33 seconds East 31.02 feet,  
thence North 58 degrees 56 minutes 32 seconds East 24.05 feet,  
thence North 64 degrees 25 minutes 49 seconds East 26.09 feet,  
thence North 71 degrees 22 minutes 37 seconds East 50.64 feet,  
thence North 74 degrees 45 minutes 54 seconds East 55.18 feet,  
thence North 74 degrees 41 minutes 08 seconds East 75.59 feet,  
thence North 74 degrees 19 minutes 23 seconds East 48.37 feet,  
thence North 71 degrees 29 minutes 39 seconds East 116.73 feet,  
thence North 60 degrees 27 minutes 31 seconds East 49.61 feet to a  
1/2 inch diameter iron pin (set),  
thence North 45 degrees 07 minutes 52 seconds East 45.00 feet to  
the place of beginning.

Containing 0.309 acre or 13,465 square feet and identified as part  
of tax parcel #033-00-019.00.

Bearings in this description refer to true north as derived from  
GPS differential positioning. Observation at Latitude (N) 38  
degrees 22 minutes 57.8 seconds and Longitude (W) 82 degrees 39  
minutes 17.7 seconds.

This description prepared by Jack A. Hamilton, Licensed Surveyor #  
2196, after a field survey of the parcel herein described during  
September 1997.

Bearings in this description refer to true north as derived from GPS differential positioning. Observation at Latitude (N) 38 degrees 22 minutes 57.8 seconds and Longitude (W) 82 degrees 39 minutes 17.7 seconds,

This description prepared by Jack A. Hamilton, Licensed Surveyor # 2196, after a field survey of the parcel herein described during September 1997.

KENTUCKY ACKNOWLEDGMENT  
FORMS

*Acknowledgment for an individual acting in his own right:*

STATE OF KENTUCKY  
COUNTY OF Boyd

The foregoing instrument was acknowledged before me this 2 day of Sept, 1997 by

Carl J. Faulkner  
Carla Q. Faulkner

My Commission Expires: 9/11/97

Judith Lyreb  
Notary Public

*Acknowledgment for a corporation:*

STATE OF KENTUCKY  
COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_ by \_\_\_\_\_ of \_\_\_\_\_, a \_\_\_\_\_ corporation, on behalf of the corporation.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

DOCUMENT NO: 469704  
ED ON APRIL 02, 1996 09:31:22AM  
FEES: \$22.00  
CLERK: MAXINE SELBEE  
COUNTY: BOYD CO CLERK  
DEPUTY CLERK: TERESA CHAMILL  
Horizon PCS  
BOOK 88 Memo Lease PAGE 404

X4

11/12/96

KY02114-A  
Bonita

### ASSIGNMENT OF PRIME LEASE

THIS ASSIGNMENT OF PRIME LEASE AGREEMENT ("Agreement") is made and entered into as of the 28 day of Sept, 1999, by and between SBA Towers, Inc., a Florida corporation ("SBA"), and Horizon Personal Communications, Inc., an Ohio corporation ("Horizon").

WHEREAS, Horizon has entered into a ground lease agreement, Option and Lease Agreement or other similar agreement (the "Prime Lease") for the lease of the real property more particularly described in Exhibit "A" attached hereto (the "Property") upon which Horizon has constructed or will construct a tower and related facilities and an easement for ingress, egress and utilities over the real property more particularly described in Exhibit "B" attached hereto (the "Easement");

WHEREAS, pursuant to that certain Asset Purchase Agreement entered into by and between SBA and Horizon on the 17th day of August, 1999, Horizon desires to assign the Prime Lease for said site; and

WHEREAS, SBA desires to accept an assignment of the Prime Lease and to thereafter sublease a portion of the space upon the tower facilities to Horizon in accordance with that certain Master Site Lease Agreement entered into by and between SBA and Horizon on the 17th day of August, 1999.

NOW THEREFORE, for and in consideration of the mutual promises outlined herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Horizon and SBA do hereby agree as follows:

1. Assignment. Horizon does hereby assign to SBA and SBA shall assume and agree to be bound by the Prime Lease, a memorandum of which has been recorded at Book 88, Page 404 in the office of the County Clerk of Boyd County, Kentucky, through which Horizon has acquired an interest in the real property which is the subject of the Prime Lease together with any Easements to the Property.

2. Covenants of Horizon. Horizon covenants that it:

(a) unconditionally and absolutely assigns, transfers, sets over and conveys to SBA, all of Horizon's right, title and interest in, to and under the Prime Lease;

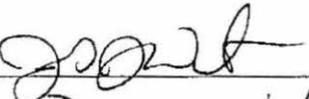
(b) shall warrant, indemnify and defend the leasehold title assigned to SBA against the lawful claims of all persons provided that such claim arises as a result of an alleged transfer of Horizon's interest in the Prime Lease, but no further or otherwise except as set forth in the Asset Purchase Agreement, and except to the extent that an interest in real estate is subject to taxes, ordinances and other matters of record; and

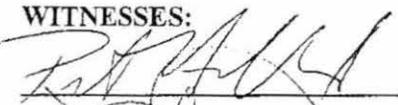
(c) has no knowledge or notice of any default, defense, offset, claim, demand, counterclaim or cause of action which may presently exist under the Prime Lease.

