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APR 23 2010
PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

CASE NO. 2010-00108

APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY (SMITH BRIDGE)

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

1. As required by 807 KAR 5:001 Sections 8(l) and (3), and 807 KAR 5:063, Cumberland Cellular states that it is a Kentucky general partnership whose full name and post office address are: Cumberland Cellular Partnership, 2902 Ring Road, Elizabethtown, Kentucky, 42701.

2. Pursuant to 807 KAR 5:063 § 1 (1)(b), a copy of the applicant's applications to the Federal Aviation Administration and Kentucky Airport Zoning Commission are Exhibit "A."

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

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

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

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

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

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

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

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

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

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

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

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

15. Pursuant to 807 KAR 5:063 § 1 (1)(n), the Cumberland County Judge Executive has been: (i) notified by certified mail, return receipt requested, of the proposed construction; (ii) given the commission docket number under which the application will be processed; and (iii) informed of its right to request intervention.

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

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

18. Pursuant to 807 KAR 5:063 § 1 (2)(a):

> (a) A written notice, of durable material at least two (2) feet by four (4) feet in size, stating that "***Cumberland Cellular Partnership proposes to construct a telecommunications tower on this site***", including the addresses of the applicant and the Kentucky Public Service Commission, has been posted and shall remain in a visible location on the proposed site until final disposition of the application; and
>
> (b) A written notice, of durable material at least two (2) feet by four (4) feet in size, stating that "***Cumberland Cellular Partnership proposes to construct a telecommunications tower near this site***", including the addresses of the applicant and the Kentucky Public Service Commission, has been posted on the public road nearest the site.

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

19. Pursuant to 807 KAR 5:063 § 1 (1)(q), a statement that notice of the location of the proposed construction has been published in a newspaper of general circulation in the county in which the construction is proposed and is attached as Exhibit "I."

20. Pursuant to 807 KAR 5:063 § 1(1)(r), the cell site, which has been selected, is in a relatively undeveloped, rural area near Burkesville, Kentucky. Existing land uses are characterized as residential and agricultural.

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

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

23. Pursuant to KRS 100.987(2)(a), a grid map, that is drawn to scale, that shows the location of all existing cellular antenna towers and that indicates the general position of proposed construction sites for new cellular antenna towers is Exhibit "K."

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

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

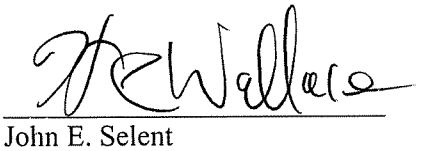
John E. Selent
Holly C. Wallace
DINSMORE & SHOHL LLP
1400 PNC Plaza
500 West Jefferson Street
Louisville, KY 40202
(502) 540-2300
(502) 585-2207 (Fax)
john.selent@dinslaw.com
holly.wallace@dinslaw.com

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

1. Granting a certificate of public convenience and necessity to construct the Smith Bridge cell site; and

2. Granting all other relief as appropriate.

Respectfully submitted,



John E. Selent
Holly C. Wallace
DINSMORE & SHOHL LLP
1400 PNC Plaza
500 West Jefferson Street
Louisville, KY 40202
(502) 540-2300
(502) 585-2207 (Fax)
john.selent@dinslaw.com
holly.wallace@dinslaw.com

Kentucky

TC 56-50E (Rev. 02/05)

Kentucky Transportation Cabinet, Kentucky Airport Zoning Commission, 200 Mero Street, Frankfort, KY 40622

APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE

INSTRUCTIONS INCLUDED

Kentucky Aeronautical Study Number

1. APPLICANT -- Name, Address, Telephone, Fax, etc.
Scott McCloud
Bluegrass Cellular, Inc.
2902 Ring Road
Elizabethtown, KY 42702
T: 270-769-0339 F:270-737-0580

2. Representative of Applicant -- Name, Address, Telephone, Fax
Leila Rezanavaz
Lukas, Nace, Gutierrez & Sachs, LLP
8300 Greensboro Drive, Suite 1200
McLean, VA 22102
T: 703-584-8668 F: 703-584-8694

3. Application for: ☒ New Construction ☐ Alteration ☐ Existing

4. Duration: ☒ Permanent ☐ Temporary (Months _____ Days _____)

5. Work Schedule: Start 5/1/2010 End 5/5/2010

6. Type: ☒ Antenna Tower ☐ Crane ☐ Building ☐ Power Line
☐ Landfill ☐ Water Tank ☐ Other _____

7. Marking/Painting and/or Lighting Preferred:
☐ Red Lights and Paint ☒ Dual - Red & Medium Intensity White
☐ White - Medium Intensity ☐ Dual - Red & High Intensity White
☐ White - High Intensity ☐ Other _____

8. FAA Aeronautical Study Number 2010-ASO-1189-OE

9. Latitude: 36 ° 52 ' 32 . 54 "

10. Longitude: 85 ° 24 ' 8 . 74 "

11. Datum: ☒ NAD83 ☐ NAD27 ☐ Other _____

12. Nearest Kentucky City: Burkesville County Cumberland

13. Nearest Kentucky public use or Military airport:
Columbia- Adair County Airport

14. Distance from #13 to Structure: 15.0 Miles

15. Direction from #13 to Structure: SSW

16. Site Elevation (AMSL): 869.00 Feet

17. Total Structure Height (AGL): 255.00 Feet

18. Overall Height (#16 + #17) (AMSL): 1,124.00 Feet

19. Previous FAA and/or Kentucky Aeronautical Study Number(s):
N/A

20. Description of Location: (Attach USGS 7.5 minute Quadrangle Map or an Airport layout Drawing with the precise site marked and any certified survey)
Site is located at:
7031 Columbia Road
Burkesville, KY 42717

21. Description of Proposal:

Structure: Proposed self-supporting tower with top-mounted antennas for overall height of 255' AGL.
Max. ERP: 250 Watts
Frequencies: Cellular Band B

22. Has a "NOTICE OF CONSTRUCTION OR ALTERATION" (FAA Form 7460-1) been filed with the Federal Aviation Administration?
☐ No ☒ Yes, When March 04, 2010

CERTIFICATION: I hereby certify that all the above statements made by me are true, complete and correct to the best of my knowledge and belief.

Leila Rezanavaz / Senior Consulting Engineer	Leila Rezanavaz	3/4/2010
Printed Name and Title	Signature	Date

PENALTIES: Persons failing to comply with Kentucky Revised Statutes (KRS 183.861 through 183.990) and Kentucky Administrative Regulations (602 KAR 050:Series) are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Non-compliance with Federal Aviation Administration Regulations may result in further penalties.

Commission Action:

☐ Chairman, KAZC ☐ Administrator, KAZC

☐ Approved

☐ Disapproved _____ Date _____

Federal Aviation Administration

« OE/AAA

Notice of Proposed Construction or Alteration - Off Airport

Project Name: BLUEG-000141251-10 **Sponsor:** Bluegrass Cellular, Inc.

Details for Case : Smith Bridge

Show Project Summary

Case Status

ASN: 2010-ASO-1189-OE
Status: Accepted
Date Accepted: 03/04/2010
Date Determined:
Letters: None
Documents: 03/04/2010 2C-Survey.pdf

Construction / Alteration Information

Notice Of: Construction
Duration: Permanent
if Temporary : Months: Days:
Work Schedule - Start: 05/01/2010
Work Schedule - End: 05/05/2010
State Filing: Filed with State

Structure Summary

Structure Type: Antenna Tower
Structure Name: Smith Bridge
FCC Number:
Prior ASN:

Structure Details

Latitude: 36° 52' 32.54" N
Longitude: 85° 24' 8.74" W
Horizontal Datum: NAD83
Site Elevation (SE): 869 (nearest foot)
Structure Height (AGL): 255 (nearest foot)
Requested Marking/Lighting: Dual-red and medium intensity
Other :
Recommended Marking/Lighting:
Current Marking/Lighting: N/A New Structure
Other :
Nearest City: Burkesville
Nearest State: Kentucky
Description of Location: Site is located at:
7031 Columbia Road
Burkesville, KY 42717
Description of Proposal: Proposed self supporting tower with top-mounted antennas for overall height of 255' AGL.

Common Frequency Bands

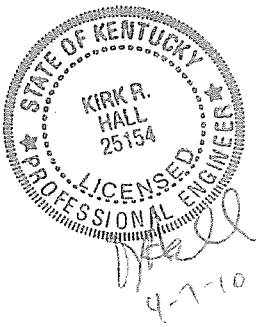
Low Freq	High Freq	Freq Unit	ERP	ERP Unit
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz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

Specific Frequencies

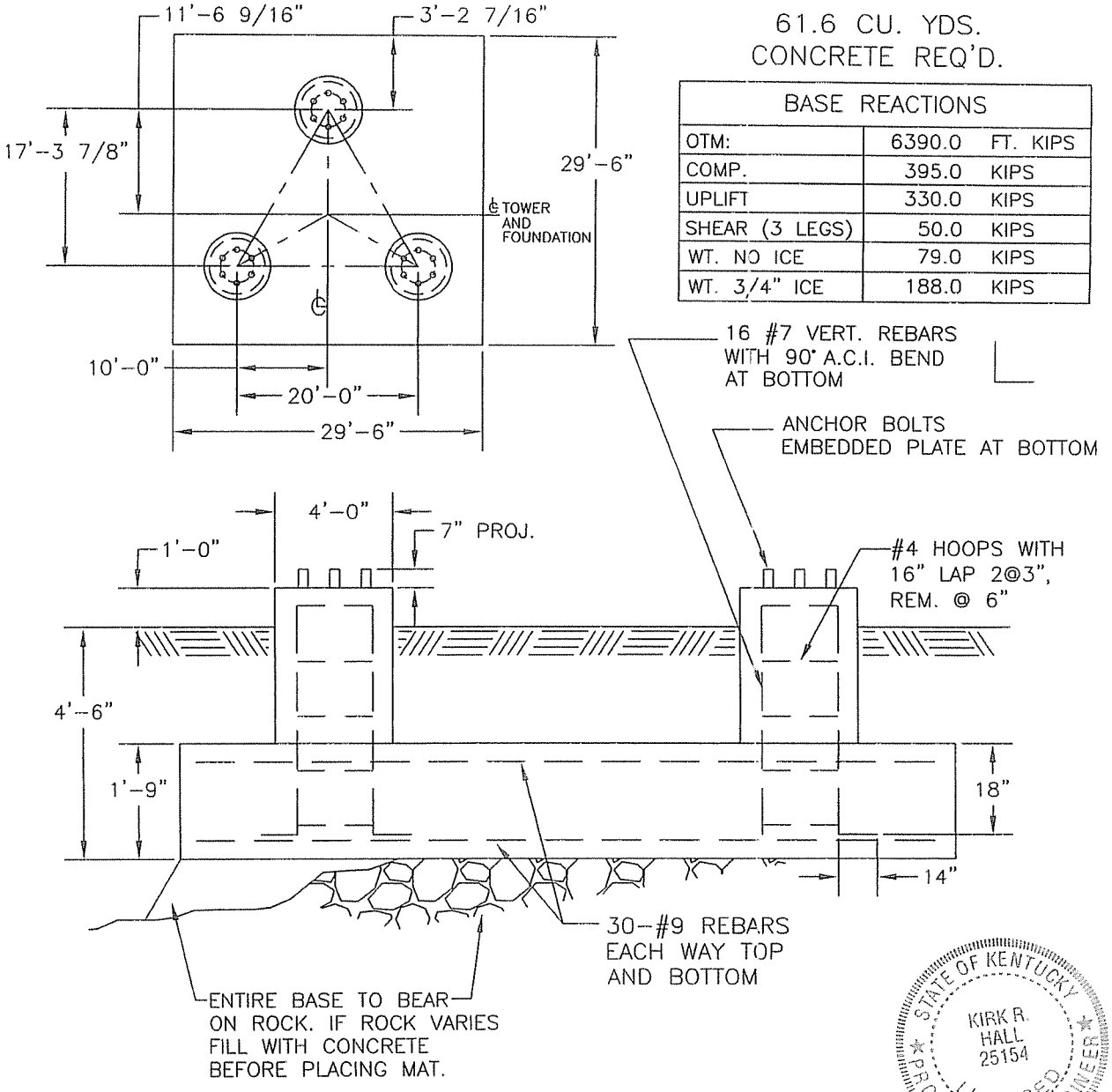
World Tower
COMPANY, INC

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

240' MODEL WSST TOWER
FOR: CUMBERLAND CELLULAR
SITE: SMITH BRIDGE
CUMBERLAND COUNTY, KY
DESIGN PACKAGE



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



61.6 CU. YDS.
CONCRETE REQ'D.

BASE REACTIONS		
OTM:	6390.0	FT. KIPS
COMP.	395.0	KIPS
UPLIFT	330.0	KIPS
SHEAR (3 LEGS)	50.0	KIPS
WT. NO ICE	79.0	KIPS
WT. 3/4" ICE	188.0	KIPS

STATE OF KENTUCKY
KIRK R. HALL
25154
LICENSED PROFESSIONAL ENGINEER
4-7-10

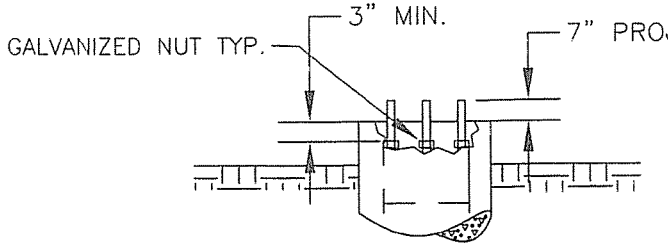
GENERAL NOTES

1. CONCRETE TO HAVE 4000 PSI MIN. COMPRESSIVE STRENGTH AFTER 28 DAYS.
2. ALL REINFORCMENT STEEL IS DEFORMED AND MEETS THE STRENGTH REQUIREMENTS OF ASTM A615 GRADE 60.
3. EMBEDDED STEEL TO HAVE 3" MIN. CONCRETE COVER.
4. FOUNDATION DESIGN IS BASED ON CUSTOMER SUPPLIED SOIL DATA FROM PATRIOT PROJECT NUMBER 5-09-0867 DATED APRIL 1, 2010.

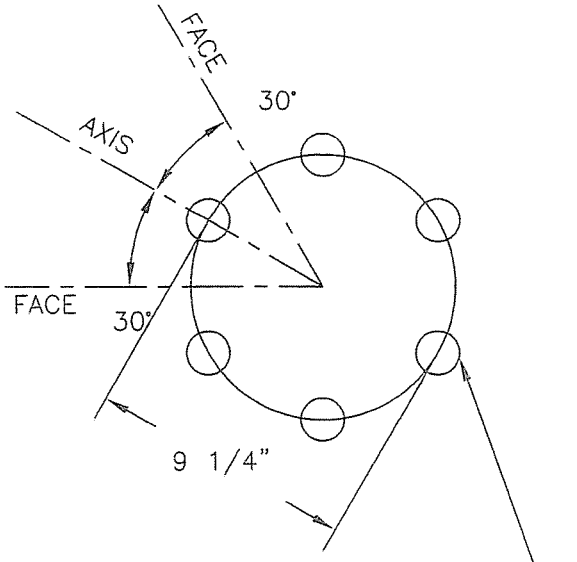
TITLE: ALTERNATIVE FOUNDATION DETAILS
FOR: CUMBERLAND CELLULAR
SITE: SMITH BRIDGE
CUMBERLAND COUNTY, KY

WORLD TOWER

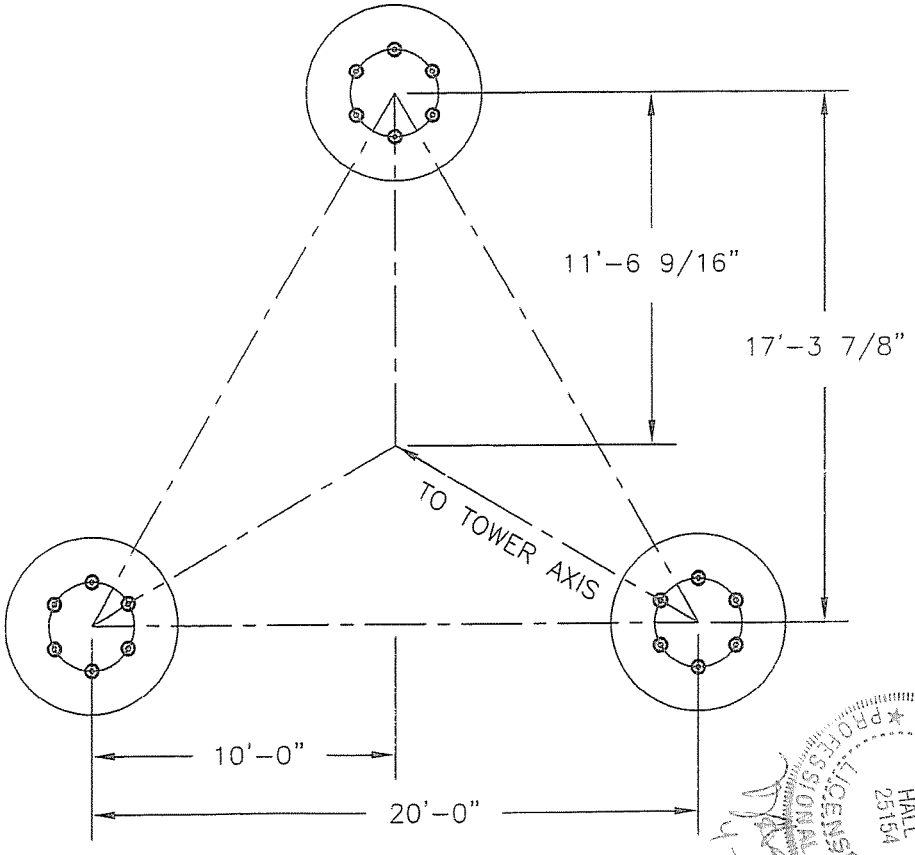
SCALE NONE	DWN. LKB	CKD.	DATE 4-7-10
FILE		DWG. NO.	Q10361F1

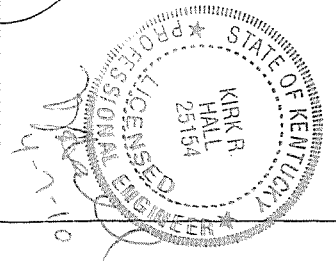


PIER ELEVATION



ANCHOR BOLTS 6 (18 TOTAL)
1 1/4"ø X 62" ASTM A354 GR. BC
EQUALLY SPACED ON A 9 1/4"
DIA. BOLT CIRCLE WITH TOP TEMPLATE
AND EMBEDDED PLATE

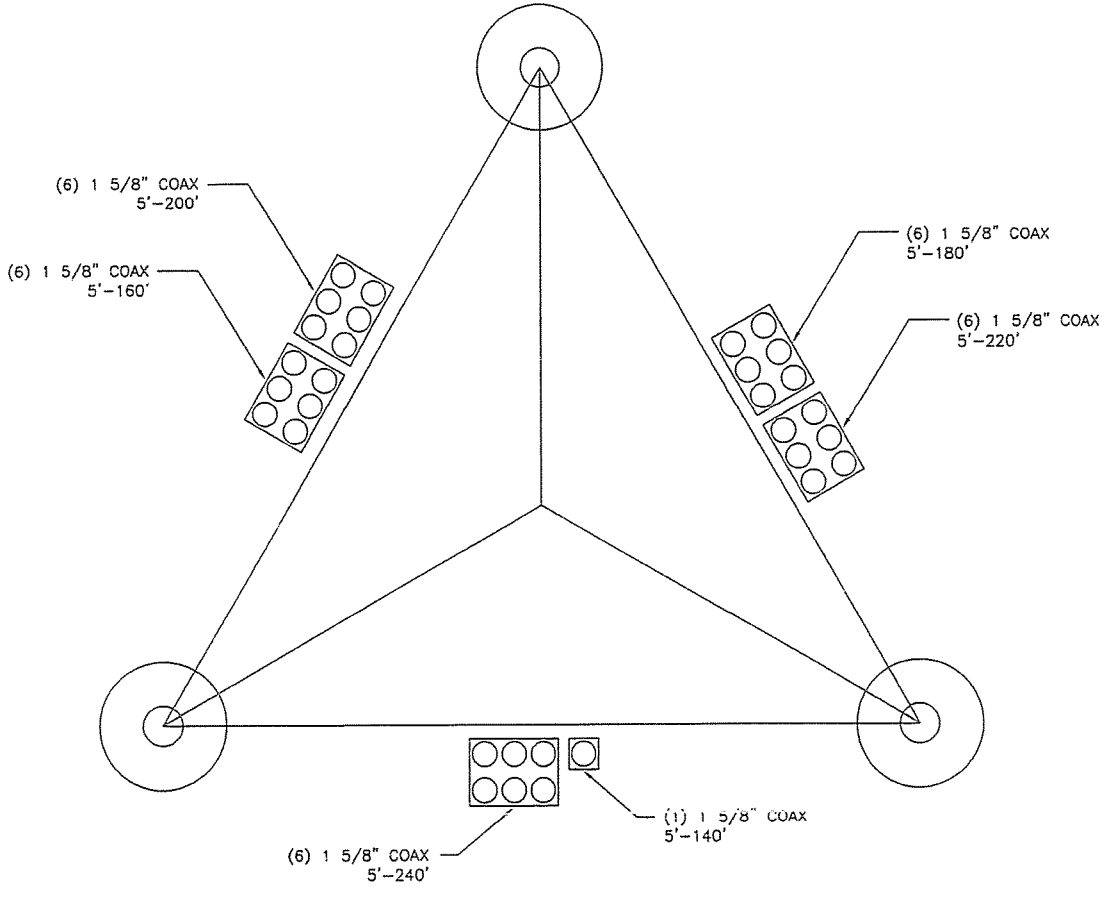




WORLD TOWER

TITLE:
ANCHOR BOLT LAYOUT
240' MODEL WSST TOWER
FOR: CUMBERLAND CELLULAR
SITE: SMITH BRIDGE
CUMBERLAND COUNTY, KY

SCALE NONE	DWN. LKB	CKD.	DATE 4-7-10
FILE		DWG. NO.	Q10361AB



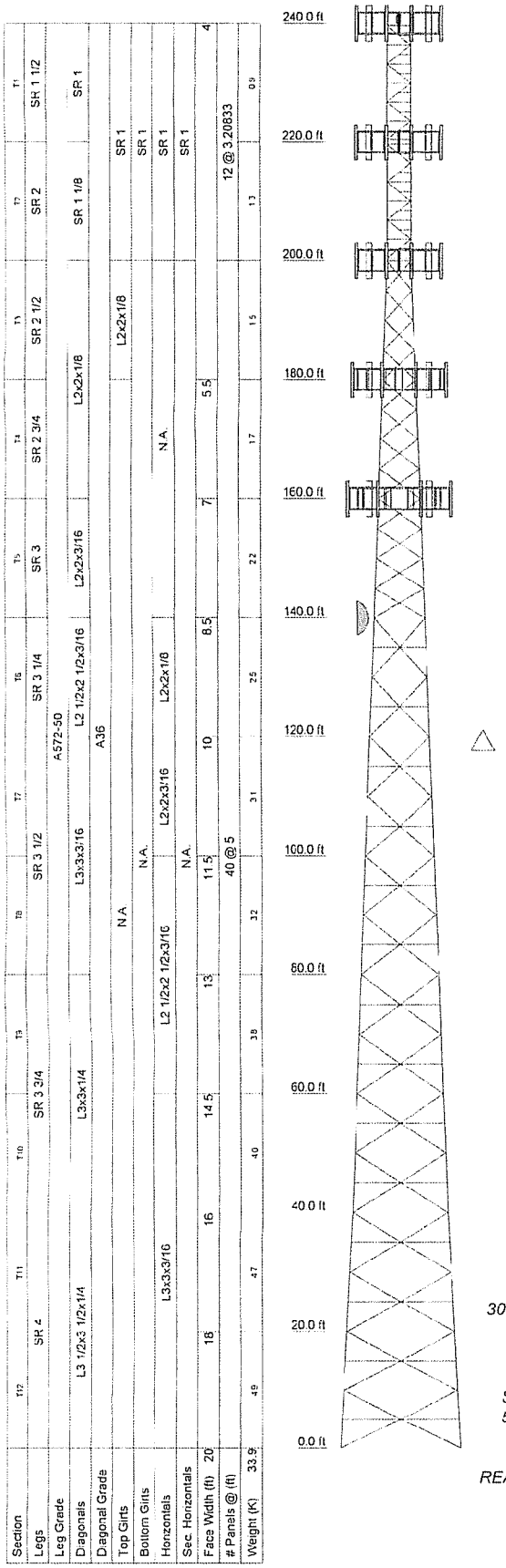
PLAN VIEW

PROFESSIONAL LICENSED ENGINEER
STATE OF KENTUCKY
KIRK R. HALL
25154

WORLD TOWER

TITLE:
WAVEGUIDE LOCATION
240' MODEL WSST TOWER
FOR: CUMBERLAND CELLULAR
SITE: SMITH BRIDGE
CUMBERLAND COUNTY, KY

SCALE NONE	DWN. LKB	CKD.	DATE 4-7-10
FILE		DWG. NO.	Q10361WG



Section	T12		T11		T10		T9		T8		T7		T6		T5		T4		T3		T2		T1	
Legs	SR 4				SR 3 3/4				SR 3 1/2				SR 3 1/4		SR 3		SR 2 3/4		SR 2 1/2		SR 2		SR 1 1/2	
Leg Grade	A572-50																							
Diagonals	L3 1/2x3 1/2x1/4				L3x3x1/4				L3x3x3/16				L2 1/2x2 1/2x3/16		L2x2x3/16		L2x2x1/8				SR 1 1/8		SR 1	
Diagonal Grade	A36																		L2x2x1/8					
Top Girts	N.A.																				SR 1			
Bottom Girts	N.A.																				SR 1			
Horizontals	L2 1/2x2 1/2x3/16				L3x3x3/16				L2x2x3/16				L2x2x1/8		N.A.						SR 1			
Sec. Horizontals	N.A.																							
Face Width (ft)	20	18		16		14.5		13		11.5		10		8.5		7		5.5		4				
# Panels @ (ft)	40 @ 5																				12 @ 3.20833			
Weight (K)	33.9	49		47		40		38		32		31		25		22		17		15		13		09