IN WITNESS WHEREOF, SBA and Horizon have signed this Agreement as of the date and year first above written.

**Horizon:**

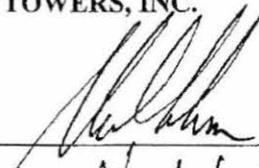
**HORIZON PERSONAL  
COMMUNICATIONS, INC.**

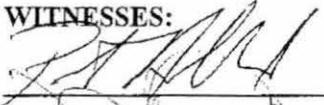
By:   
Name: Joseph J. Watson  
Title: Vice President

**WITNESSES:**  
  


**SBA:**

**SBA TOWERS, INC.**

By:   
Name: Neil Sudman  
Title: Director of Acquisitions

**WITNESSES:**  
  


ACKNOWLEDGMENT

STATE OF OHIO            )  
  ) ss  
COUNTY OF ROSS        )

Before me, a notary public, in and for said county in said state, personally appeared Joseph J. Watson, known to me to be the person who, as Vice-President of Horizon Personal Communications, Inc., an Ohio corporation, executed the foregoing instrument, signed the same, and acknowledged to me that he did so sign said instrument in the name and upon behalf of said corporation as such officer, and the free and corporate act and deed of said corporation; that he was duly authorized thereunto by its board of directors; and that the seal affixed to said instrument is the corporate seal of said corporation. In testimony whereof, I have hereunto subscribed my name and affixed my official seal this 28 day of September, 1999.

*Linda B Stepp*  
\_\_\_\_\_  
Notary Public



My Commission Expires  
**LINDA B. STEPP**  
NOTARY PUBLIC, STATE OF OHIO  
MY COMMISSION EXPIRES JAN. 9, 2003

ACKNOWLEDGMENT

STATE OF OHIO            )  
  ) ss  
COUNTY OF ROSS        )

Before me, a notary public, in and for said county in said state, personally appeared Neil Seidman, known to me to be the person who, as Director of Acquisitions and Associate General Counsel of SBA Towers, Inc., a Florida corporation, executed the foregoing instrument, signed the same, and acknowledged to me that he did so sign said instrument in the name and upon behalf of said corporation as such officer, and the free and corporate act and deed of said corporation; that he was duly authorized thereunto by its board of directors; and that the seal affixed to said instrument is the corporate seal of said corporation. In testimony whereof, I have hereunto subscribed my name and affixed my official seal this 28 day of September, 1999.

*Linda B Stepp*  
\_\_\_\_\_  
Notary Public



My Commission Expires  
**LINDA B. STEPP**  
NOTARY PUBLIC, STATE OF OHIO  
MY COMMISSION EXPIRES JAN. 9, 2003

EXHIBIT "A"

LEGAL DESCRIPTION OF THE PROPERTY AND EASEMENT

DESCRIPTION FOR TOWER PROPERTY:

Situated in the State of Kentucky, County of Boyd, and located on Buck Haven Court Road approximately 1300 feet from the intersection with Tarpin Ridge Road. Being part of the Fred and Carla Faulkner lands recorded as an 8.32 acre parcel in Volume 526 Page 24 and a 10.3 acre parcel in Volume 478 Page 928 in the office of the Clerk of County Court of Boyd County.

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thence South 29 degrees 11 minutes 04 seconds West 59.32 feet,

thence South 61 degrees 25 minutes 04 seconds West 16.27 feet,

thence leaving the boundary line of said 8.32 acre parcel South 44 degrees 52 minutes 08 seconds East 7.26 feet to a 1/2 inch diameter iron pin (set) at the true place of beginning for the herein described parcel,

thence from said place of beginning South 45 degrees 07 minutes 52 seconds West 45.00 feet to a 1/2 inch diameter iron pin (set),

thence North 44 degrees 52 minutes 08 seconds West 35.00 feet to a 1/2 inch diameter iron pin (set),

thence North 45 degrees 07 minutes 52 seconds East 45.00 feet to a 1/2 inch diameter iron pin (set),

thence South 44 degrees 52 minutes 08 seconds East 35.00 feet to the place of beginning.

Containing 0.036 acre or 1,575 square feet and being 0.008 acre or 328.2 square feet out of Volume 526 Page 24 (Parcel #033-00-018.00) and 0.028 acre or 1,246.8 square feet out of Volume 478 Page 928 (Parcel #033-00-019.00).

Bearings in this description refer to true north as derived from GPS differential positioning. Observation at Latitude (N) 38 degrees 22 minutes 57.8 seconds and Longitude (W) 82 degrees 39 minutes 17.7 seconds,