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Flash Beacon Lighting	240	(2) Antel RWB 80014/120 w/ mnt pipe(Panel 96.5"x11.2"x5.9")*	200
WD13X53 Antenna Mounting Frame (w/ .75)*	240	(2) Antel RWB 80014/120 w/ mnt pipe(Panel 96.5"x11.2"x5.9")*	200
WD13X53 Antenna Mounting Frame (w/ .75)*	240	(2) Antel RWB 80014/120 w/ mnt pipe(Panel 96.5"x11.2"x5.9")*	200
WD13X53 Antenna Mounting Frame (w/ .75)*	240	WD13X53 Antenna Mounting Frame (w/ .75)*	180
(2) Antel RWB 80014/120 w/ mnt pipe(Panel 96.5"x11.2"x5.9")*	240	WD13X53 Antenna Mounting Frame (w/ .75)*	180
(2) Antel RWB 80014/120 w/ mnt pipe(Panel 96.5"x11.2"x5.9")*	240	WD13X53 Antenna Mounting Frame (w/ .75)*	180
(2) Antel RWB 80014/120 w/ mnt pipe(Panel 96.5"x11.2"x5.9")*	240	(2) Antel RWB 80014/120 w/ mnt. pipe(Panel 96.5"x11.2"x5.9")*	180
WD13X53 Antenna Mounting Frame (w/ .75)*	220	(2) Antel RWB 80014/120 w/ mnt pipe(Panel 96.5"x11.2"x5.9")*	180
WD13X53 Antenna Mounting Frame (w/ .75)*	220	(2) Antel RWB 80014/120 w/ mnt. pipe(Panel 96.5"x11.2"x5.9")*	180
WD13X53 Antenna Mounting Frame (w/ .75)*	220	WD13X53 Antenna Mounting Frame (w/ .75)*	160
(2) Antel RWB 80014/120 w/ mnt pipe(Panel 96.5"x11.2"x5.9")*	220	WD13X53 Antenna Mounting Frame (w/ .75)*	160
(2) Antel RWB 80014/120 w/ mnt pipe(Panel 96.5"x11.2"x5.9")*	220	WD13X53 Antenna Mounting Frame (w/ .75)*	160
(2) Antel RWB 80014/120 w/ mnt pipe(Panel 96.5"x11.2"x5.9")*	220	(2) Antel RWB 80014/120 w/ mnt. pipe(Panel 96.5"x11.2"x5.9")*	160
WD13X53 Antenna Mounting Frame (w/ .75)*	200	(2) Antel RWB 80014/120 w/ mnt. pipe(Panel 96.5"x11.2"x5.9")*	160
WD13X53 Antenna Mounting Frame (w/ .75)*	200	(2) Antel RWB 80014/120 w/ mnt. pipe(Panel 96.5"x11.2"x5.9")*	160
WD13X53 Antenna Mounting Frame (w/ .75)*	200	6' Grid Dish	140

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Cumberland County, Kentucky
2. Tower designed for Exposure C to the TIA-222-G Standard
3. Tower designed for a 90.00 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 30.00 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60.00 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. Tower is designed for feedlines distributed on 3 tower faces with a maximum of 6 lines exposed to the wind on any one face.
9. Weak link in diagonals from 140' to 120'.
10. TOWER RATING: 95.5%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 395 K
UPLIFT: -330 K
SHEAR: 32 K

AXIAL
188 K
SHEAR 6 K — *MOMENT 834 kip-ft*

TORQUE 1 kip-ft
30.00 mph WIND - 0.75 in ICE

AXIAL
79 K
SHEAR 50 K — *MOMENT 6390 kip-ft*

TORQUE 3 kip-ft
REACTIONS - 90.00 mph WIND

STATE OF KENTUCKY
KIRK R. HALL
25154
LICENSED PROFESSIONAL ENGINEER

4-22-10

World Tower Company	Job: ***240' Standard WSST Job Q10-361***	
1213 Compressor Drive	Project: ***Smith Bridge, Kentucky***	
Mayfield, Kentucky 42066	Client: Cumberland Cellular	Drawn by: Kirk Hall / App'd:
Phone: (270) 247-3642	Code: TIA-222-G	Date: 04/22/10 / Scale: NTS
FAX: (270) 247-0909	Path: C:\Tower\PE Runs\2010\Q10-361 smith bridge blueprints\Q10-361.en	Dwg No. E-1

Report of
Geotechnical Engineering Investigation
Smith Bridge Cell Tower
Burkesville, Cumberland County, KY
Patriot Project No. 5-09-0867

Prepared For:

Jeff Brewer
Bluegrass Cellular
2902 Ring Road
P.O. Box 5012
Elizabethtown, KY 42702

Prepared By:

Patriot Engineering and
Environmental, Inc.
400 Production Court
Louisville, Kentucky 40299

April 1, 2010

PATRIOT ENGINEERING and Environmental, Inc.
Engineering Value for Project Success
Consulting Environmental, Geotechnical and Materials Engineers

April 1, 2010

Bluegrass Cellular
2902 Ring Road
P.O. Box 5012
Elizabethtown, KY 42702

Attention: Jeff Brewer, Project Manager

RE: Report of Geotechnical Engineering Investigation
Smith Bridge Cell Tower
Burkesville, Cumberland County, KY
Patriot Project Number 5-09-0867

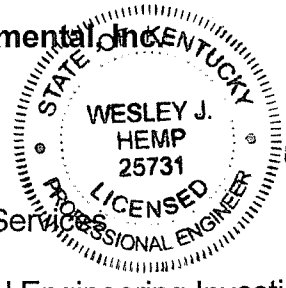
Dear Jeff:

Submitted herewith is the report of our subsurface investigation for the above-referenced project. This investigation was completed in general accordance with our Proposal Number PLE08-0025 dated June 19, 2008.

This report includes detailed and graphic logs of the two (2) soil test borings drilled at the proposed site. Also included in the report are the results of laboratory tests performed on samples obtained from the site, and geotechnical recommendations pertinent to the foundation design and construction.

We appreciate the opportunity to have performed this geotechnical engineering investigation and are looking forward to working with you during the construction phase of the project. If you have any questions regarding this report or if we may be of any additional assistance regarding any geotechnical aspect of the project, please do not hesitate to contact our office.

Respectfully submitted,
Patriot Engineering and Environmental, Inc.



Wesley J. Hemp, P.E., LEED AP
Director – Louisville Geotechnical Services

Richard L. Johnson, P.E.
Senior Project Engineer

Attachment: Report of Geotechnical Engineering Investigation

TABLE OF CONTENTS

REPORT OF GEOTECHNICAL ENGINEERING INVESTIGATION

Smith Bridge Cell Tower
Burkesville, Cumberland County, KY
Patriot Project No. 5-09-0867

1.0 INTRODUCTION

1.1 General

Bluegrass Cellular is planning the construction of a new cell tower to be located in Burkesville, Cumberland County, Kentucky. The results of our geotechnical engineering investigation for the project are presented in this report. This investigation was carried out in general accordance with *Patriot's* Proposal No. PLE08-0025, dated June 19, 2008.

1.2 Purpose and Scope

The purpose of this investigation was to determine the general near surface and subsurface conditions within the project area and to develop the geotechnical engineering recommendations necessary for the design and construction of the tower structure. This was achieved by drilling 2 rock core borings at the proposed tower location. This report contains the results of our findings, an engineering interpretation of these results with respect to the available project information, and recommendations to aid in the design and construction of the proposed cell tower facility. ***It should be noted that the project area is extremely hilly with steep grades within the project area. The performance of an in-depth slope stability analysis to examine slope stability issues with the project vicinity was beyond the scope of this investigation.***

2.0 PROJECT INFORMATION

The proposed project includes a self-supported cell tower to be constructed in Burkesville, Cumberland County, KY. Structural loading information for this project was not available at the time of this report. However, information provided by the client in regards to projects of a similar size and scope indicates that the tower height will not exceed 250 feet. We estimate that the ultimate structural loads will not exceed the following loading conditions for each tower leg:

Vertical (Downward) Load:	600 kips
Uplift:	500 kips
Horizontal Shear:	80 kips

Due to the relatively small amount of space available at the proposed tower location, it has been proposed by the client that the upper 8 to 10 feet of the area may be removed to create more space, or the perimeter of the site may be brought up to grade with structural fill restrained by retaining walls.

3.0 SITE AND SUBSURFACE CONDITIONS

3.1 Site Conditions

The area for the proposed cell tower consists of the pinnacle of a hill located near Burkesville, Cumberland County, KY. The area for the proposed tower is relatively flat in the immediate tower location, although the site slopes down abruptly at a lateral distance of approximately 20 feet from the tower center on the north, east, and west sides. Access to the project site is provided via two creek crossings (Big Renox Creek and Fjord Creek), a large valley at the base of the hill followed by a 1.5 to 2 mile path leading up the steep hillside to the south side of the project area. An elevation difference of 200 feet (+/-) occurs between the proposed tower lease area at the top of the hill and Big Renox Creek, which flows along the base of the hill on the north side. Various outbuildings (barns, sheds, etc.) are located on the property at the bottom of the hill north of the proposed tower location and Big Renox Creek. The ground surface along the access path was moist and covered with snow during our initial site. Drier conditions were encountered during our follow-up visit.

3.2 Site Geology

Information pertaining to soil characteristics in the project area was obtained through the Kentucky Geological Survey interactive GIS Map, and experience with previous geotechnical investigations in the area.

The site is located in the Mississippian Plateaus Physiographic Region in south central Kentucky. The bedrock at or near the surface consists of sedimentary rock and is of Mississippian age. Specifically, the underlying bedrock is referred to as the Fort Payne formation. This formation consists of medium to coarse-grained

limestone with shale partings. Parent soils in this area consist primarily of material weathered from limestone.

3.3 Subsurface Conditions

Our interpretation of the subsurface conditions is based upon two soil borings drilled at the same approximate location shown on the Boring Location Map in Appendix A. The following discussion is general; for more specific information, please refer to the boring logs presented in Appendix A. It should be noted that the dashed stratification lines shown on the soil boring logs indicate approximate transitions between soil types. In situ stratification changes could occur gradually or at different depths. All depths discussed below refer to depths below the existing ground surface.

The parcel is generally covered with scant surficial soil and weathered rock outcroppings. Below the scant soil surface cover, boring B-1 encountered auger refusal at a depth of 1.0'. Upon encountering auger refusal, 10 feet of rock coring was performed. The core samples recovered consisted of shaley limestone described as medium gray to brown in color, slightly weathered to highly weathered, medium to coarse-grained, and hard to a depth of 11 feet, the boring termination depth. Please refer to the table below for more information in regards to rock coring recovery and RQD (Rock Quality Designation).

Table 1 – Rock Coring Data (B-1)

Depth (ft)	Recovery (%)	RQD (%)	Rock Quality
1.0-6.0	100	37	Poor
6.0-11.0	100	42	Poor

Boring B-1A was drilled at the same location as B-1 in order to obtain additional subsurface data below the termination depth of B-1. Auger refusal was encountered at a depth of about 4.5 feet, at which time wash drilling methods were utilized to advance the hole to a depth of 11.3 feet, which is nearly the termination depth of boring B-1. At this point, 15-feet of rock coring was performed. The first 5-ft sample consisted of limestone described as medium gray, slightly to moderately weathered, and hard with shale partings to a depth of 16.3 feet. The core samples recovered between depths of 16.3 feet and 26.3 feet consisted of limestone described as medium gray, fresh to slightly weathered, medium to coarse-grained, and hard.

Please refer to the table below for more information in regards to rock coring recovery and RQD (Rock Quality Designation).

Table 2 – Rock Coring Data (B-1A)			
Depth (ft)	Recovery (%)	RQD (%)	Rock Quality
11.3-16.3	35	0	Very Poor
16.3-21.3	100	78	Good
21.3-26.3	100	80	Good

3.4 Groundwater Conditions

Groundwater was not encountered during or upon completion of drilling operations.

The term groundwater, for the purpose of this report, pertains to any water that percolates through the naturally occurring soil materials found on site. This includes any overland flow that permeates through a given depth of soil, perched water, and water that occurs below the "water table", a zone that remains saturated and water bearing year round.

It should be recognized that fluctuations in the groundwater level should be expected to occur due to variations in rainfall and other environmental or physical factors at the time measurements are made. The true static groundwater level can only be determined through observations made in cased holes over a long period of time, the construction of which was beyond the scope of this investigation.

4.0 DESIGN RECOMMENDATIONS

4.1 Basis

Our recommendations are based on data presented in this report, which include rock core borings, and our experience with similar projects. Subsurface variations that may not be indicated by a dispersive exploratory boring program can exist on any site. If such variations or unexpected conditions are encountered during construction, or if the project information is incorrect or changed, we should be informed immediately since

the validity of our recommendations may be affected. Refer to Appendix B for additional qualifications and contractual considerations.

4.2 Tower Foundation

Drilled Piers

The structure may be supported on a deep foundation system consisting of drilled piers. Drilled piers may be designed using the net allowable end bearing pressures and allowable skin friction values shown in the table below.

Depth Range (feet)	*Soil Type*	*Allowable Skin Friction (psf)*	*Allowable End Bearing Pressure (psf)*	*Angle of Shearing Resistance (degrees)*	**Cohesion (psf)*
0.0-5.0	Scant topsoil and Shaley LImestone	Ignore	Ignore	Ignore	Ignore
5.0-16.0	Shaley Limestone	1,200	20,000	0	10,000
>16.0	Limestone	2,600	60,000	0	20,000

*** It should be noted that the recommended cohesion value does not include a factor of safety.**

Development of the design capacity is based on the following conditions or criteria:

- Drilled Piers should be designed as straight shaft and have a minimum diameter of 30 inches and be installed to a minimum depth of four times the pier diameter.
- The center-to-center spacing of the shafts will be a minimum of 2.5 pier diameters.
- Load applied to the shaft cap is uniformly distributed to each of the piers.
- Shafts should be constructed in accordance with the recommendations for shaft construction in Section 5.1 of this report.
- The drilled piers should be installed by a specialty contractor experienced in drilled pier installation.

For drilled pier design, the net allowable end bearing pressure is based on loads applied at the pier cap. The weight of the pier or the pier cap need not be included in the downward axial load used to dimension the pier.

Mat Foundation

Alternatively, the cell tower may be supported using a mat foundation. The maximum allowable bearing pressure for mat foundation design should not exceed the values provided in the table below.

Depth Range (feet)	*Soil Type*	*Allowable Bearing Pressure (psf)*	*Friction Coefficient*
2.0-16.0	Shaley Limestone	20,000	0.60
>16.0	Limestone	60,000	0.60

The thickness of the mat should be sufficient to support the tower as a rigid mat without flexure. For mat foundation design, we recommend that the modulus of subgrade reaction, "K_{30}", not exceed ***300*** pounds per cubic inch for a mat bearing on competent limestone bedrock.

The mat should be constructed in compliance with the recommendations discussed in the Construction Considerations (Section 5.0) of this report.

A detailed settlement analysis was beyond the scope of this report; however, we estimate that the total settlement of the mat foundation bearing on competent limestone bedrock should not exceed approximately 1 inch. Careful field control during construction is necessary to minimize the actual settlement that will occur.

4.3 Maintenance Building Foundations

The proposed structure can be supported on spread footings bearing on sound bedrock or on structural fill overlying the same. These footings may be proportioned using a net allowable soil bearing pressure not exceeding ***10,000*** pounds per square foot (psf) for wall footings, provided the foundations are constructed in compliance with the recommendations discussed in Section 5.0 of this report. ***If necessary, a higher design allowable bearing pressure may be provided for foundations bearing on competent limestone bedrock. The recommended bearing pressure provided above assumes that the minimum recommended foundation widths will control the footing design.***

In using the above net allowable soil bearing pressure, the weight of the foundation and backfill over the foundation need not be considered. Hence, only loads applied at or above the minimum finished grade adjacent to the footing need to be used for dimensioning the foundations. Each new foundation should be positioned so it does not induce significant pressure on adjacent foundations; otherwise the stress overlap must be considered in the design.

All exterior foundations and foundations in unheated areas should be located at a depth of at least 24 inches below final exterior grade for frost protection. We recommend that strip footings be at least 18 inches wide and column footings be at least 24 inches wide.

We estimate that the total foundation settlement should not exceed approximately 1 inch and that differential settlement should not exceed about ¾ inch for footings bearing at shallow depths on stiff clayey silt or structural fill. Careful field control during construction is necessary to minimize the actual settlement that will occur.

Positive drainage of surface water, including downspout discharge, should be maintained away from structure foundations to avoid wetting and weakening of the foundation soils both during construction and after construction is complete.

4.4 Floor Slabs

It should be noted that a test boring was not performed for the proposed maintenance building. Therefore, the following discussion should be considered general in regards to floor slabs.

The competent limestone bedrock encountered in the test borings is suitable for the support of floor slabs. Where encountered in floor slab areas, any rock pinnacles should be removed to a depth just below the granular base course elevation.

Depending upon the time of year in which floor slabs are constructed (and if clay fill is imported to the site) the subgrade may be soft or frozen. If floor slab construction takes place during the rainy season or the winter months, some undercutting should be expected prior to placement of the granular base course.

We recommend that all floor slabs be designed as "floating", that is, fully ground supported and not structurally connected to walls or foundations. This is to minimize the possibility of cracking and displacement of the floor slab because of differential movements between the slab and the foundation. Although the movements are estimated to be within the tolerable limits for the structural safety, such movements could be detrimental to the slabs if they were rigidly connected to the foundations.

The building floor slab should be supported on a minimum 6-inch thick, granular base course, bearing on a suitably prepared subgrade (refer to Section 5.0 Construction Considerations). The granular base course is expected to help distribute loads and equalize moisture conditions beneath the slab. All slabs should be liberally jointed and designed with the appropriate reinforcement for the anticipated loading conditions.

4.5 Modulus of Subgrade Reaction

A modulus of subgrade reaction, "K_{30} ", value of ***300*** pounds per cubic inch (pci) is recommended for the design of ground supported floor slabs bearing on competent limestone bedrock. If floors slabs are to be supported on crushed stone or clay borrow fill, the recommended subgrade modulus should be reduced to ***100*** pci, assuming that the clay borrow meets the requirements set forth in this report for

structural fill. It should be noted that the "K_{30}" modulus is based on a 30-inch diameter plate load test.

4.6 Access Road and Parking Area

No test borings were performed for the tower access drive. It is possible that conditions different than those encountered at the tower location may exist along the access drive. Therefore, the following discussion should be considered general in nature in regards to access road and parking areas.

Depending upon the time of year in which access road and parking areas are constructed the exposed subgrade may be soft. If soft areas are encountered during construction, the areas should be undercut and replaced with approved compacted structural fill as outlined in section 5.0 of this report. If construction is performed during a wet or cold period, the contractor will need to exercise care during the grading and fill placement activities in order to achieve the necessary subgrade soil support for the access road (See Section 5.0 for Construction Considerations).

It is assumed that the access drive/parking lot design for this project will consist of crushed stone overlying the existing soil and/or rock subgrade. A pavement section without asphalt or concrete surface cover will require regular maintenance due to degradation of soils caused by inclement weather, vegetation growth, and vehicular traffic. Therefore, the pavement section will require routine maintenance to keep the access drive and parking areas functional.

The base soil for the access road and parking will need to be firm and dry. The subgrade should be sloped properly in order to provide good base drainage. To minimize the effects of groundwater or surface water conditions, the base section for the driveway should be sufficiently high above adjacent ditches and properly graded to provide adequate drainage.

Our recommendations are based on the assumption that the access drive and parking areas will be constructed on proofrolled natural soils, or on structural fill overlying the same. Serviceable pavements can be achieved by different combinations of materials and thickness, varied to provide roughly equivalent strengths. In addition, local practice for existing pavement construction should be

reviewed for other blends, combinations of materials that have been found satisfactory, and for applicable minimum standards.

4.7 Seismic Considerations

We have reviewed Section 1615 of the 2007 Kentucky Building Code with respect to the subsurface conditions disclosed by our geotechnical investigation and the following recommendations and comments are presented for your use in developing the seismic design criteria for the structural design. For structural design purposes, we recommend using a **Site Class of B** as defined by the 2007 Kentucky Building Code. Other earthquake resistant design parameters should be applied consistent with the minimum requirements of the Kentucky Building Code. The Site Class of B was based on hard limestone bedrock with an average shear wave velocity of 3000 feet/second to a depth of 100 feet.

4.8 Earth Resistivity Testing

Resistivity testing of the subsurface materials was performed utilizing a Metrel Earth-Insulation Tester. The four point Wenner Array was utilized. The setup of this array consists of placing four equally spaced electrodes in a straight line along the subgrade. A current is sent through the outer two probes via the test meter, while the two inner probes measure the voltage drop due the current flow. The resistance is then calculated utilizing Ohm's Law. Earth resistivity measurements were performed along two lines running perpendicular to one another through the center of the proposed tower location at 5, 10, 15, and 20 foot spacing's. ***Due to space restrictions within the vicinity of the proposed tower location, it was not feasible to perform earth resistivity at the typical 30 and 40 foot spacing's, respectively.*** Please refer to the table below for testing results.

Figure 2 - Earth Resistivity Testing Results

Line A-A'		Line B-B'	
Spacing (ft.)	Resistivity (Ω-m)	Spacing (ft.)	Resistivity (Ω-m)
5	352	5	364
10	260	10	255
15	263	15	181
20	265	20	203

5.0 CONSTRUCTION CONSIDERATIONS

5.1 Site Preparation

All areas that will support foundations, floors, pavements or newly placed structural fill must be properly prepared. All loose surficial soil, topsoil, fill and other unsuitable materials must be removed. Unsuitable materials include: frozen soil, relatively soft material, relatively wet soils, deleterious material, soils that exhibit a high organic content.

Prior to construction of floor slabs or pavements or the placement of new structural fill, the exposed subgrade must be evaluated by the Patriot representative (assuming the exposed subgrade does not consist of bedrock). The evaluation should include proofrolling of the subgrade.

Care must be exercised during grading and fill placement operations. The combination of heavy construction equipment traffic and excess surface moisture can cause pumping and deterioration of the near surface soils. The severity of this potential problem depends to a great extent on the weather conditions prevailing during construction.

5.2 Foundation Excavations

Drilled Shaft Excavations

The drilled shaft excavations should be observed by *Patriot's* geotechnical engineer or his representative to verify that the foundations will bear at the specified minimum depth and with the minimum bearing requirements, as recommended in Section 4.2 of this report. To confirm adequate bearing, *Patriot's* site representative will visually examine a sample of the bedrock taken at the proposed bearing depth. Surface runoff or seepage water should be drained away from the drilled pier excavation and not be allowed to collect in the excavation.

Additional recommendations for drilled pier foundation construction are presented below:

- The geotechnical engineer should be retained to document the shaft diameter, depth, cleanliness, plumbness, and type of end bearing material during pier construction.
- The foundation bearing material should be evaluated after the bottom of the hole is leveled, cleared of any mud and extraneous materials, and dewatered.
- The drilling equipment should have the capacity to produce a torque of at least 500,000 inch-pounds and a downward force of at least 50,000 pounds.
- Temporary protective steel casing should be available to be installed in the pier, if necessary, to prevent sidewall collapse and excessive mud and water intrusion into the opened excavation. The casing may be extracted as the excavation is filled with concrete. However, the protective casing should not be removed until the weight of concrete placed into the pier exceeds the ground water head.
- A positive head of concrete (minimum of 5 feet) should be maintained above the bottom of the casing during withdrawal and the contractor should prevent concrete from "hanging-up" inside the shell, which may allow soil and water intrusion below the shell.
- If groundwater seepage into the drilled pier excavation is less than 20 gallons per minute, pumps should be used to maintain less than two inches of water. After observation and evaluation of the pier bottom by the geotechnical engineer, the pumps should be removed and concrete placement initiated immediately. If water is flowing into the hole at a rate greater than 20 gallons per minute, the geotechnical engineer should be consulted for guidance.
- Concrete with slumps ranging between four and seven inches should be used for backfilling the piers.
- Concrete placement into the drilled hole should be directed through a centering device located at the ground surface. If significant groundwater inflow is encountered, a tremie pipe should be used during the concrete placement.
- Construction techniques used for drilled pier installation should conform to applicable Occupational Safety and Health Administration (OSHA) regulations.

Spread Footing & Mat Foundation Excavations

The limestone bedrock in the base of the foundation (except for foundations bearing on structural backfill) should be observed by a Patriot site representative to confirm that bearing material of adequate strength has been reached. Any localized soft soil or highly weathered rock zones encountered at the bearing elevation should be further excavated until adequate support materials encountered. The cavity should be backfilled with approved structural fill as outlined in Section 5.3 of this report.

If it is necessary to support the foundation on structural fill, then the fill pad must extend laterally a minimum distance beyond the edge of the mat foundation. The minimum structural pad width would correspond with a point at which an imaginary line extending downward from the outside edge of the footing at a 1H:2V slope intersects the surface of the natural soils. For example, if the depth to the bottom of excavation is 2 feet below the bottom of the foundation, the excavation would need to extend laterally beyond the edge of the footing at least 1 foot, as shown in Illustration A found at the conclusion of this report.

Excavation slopes should be maintained within OSHA requirements. In addition, we recommend that any surcharge fill or heavy equipment be kept at least 5 feet away from the edge of the excavation. In addition, excavations that occur near existing in-use foundations should be carefully performed, making a conscious effort not to undermine the support of the in-use foundations. If it is necessary to excavate soils adjacent to and below the bearing elevation of any in-use foundations *Patriot* should be contacted to make further recommendations regarding these excavations. Please refer to Illustration B in Appendix A for further details.

Construction traffic on the exposed surface of the bearing soils will potentially cause some disturbance of the subgrade and consequently loss of bearing capacity. However, the degree of disturbance can be minimized by proper protection of the exposed surface.

5.3 Structural Fill and Fill Placement Control

Structural fill, defined as any fill that will support structural loads, should be clean and free of organic material, debris, deleterious materials and frozen soils. Samples of the proposed fill materials should be tested prior to initiating the earthwork and backfilling

operations to determine the classification, natural and optimum moisture contents, maximum dry density and overall suitability as a structural fill.

Structural fill should be limited to compacted No. 57 Stone, DGA, or lean clay placed and compacted in accordance with this report, or lean concrete. Any clay borrow should have a liquid limit of less than 40 percent and a plasticity index of less than 20 percent. If the mat or spread footing foundations bear directly on the bedrock surface, suitable structural fill should be limited to No. 57 Stone or lean concrete.

All structural fill placed beneath floor slabs and above the foundation bearing elevation should be compacted to at least 95 percent of its maximum Standard Proctor dry density (ASTM D-698). This minimum compaction requirement should be increased to 100 percent of the maximum Standard Proctor dry density for fill supporting footings or the mat foundation, provided foundations are designed as outlined in Recommendations, Section 4.2.

It may be necessary to scarify and recompact the near surface soil prior to placement of the pavement sections. Any fill placed or recompacted within 1 ft of the base of the pavement section should also be compacted to at least 100 percent of the Standard Proctor maximum dry density. This can be reduced to 95 percent for engineered fill placed more than 1 ft below the base of the pavement section.

To achieve the recommended compaction of the structural fill, we suggest that the fill be placed and compacted in layers not exceeding eight inches in loose thickness. A Patriot soils engineer or his representative should monitor all fill placements.

5.4 Groundwater

Groundwater was not encountered during or upon completion of drilling operations in the test boring. Groundwater inflow into shallow excavations above the groundwater table is expected to be adequately controlled by conventional methods such as gravity drainage and/or pumping from sumps. More significant inflow can be expected in deeper excavations below the groundwater table requiring more aggressive dewatering techniques, such as well or wellpoint systems. For groundwater to have minimal effects on the construction, foundation excavations should be constructed and poured in the same day, if possible.

6.0 INVESTIGATIONAL PROCEDURES

6.1 Field Work

A total of 2 borings were performed at the project site on the dates of January 25, 2010 and March 16, 2010 at the approximate location shown on the Boring Location Plan in Appendix A. Boring B-1 was drilled in the center of the cell tower area to auger refusal, which was encountered at a depth of 1-ft. Upon reaching auger refusal, ten (10) feet of rock coring was performed. Drilling was suspended until March 16, 2010 after reaching a termination depth of 11 feet. On this date, the boring B-1A was advanced to a depth of about 11 feet via auger and wash drilling methods at the location of boring B-1. Upon reaching a depth 11 feet, an additional 15 feet of rock coring was performed. All depths are given as feet below the existing ground surface.

The borings were advanced using 3¼" I.D. (inside diameter) hollow-stem augers. Water levels were monitored at the borehole location during drilling and upon completion of the boring. For rock coring, a double-tube NX core barrel with a diamond bit was used to obtain the core samples. The boreholes were backfilled with auger cuttings prior to demobilization for safety considerations.

Upon completion of the boring program, all of the samples retrieved during drilling in this sampling program were returned to *Patriot*'s soils testing laboratory where they were visually examined and classified. Laboratory generated logs were prepared based upon the driller's field log, laboratory test results, and our visual classification. The test boring logs and a description of the classification system are included in Appendix A in this report. Indicated on the log are the primary strata encountered, the approximate depth of each stratum change, depth of sample, groundwater conditions, and select laboratory test data. The laboratory log was prepared giving the appropriate sample data and the textural description and classification.

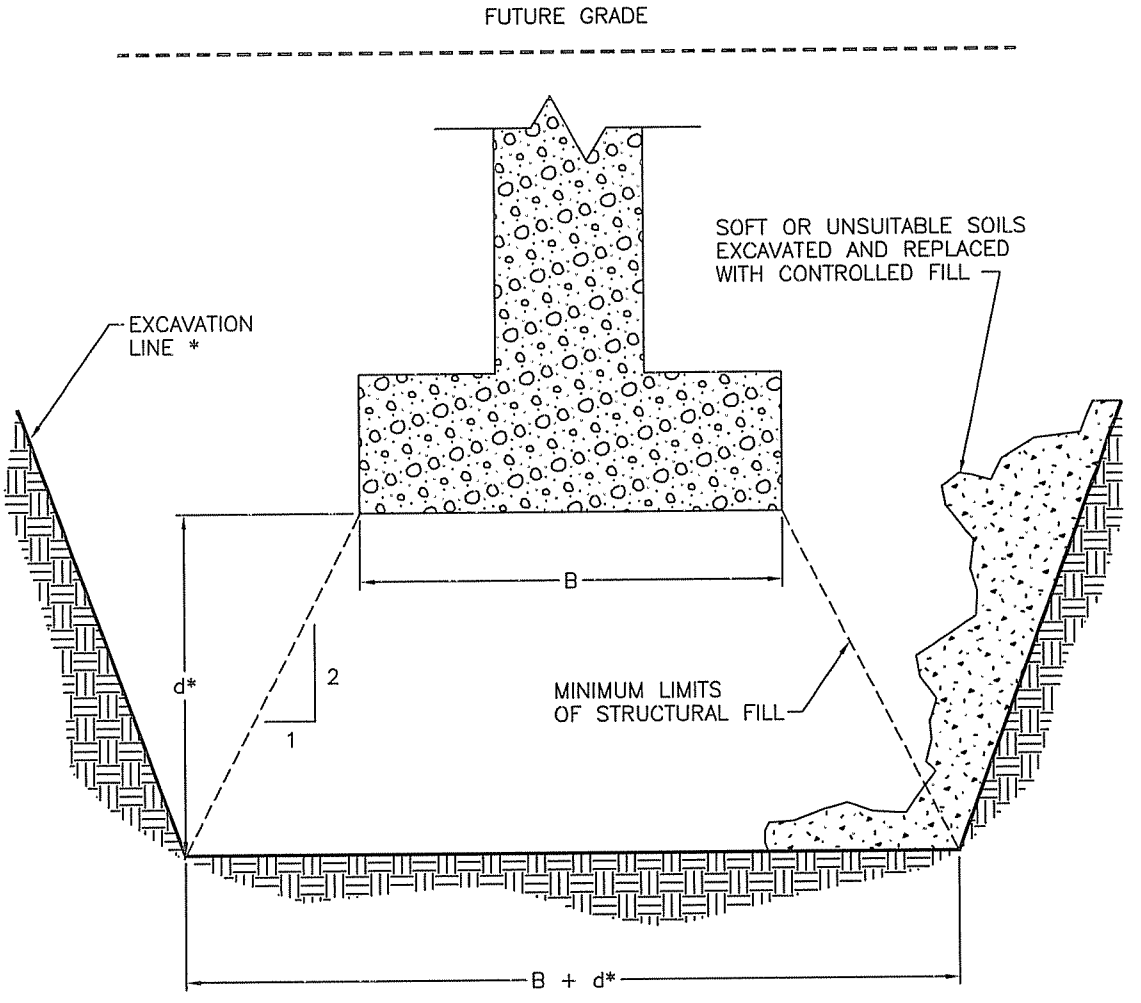
Earth Resistivity Testing was performed at the site on February 10, 2010. The testing was performed along two lines running perpendicular to one another through the center of the proposed tower location.

6.2 Laboratory Testing

Since no SPT samples were obtained due to the shallow depth to bedrock at the proposed tower location, no laboratory testing was performed for the on-site soils.

7.0 ILLUSTRATIONS

See Illustrations A and B on the following pages. These illustrations are presented to further visually clarify the Construction Considerations presented in Section 5.2.



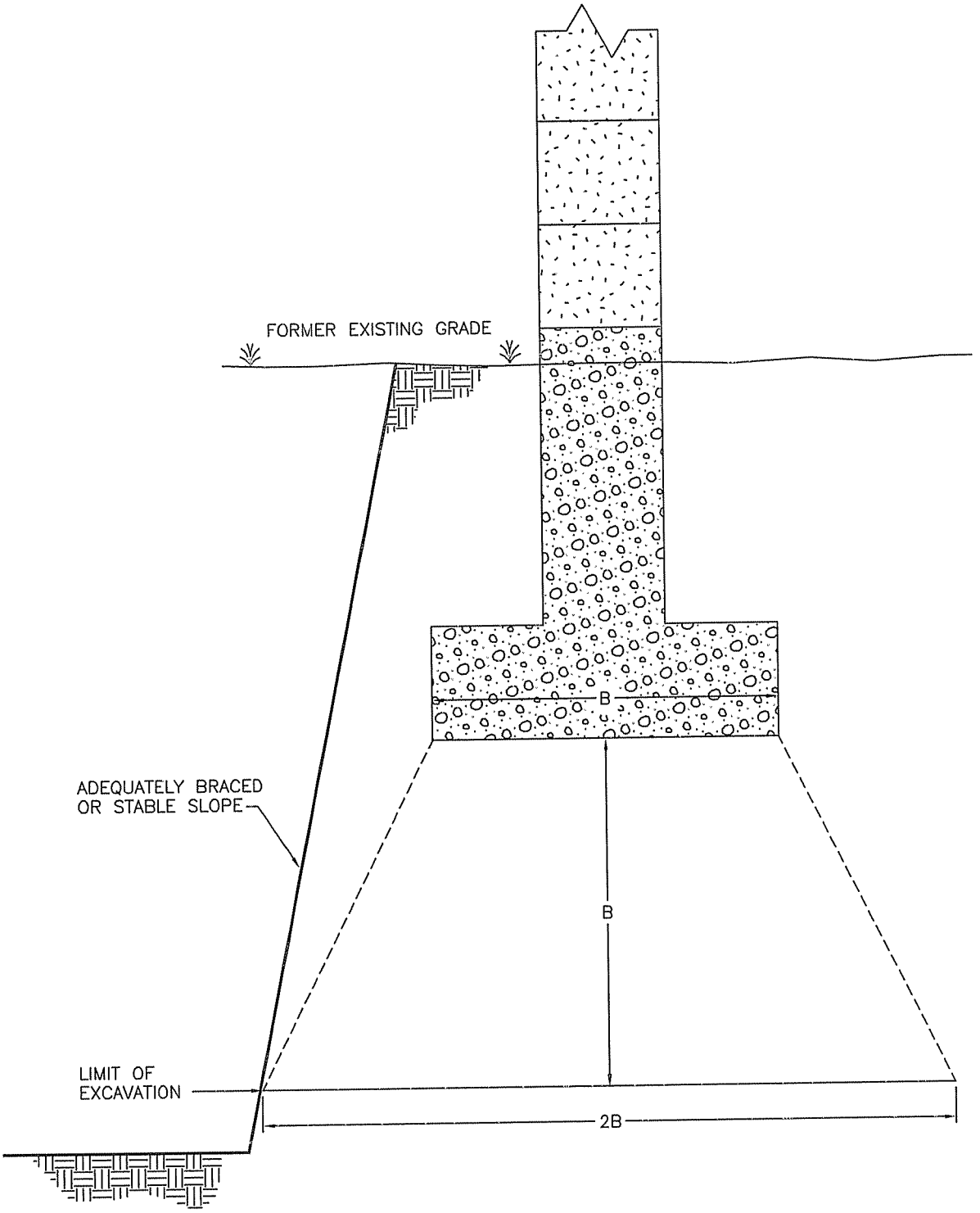
*d IS DEPTH TO SUITABLE SOILS

* IN COMPLIANCE WITH OSHA STANDARDS

PATRIOT ENGINEERING
and Environmental, Inc.
4735 Poplar Level Road, Suite 1
(502)961-5652 FAX (502)961-9256

Excavation for Footings
In an Area of Fill
ILLUSTRATION A

job. no.:	PAT–UC	figure:	1



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(502)961-5652 FAX (502)961-9256

Excavation Near Existing
In Use Foundations
ILLUSTRATION B

job. no.:	PAT-UC1	figure:	1

APPENDIX A

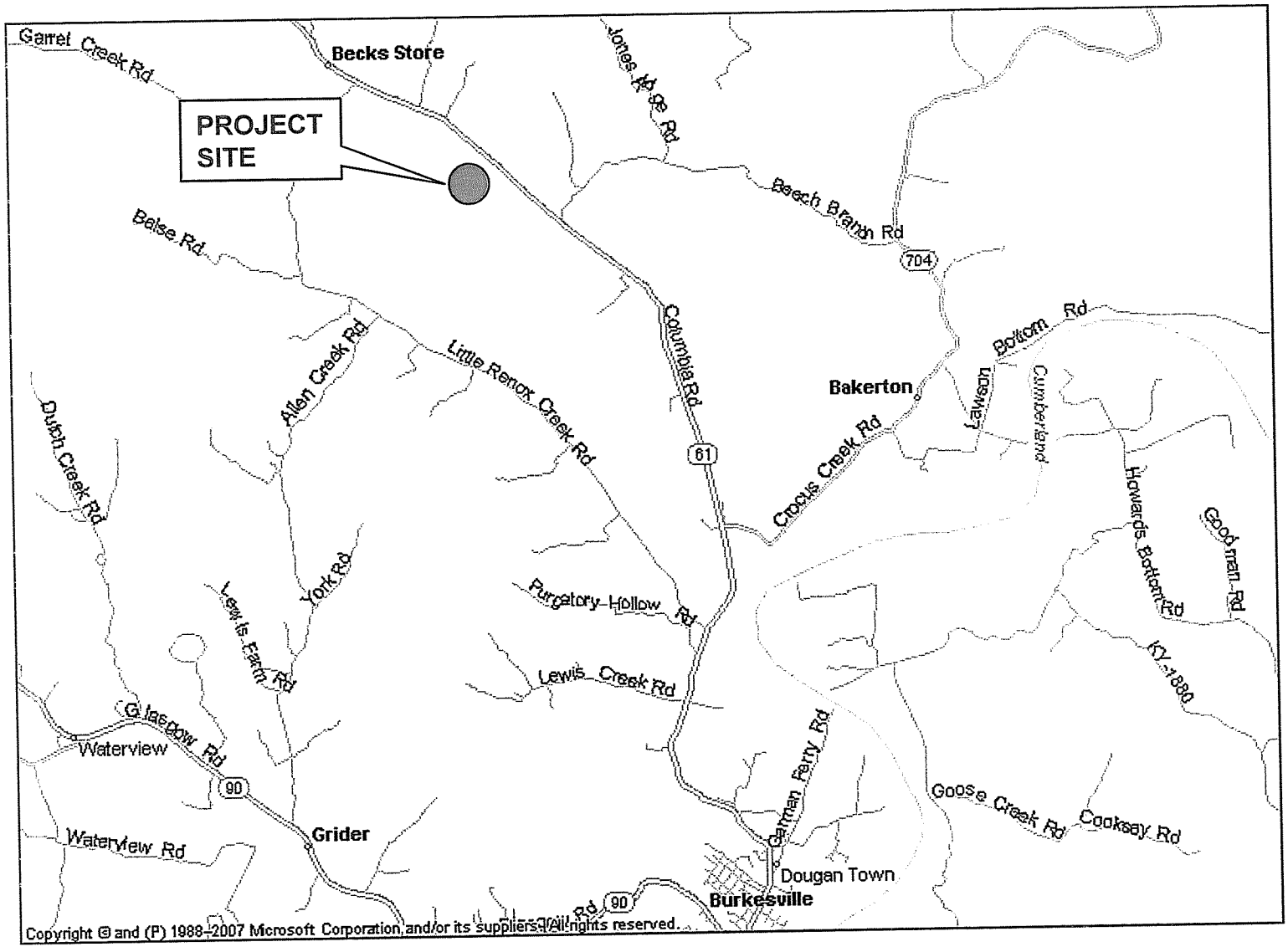
Site Vicinity Map

Boring / Resistivity Test Location Map

Boring Log

Boring Log Key

Unified Soils Classification (USCS)

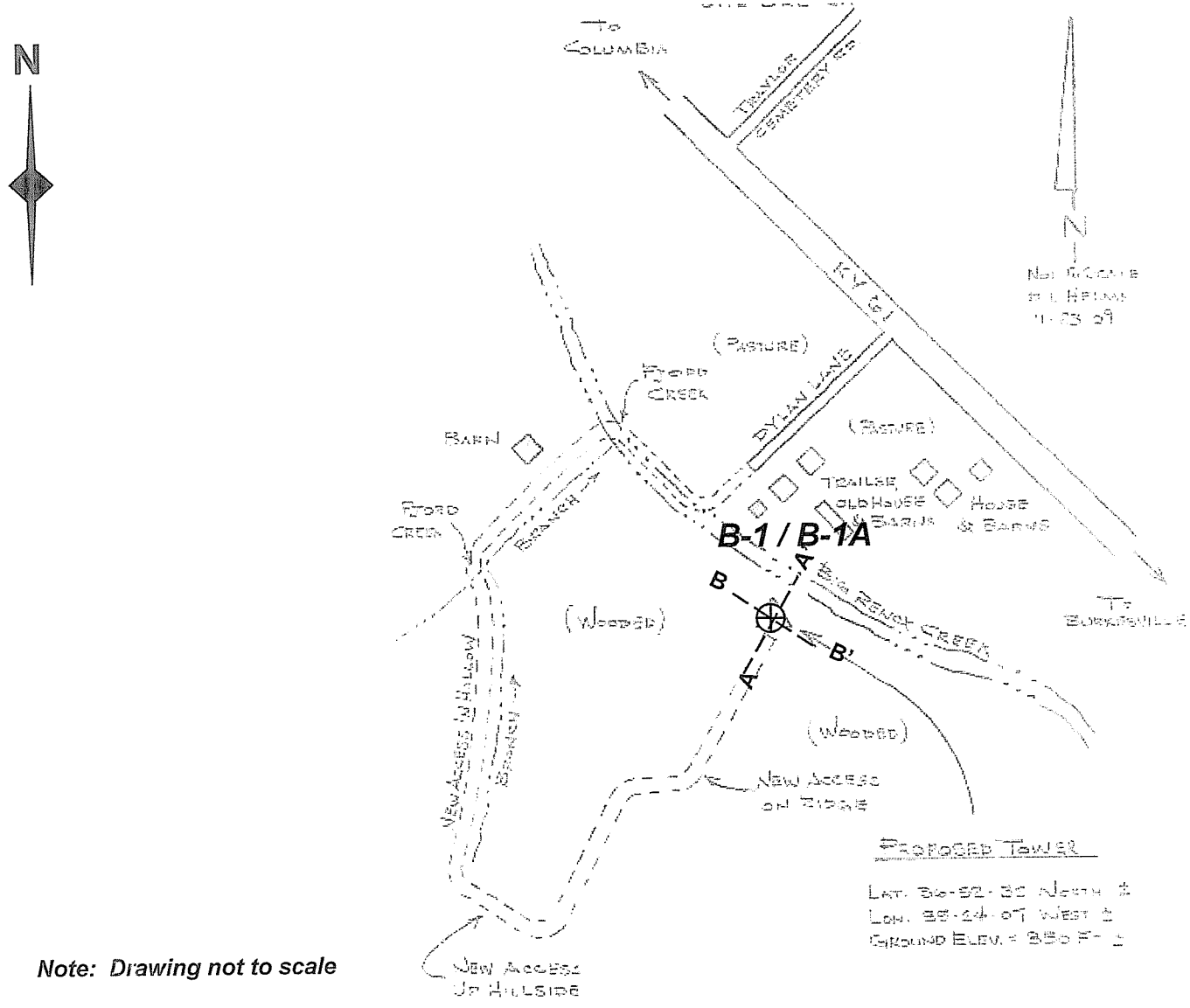


PATRIOT ENGINEERING
and Environmental, Inc.
Louisville, Kentucky 40299

Site Location Map
Smith Bridge Cell Tower
Burkesville, Cumberland County, KY

Job No. 5-09-0867

Figure 1



Note: Drawing not to scale

PATRIOT ENGINEERING
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Louisville, Kentucky 40299

Boring Location Map
Smith Bridge Cell Tower
Burkesville, Cumberland County, KY

Job No. 5-09-0867	**Figure** 2

PATRIOT ENGINEERING and Environmental Inc.
Indianapolis, Terre Haute, Evansville, Fort Wayne, South Bend, Lafayette, Louisville KY, Dayton OH, Charleston IL

LOG OF BORING B-1

Smith Bridge Cell Tower
Burkesville, Cumberland County, KY

Client Name	: Bluegrass Cellular	Driller	: G. Taylor
Project Number	: 5-09-0867	Sampling	: Splitspoon
Logged By	: W. Hemp	Approximate Elevation	:
Start Date	: 2/3/2010	Drill Rig	: CME-750 ATV
Drilling Method	: HSA		

Water Levels
- During Drilling
- After Completion
- After 24 hours

Depth in Feet	Water Level	USCS	GRAPHIC	DESCRIPTION	Samples	Rec %	SPT Results	qp tsf	w %	RQD %	REMARKS
0				Blank Drill - no sampling							Auger refusal encountered at 1.0'. Rock core run No. 1 - 1.0' to 6.0'
		LS		SHALEY LIMESTONE, medium gray to brown, slightly weathered to highly weathered, medium to coarse-grained, hard (Approximately 20% shale, 80% limestone)		100				37	
5											Rock core run No. 2 - 6.0' to 11.0'
		LS		SHALEY LIMESTONE, medium gray to brown, slightly weathered to highly weathered, medium to coarse-grained, hard (Approximatley 20% shale, 80% limestone)		100				42	
10				Boring terminated at 11.0'							
15											
20											
25											
30											

03-29-2010 P:\Borings\KY2009\5-09-0867\B-1.bor

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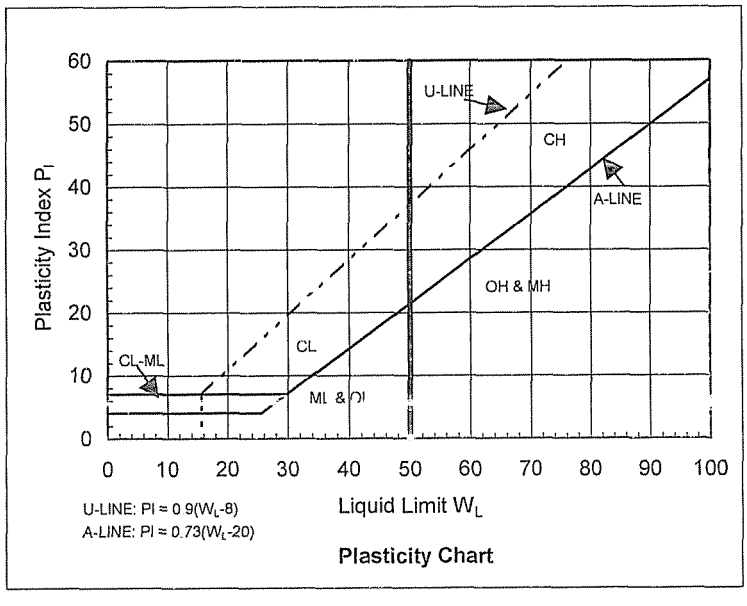
Unified Soil Classification

Major Divisions			Group Symbol	Typical Names	Classification Criteria for Coarse-Grained Soils		
Coarse-grained soils (more than half of material is larger than No. 200)	Gravels (more than half of coarse fraction is larger than No. 4 sieve size)	Clean gravels (little or no fines)	GW	*Well-graded gravels, gravel-sand mixtures,* little or no fines	$C_U \geq 4$ $1 \leq C_C \leq 3$	$C_U = \frac{D_{60}}{D_{10}}$	$C_C = \frac{D^2_{30}}{D_{10} D_{60}}$
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	Not meeting all gradation requirements for GW ($C_U < 4$ or $1 > C_C > 3$)		
		Gravels with fines (appreciable amount of fines)	GM $\frac{d}{u}$	Silty gravels, gravel-sand-silt mixtures	Atterberg limits below A line or $P_I < 4$	Above A line with $4 < P_I < 7$ are borderline cases requiring use of dual symbols	
			GC	Clayey gravels, gravel-sand-clay mixtures	Atterberg limits above A line or $P_I > 7$		
	Sands (more than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (little or no fines)	SW	Well-graded sands, gravelly sands, little or no *fines*	$C_U \geq 6$ $1 \leq C_C \leq 3$	$C_U = \frac{D_{60}}{D_{10}}$	$C_C = \frac{(D_{30})^2}{D_{10} D_{60}}$
			SP	Poorly graded sands, gravelly sands, little or *no fines*	Not meeting all gradation requirements for SW ($C_U < 6$ or $1 > C_c > 3$)		
		Sands with fines (appreciable amount of fines)	SM $\frac{d}{u}$	Silty sands, sand-silt mixtures	Atterberg limits below A line or $P_I < 4$	Limits plotting in hatched zone with $4 \leq P_I \leq 7$ are borderline cases requiring use of dual symbols	
			SC	Clayey sands, sand-clay mixtures	Atterberg limits above A line with $P_I > 7$		
Fine-grained soils (more than half of material is smaller than No. 200)	Silt and clays (liquid limit <50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with *slight plasticity*	1. Determine percentages of sand and gravel from grain size curve. 2. Depending on percentages of fines (fraction smaller than 200 sieve size), coarse-grained soils are classified as follows: Less than 5% - GW, GP, SW, SP More than 12% - GM, GC, SM, SC 5-12% - Borderline cases requiring dual symbols		
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean *clays*			
			OL	Organic silts and organic silty clays of low plasticity			
	Silts and clays (liquid limit >50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts			
			CH	Inorganic clays or high plasticity, fat clays			
			OH	*Organic clays of medium to high plasticity,* organic silts			
	Highly organic soils		PT	Peat and other highly organic soils			



Plasticity Chart

PATRIOT ENGINEERING and Environmental Inc.
Indianapolis, Terre Haute, Evansville, Fort Wayne, South Bend, Lafayette, Louisville KY, Dayton OH, Charleston IL

LOG OF BORING B-1A

Smith Bridge Cell Tower
Burkesville, Cumberland County, KY

Client Name	: Bluegrass Cellular	Driller	: M. Wells
Project Number	: 5-09-0867	Sampling	: Splitspoon
Logged By	: W. Hemp	Approximate Elevation	:
Start Date	: 3/16/2010	Drill Rig	: CME-550 ATV
Drilling Method	: HSA		

Water Levels
▽ During Drilling
▽ After Completion
◈ After 24 hours

Depth in Feet	Water Level	USCS	GRAPHIC	DESCRIPTION	Samples	Rec %	SPT Results	qp tsf	w %	RQD %	REMARKS
0				Blank Drill - no sampling							
5				Wash Drill - no sampling							Auger refusal encountered at 4.5'. Switch from HSA drilling to wash drilling. Wash drill to approximately 11 feet.
10		LS		LIMESTONE, medium gray, slightly to moderately weathered, medium to coarse-grained, hard, w/ shale partings		35				0	Rock core run No. 1 - 11.3' to 16.3'
15											Rock core run No. 2 - 16.3' to 21.3'
20		LS		LIMESTONE, medium gray, fresh to slightly weathered, medium to coarse-grained, hard		100				78	Rock core run No. 3 - 21.3' to 26.3'\
25						100				80	
30				Boring terminated at 26.3'							

BORING LOG KEY

UNIFIED SOIL CLASSIFICATION SYSTEM
FIELD CLASSIFICATION SYSTEM
FOR SOIL EXPLORATION

NON COHESIVE SOILS
(Silt, Sand, Gravel and Combinations)

Density

Very Loose	-5 blows/ft. or less
Loose	-6 to 10 blows/ft.
Medium Dense	-11 to 30 blows/ft.
Dense	-31 to 50 blows/ft.
Very Dense	-51 blows/ft. or more

Grain Size Terminology

Soil Fraction	Particle Size	US Standard Sieve Size
Boulders	Larger than 12"	Larger than 12"
Cobbles	3" to12"	3" to 12"
Gravel: Coarse	¾" to 3"	¾" to 3"
Small	4.76mm to ¾"	#4 to ¾"
Sand: Coarse	2.00mm to 4.76mm	#10 to #4
Medium	0.42mm to 2.00mm	#40 to #10
Fine	0.074mm to 0.42mm	#200 to #40
Silt	0.005mm to 0.074 mm	Smaller than #200
Clay	Smaller than 0.005mm	Smaller than #200

RELATIVE PROPORTIONS FOR SOILS

Descriptive Term	Percent
Trace	1 - 10
Little	11 - 20
Some	21 - 35
And	36 - 50

COHESIVE SOILS
(Clay, Silt and Combinations)

Consistency	Field Identification	Unconfined Compressive Strength (tons/sq. ft.)
Very soft	Thumb will penetrate soil more than 1 inch	Less than 0.25
Soft	Thumb will penetrate soil about 1 inch	0.25 - 0.5
Medium Stiff	Thumb will penetrate soil about ½ inch	0.5 - 1.0
Stiff	Thumb will indent soil about ¼ inch	1.0 - 2.0
Very Stiff	Readily indented by thumbnail	2.0 - 4.0
Hard	Indented with difficulty by thumbnail	Over 4.0

Classification on logs are made by visual inspection.

Standard Penetration Test - Driving a 2.0" O.D., $1^{3/8}$" I.D., sampler a distance of 1.0 foot into undisturbed soil with a 140 pound hammer free falling a distance of 30.0 inches. It is customary for **Patriot** to drive the spoon 6.0 inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating the spoon and making the tests are recorded for each 6.0 inches of penetration on the drill log (Example - 6/8/9). The standard penetration test results can be obtained by adding the last two figures (i.e. 8 + 9 = 17 blows/ft.).

Strata Changes - In the column "Soil Descriptions" on the drill log the horizontal lines represent strata changes. A solid line (———) represents an actually observed change, a dashed line (- - - - -) represents an estimated change.

Groundwater observations were made at the times indicated. Porosity of soil strata, weather conditions, site topography, etc., may cause changes in the water levels indicated on the logs.

Groundwater symbols: ▽-observed groundwater elevation, encountered during drilling; ▽-observed groundwater elevation upon completion of boring.

APPENDIX B

General Qualifications

and

Standard Clause for Unanticipated Subsurface Conditions

GENERAL QUALIFICATIONS

of Patriot Engineering's Geotechnical Engineering Investigation

This report has been prepared at the request of our client for his use on this project. Our professional services have been performed, findings obtained, and recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties either expressed or implied.

The scope of our services did not include any environmental assessment or investigation for the presence or absence of wetlands, hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the site studied. Any statements in this report or on the test borings logs regarding vegetation types, odors or staining of soils, or other unusual conditions observed are strictly for the information of our client and the owner.

This report may not contain sufficient information for purposes of other parties or other uses. This company is not responsible for the independent conclusions, opinions or recommendations made by others based on the field and laboratory data presented in this report. Should there be any significant differences in structural arrangement, loading or location of the structure, our analysis should be reviewed.

The recommendations provided herein were developed from the information obtained in the test borings, which depict subsurface conditions only at specific locations. The analysis, conclusions, and recommendations contained in our report are based on site conditions as they existed at the time of our exploration. Subsurface conditions at other locations may differ from those occurring at the specific drill sites. The nature and extent of variations between borings may not become evident until the time of construction. If, after performing on-site observations during construction and noting the characteristics of any variation, substantially different subsurface conditions from those encountered during our explorations are observed or appear to be present beneath excavations we must be advised promptly so that we can review these conditions and reconsider our recommendations where necessary.

If there is a substantial lapse of time between the submission of our report and the start of work at the site, or if conditions have changed due to natural causes or construction operations at or adjacent to the site, we urge that our report be reviewed to determine the applicability of the conclusions and recommendations considering the changed conditions and time lapse.

We urge that Patriot be retained to review those portions of the plans and specifications that pertain to earthwork and foundations to determine whether they are consistent with our recommendations. In addition, we are available to observe construction, particularly the compaction of structural backfill and preparation of the foundations, and such other field observations as may be necessary.

In order to fairly consider changed or unexpected conditions that might arise during construction, we recommend the following verbiage (Standard Clause for Unanticipated Subsurface Conditions) be included in the project contract.

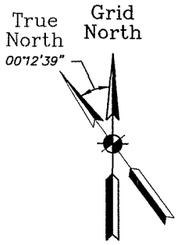
STANDARD CLAUSE FOR UNANTICIPATED SUBSURFACE CONDITIONS

"The owner has had a subsurface exploration performed by a soils consultant, the results of which are contained in the consultant's report. The consultant's report presents his conclusions on the subsurface conditions based on his interpretation of the data obtained in the exploration. The contractor acknowledges that he has reviewed the consultant's report and any addenda thereto, and that his bid for earthwork operations is based on the subsurface conditions as described in that report. It is recognized that a subsurface exploration may not disclose all conditions as they actually exist and further, conditions may change, particularly groundwater conditions, between the time of a subsurface exploration and the time of earthwork operations. In recognition of these facts, this clause is entered in the contract to provide a means of equitable additional compensation for the contractor if adverse unanticipated conditions are encountered and to provide a means of rebate to the owner if the conditions are more favorable than anticipated.

At any time during construction operations that the contractor encounters conditions that are different than those anticipated by the soils consultant's report, he shall immediately (within 24 hours) bring this fact to the owner's attention. If the owner's representative on the construction site observes subsurface conditions which are different than those anticipated by the consultant's report, he shall immediately (within 24 hours) bring this fact to the contractor's attention. Once a fact of unanticipated conditions has been brought to the attention of either the owner or the contractor, and the consultant has concurred, immediate negotiations will be undertaken between the owner and the contractor to arrive at a change in contract price for additional work or reduction in work because of the unanticipated conditions. The contract agrees that the following unit prices would apply for additional or reduced work under the contract. For changed conditions for which unit prices are not provided, the additional work shall be paid for on a time and materials basis."

Another example of a changed conditions clause can be found in paper No. 4035 by Robert F. Borg, published in ASCE Construction Division Journal, No. CO2, September 1964, page 37.

Site: Smith Bridge
Lease Boundary and Topographic Survey
Cumberland County, Kentucky



Basis of Bearings

The bearing system of this survey is based upon G.P.S. observations made on February 3, 2010 using the National Geodetic Survey monument "BREEDING" and the Kentucky State Plane Coordinate System, South Zone, NAD 1983 (1993). This system is grid north.

Tower Location Information

Designation: Smith Bridge
Site ID#: None
Horizontal Datum: NAD 1983 (1993)
Latitude: 36°52'32.54" North
Longitude: 85°24'08.74" West
Vertical Datum: NAVD 1988
Ground Elevation: 869.2 feet (264.93 m)
State Plane Coordinates
Northing: 1,838,073.91 feet (560,246.048 m)
Easting: 1,742,081.21 feet (530,987.415 m)

Landowner Information

Landowners: David W. and Lisa F. Branham
Address: 7167 Columbia Road
Burkesville, Kentucky 42717
Contact Person: David Branham
Phone: 270--433--5869 Cell: 270--459--0813
PVA Map Nos. 039--00--00--043.01 and 039--00--00--024.00

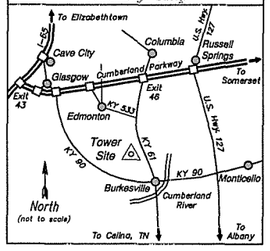
Project Bench Mark 1

Northing: 1,837,995 feet (560,222 m)
Easting: 1,742,073 feet (530,985 m)
Elevation: 850.15 feet (259.126 m)
Description: A railroad spike set in the northwest side of a 16" red cedar, 12" above grade. The benchmark is 80' south of the center of the tower.

Flood Plain Statement

According to the Flood Hazard Boundary Map for the Unincorporated Areas of Cumberland County, Kentucky; Community Panel No. 210060 0001 A, dated December 16, 1977; the subject tower site does not lies within a Special Flood Hazard Area.

Vicinity Map



Directions to Site

From Elizabethtown, Kentucky: travel south on I--65 for about 46 miles to Exit 43 and the Cumberland Parkway; travel east on the Cumberland Parkway for about 46 miles to Exit 46 and Kentucky Highway 61 near Columbia; travel south on Kentucky Highway 61 for 17.5 miles to the tower access lane on the right about 7 miles before reaching Burkesville; turn right onto the lane and travel southwesterly for 0.4 miles through a pasture, across Big Renox Creek and up a hill to the tower site on the north side of the hill overlooking Big Renox Creek.

Course Table		
Course	Bearing	Length
L1	S30°02'32"W	20.00'(c)
L2	N59°57'28"W	27.50'(c)
L3	S30°02'32"W	42.61'(c)
L4	S48°02'53"W	85.65'(c)
L5	S43°57'07"E	37.24'(c)
L6	N72°27'04"E	53.93'(c)
L7	N54°17'51"E	83.00'(c)
L8	S72°44'36"E	104.39'(c)
L9	N71°38'36"E	402.67'(c)
L10	N29°09'01"E	92.37'(c)
L11	S60°50'59"E	50.56'(c)
L12	S57°39'51"E	184.13'(c)
L13	S79°46'06"E	184.80'(c)
L14	N23°26'59"E	126.26'(c)
L15	N30°10'14"E	195.57'(c)
L16	S48°12'50"E	20.42'(c)
L17	S30°10'14"W	190.29'(c)
L18	S23°26'59"W	125.08'(c)
L19	N79°46'06"W	184.80'(c)
L20	N57°39'51"W	183.57'(c)
L21	N60°50'59"W	50.00'(c)
L22	S29°09'01"W	92.37'(c)
L23	S71°38'36"W	402.67'(c)
L24	N72°44'36"W	104.39'(c)
L25	S54°17'51"W	83.00'(c)
L26	S72°27'04"W	116.10'(c)
L27	S46°02'53"W	85.42'(c)
L28	N43°57'07"W	75.00'(c)
L29	N46°02'53"E	150.00'(c)
L30	S43°57'07"E	27.50'(c)
L31	N46°02'53"E	85.65'(c)
L32	N30°02'32"E	42.61'(c)
L33	N59°57'28"W	27.50'(c)
L34	N30°02'32"E	20.00'(c)

Proposed Self-Support Tower

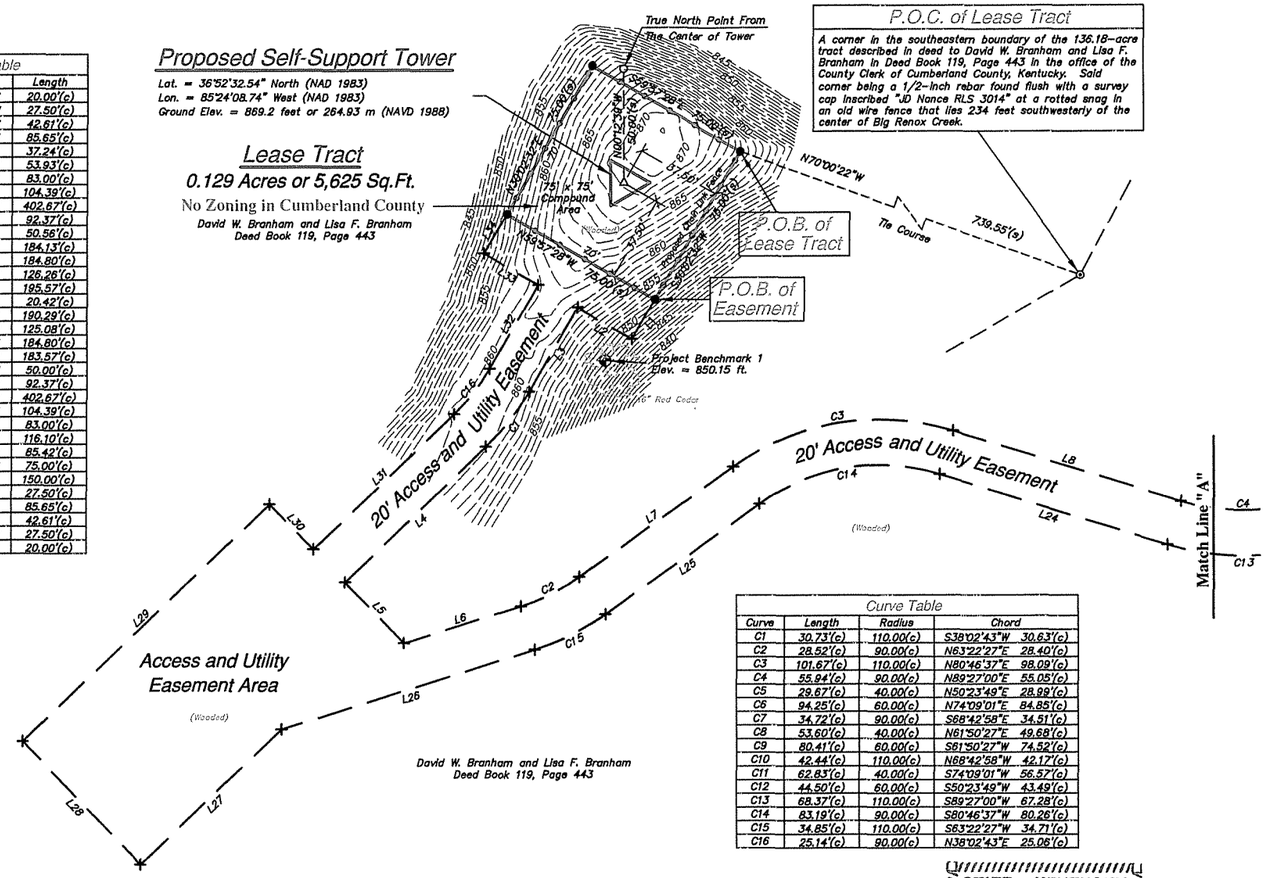
Lat. = 36°52'32.54" North (NAD 1983)
Lon. = 85°24'08.74" West (NAD 1983)
Ground Elev. = 869.2 feet or 264.93 m (NAVD 1988)

Lease Tract

0.129 Acres or 5,625 Sq.Ft.

No Zoning in Cumberland County

David W. Branham and Lisa F. Branham
Deed Book 119, Page 443



Curve Table			
Curve	Length	Radius	Chord
C1	30.73'(c)	110.00(c)	S38°02'43"W 30.63'(c)
C2	28.52'(c)	90.00(c)	N63°22'27"E 28.40'(c)
C3	101.67'(c)	110.00(c)	N80°46'37"E 98.09'(c)
C4	55.94'(c)	90.00(c)	N89°27'00"E 55.05'(c)
C5	29.67'(c)	40.00(c)	N50°23'49"E 28.99'(c)
C6	94.25'(c)	60.00(c)	N74°09'01"E 84.85'(c)
C7	34.72'(c)	90.00(c)	S68°42'59"E 34.51'(c)
C8	53.60'(c)	40.00(c)	N61°50'27"E 49.68'(c)
C9	80.41'(c)	60.00(c)	S81°50'27"W 74.52'(c)
C10	42.44'(c)	110.00(c)	N68°42'58"W 42.17'(c)
C11	62.83'(c)	40.00(c)	S74°09'01"W 56.57'(c)
C12	44.50'(c)	60.00(c)	S50°23'49"W 43.49'(c)
C13	68.37'(c)	110.00(c)	S89°27'00"W 67.28'(c)
C14	83.19'(c)	90.00(c)	S80°46'37"W 80.26'(c)
C15	34.85'(c)	110.00(c)	S63°22'27"W 34.71'(c)
C16	25.14'(c)	90.00(c)	N38°02'43"E 25.06'(c)

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 80 ft.

Contour Interval = 1--foot

Reduced Copy

Surveyor's Notes

1. *This survey is subject to a statement of facts which may be disclosed by an Abstract of Title or a Title Commitment Policy. This documentation was not provided by the client.*
2. *No search of public records has been performed to determine any defects and/or ambiguities in the title of the parent tract.*
3. *The utilities shown on this plat may or may not represent all of the utilities located on the subject site. The presence of utilities was determined by a visual inspection of the property surface. No utility locate was called in prior to this survey. It shall be the responsibility of the contractor to locate utilities prior to construction.*
4. *The topographic information contained on this plat was as requested by the client and may or may not represent all of the topographic features located on the subject property.*
5. *According to Mr. Tim Hicks, County Judge Executive of Cumberland County, no local planning unit exists which has geographical jurisdiction of the subject tower site. The County Judge Executive's Office may be contacted at (270) 864--3444 for confirmation.*
6. *The proposed location of the Smith Bridge cell site will be located outside of an incorporated city.*

Legend

- ● *5/8" Rebar Set Flush With A Survey Cap Inscribed "D.L. Helms PLS 3386"*
- △ *Mag Nail Set Flush In Rock*
- ○ *5/8" Rebar Set Flush -- No Cap*
- ⊙ *1/2" Rebar Found Flush With A Survey Cap Inscribed "JD Nance RLS 3014"*
- \+ *Calculated Position -- No Monument Found or Set*

Subject Boundaries
Proposed Easement
Other Boundaries
Right of Way
Utility Pole
(m) Electric Meter
(r) Recorded
(c) Calculated
(s) Set

STATE OF KENTUCKY
DARREN L. HELMS
3386
LICENSED PROFESSIONAL LAND SURVEYOR
Surveyor's Certification

I hereby certify that this plat has been compiled from a survey actually made upon the ground under my direct supervision on February 3, 2010 by the method of random traverse with sideshots. The unadjusted precision ratio of the traverse was 1:23,900 and it was not adjusted. This survey is a Class B survey and the accuracy and precision of this survey meets all the specifications of this class.

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

FEB. 23, 2010
Date

Lease Boundary and Easement Descriptions

A tract of land being located on the southwest side of Big Renox Creek about 7 miles north of Burkesville in Cumberland County, Kentucky; said tract being described as follows:

COMMENCING AT a corner in the southeastern boundary of the 136.18--acre tract described in deed to David W. Branham and Lisa F. Branham on August 13, 2001 in Deed Book 119, page 443 in the office of the County Clerk of Cumberland County, Kentucky; said corner being a 1/2--inch rebar found flush with a survey cap inscribed "JD Nance RLS 3014" at a rotted snag in an old wire fence that lies 234 feet southwesterly of the center of Big Renox Creek; thence North 70 degrees 00 minutes 22 seconds West 739.55 feet to a 5/8--inch rebar set flush with a survey cap inscribed "D.L. Helms PLS 3386" (referred to as a rebar in the remainder of this description) at the POINT OF BEGINNING of this description: thence South 30 degrees 02 minutes 32 seconds West 75.00 feet to a rebar set flush; thence North 59 degrees 57 minutes 28 seconds West 75.00 feet to a rebar set flush; thence North 30 degrees 02 minutes 32 seconds East 75.00 feet to a rebar set flush; thence South 59 degrees 57 minutes 28 seconds East 75.00 feet to the point of beginning and containing 0.129 acres (5,625 square feet), more or less.

TOGETHER WITH an access and utility easement from the above--described 0.129--acre lease tract to Columbia Road (Kentucky Highway 61); said easement being described as follows: BEGINNING AT a 5/8--inch rebar set flush with a survey cap inscribed "D.L. Helms PLS 3386" at the south corner of the above--described 0.129--acre lease tract; thence South 30 degrees 02 minutes 32 seconds West 20.00 feet; thence North 59 degrees 57 minutes 28 seconds West 27.50 feet; thence South 30 degrees 02 minutes 32 seconds West 42.61 feet; thence Southwesterly 30.73 feet along an arc to the right and having a radius of 110.00 feet and subtended by a long chord having a bearing of South 38 degrees 02 minutes 43 seconds West and a length of 30.63 feet; thence South 46 degrees 02 minutes 53 seconds West 85.65 feet; thence South 43 degrees 57 minutes 07 seconds East 37.24 feet; thence North 72 degrees 27 minutes 04 seconds East 53.93 feet; thence Northeasterly 28.52 feet along an arc to the left and having a radius of 90.00 feet and subtended by a long chord having a bearing of North 63 degrees 22 minutes 27 seconds East and a length of 28.40 feet; thence North 54 degrees 17 minutes 51 seconds East 83.00 feet; thence Northeasterly 101.67 feet along an arc to the right and having a radius of 110.00 feet and subtended by a long chord having a bearing of North 80 degrees 46 minutes 37 seconds East and a length of 98.09 feet; thence South 72 degrees 44 minutes 36 seconds East 104.39 feet; thence Easterly 55.94 feet along an arc to the left and having a radius of 90.00 feet and subtended by a long chord having a bearing of North 89 degrees 27 minutes 00 seconds East and a length of 55.05 feet; thence North 71 degrees 38 minutes 36 seconds East 402.67 feet; thence Northeasterly 29.67 feet along an arc to the left and having a radius of 40.00 feet and subtended by a long chord having a bearing of North 50 degrees 23 minutes 49 seconds East and a length of 28.99 feet; thence North 29 degrees 09 minutes 01 second East 92.37 feet; thence Northeasterly 94.25 feet along an arc to the right and having a radius of 60.00 feet and subtended by a long chord having a bearing of North 74 degrees 09 minutes 01 second East and a length of 84.85 feet; thence South 60 degrees 50 minutes 59 seconds East 50.56 feet; thence South 57 degrees 39 minutes 51 seconds East 184.13 feet; thence Southeasterly 34.72 feet along an arc to the left and having a radius of 90.00 feet and subtended by a long chord having a bearing of South 68 degrees 42 minutes 58 seconds East and a length of 34.51 feet; thence South 79 degrees 46 minutes 06 seconds East 184.80 feet; thence Northeasterly 53.60 feet along an arc to the left and having a radius of 40.00 feet and subtended by a long chord having a bearing of North 61 degrees 50 minutes 27 seconds East and a length of 49.68 feet; thence North 23 degrees 26 minutes 59 seconds East 126.26 feet; thence North 30 degrees 10 minutes 14 seconds East 195.57 feet to the southwestern right of way of Columbia Road (30 feet from the centerline); thence, along said southwestern right of way, South 48 degrees 12 minutes 50 seconds East 20.42 feet; thence South 30 degrees 10 minutes 14 seconds West 190.29 feet; thence South 23 degrees 26 minutes 59 seconds West 125.08 feet; thence Southwesterly 80.41 feet along an arc to the right and having a radius of 60.00 feet and subtended by a long chord having a bearing of South 61 degrees 50 minutes 27 seconds West and a length of 74.52 feet; thence North 79 degrees 46 minutes 06 seconds West 184.80 feet; thence Northwesterly 42.44 feet along an arc to the right and having a radius of 110.00 feet and subtended by a long chord having a bearing of North 68 degrees 42 minutes 58 seconds West and a length of 42.17 feet; thence North 57 degrees 39 minutes 51 seconds West 183.57 feet; thence North 60 degrees 50 minutes 59 seconds West 50.00 feet; thence Southwesterly 62.83 feet along an arc to the left and having a radius of 40.00 feet and subtended by a long chord having a bearing of South 74 degrees 09 minutes 01 second West and a length of 56.57 feet; thence South 29 degrees 09 minutes 01 second West 92.37 feet; thence Southwesterly 44.50 feet along an arc to the right and having a radius of 60.00 feet and subtended by a long chord having a bearing of South 50 degrees 23 minutes 49 seconds West and a length of 43.49 feet; thence South 71 degrees 38 minutes 36 seconds West 402.67 feet; thence Westerly 68.37 feet along an arc to the right and having a radius of 110.00 feet and subtended by a long chord having a bearing of South 89 degrees 27 minutes 00 seconds West and a length of 67.28 feet; thence North 72 degrees 44 minutes 36 seconds West 104.39 feet; thence Southwesterly 83.19 feet along an arc to the left and having a radius of 90.00 feet and subtended by a long chord having a bearing of South 80 degrees 46 minutes 37 seconds West and a length of 80.26 feet; thence South 54 degrees 17 minutes 51 seconds West 83.00 feet; thence Southwesterly 34.85 feet along an arc to the right and having a radius of 110.00 feet and subtended by a long chord having a bearing of South 63 degrees 22 minutes 27 seconds West and a length of 34.71 feet; thence South 72 degrees 27 minutes 04 seconds West 116.10 feet; thence South 46 degrees 02 minutes 53 seconds West 85.42 feet; thence North 43 degrees 57 minutes 07 seconds West 75.00 feet; thence North 46 degrees 02 minutes 53 seconds East 150.00 feet; thence South 43 degrees 57 minutes 07 seconds East 27.50 feet; thence North 46 degrees 02 minutes 53 seconds East 85.65 feet; thence Northeasterly 25.14 feet along an arc to the left and having a radius of 90.00 feet and subtended by a long chord having a bearing of North 38 degrees 02 minutes 43 seconds East and a length of 25.06 feet; thence North 30 degrees 02 minutes 32 seconds East 42.61 feet; thence North 59 degrees 57 minutes 28 seconds West 27.50 feet; thence North 30 degrees 02 minutes 32 seconds East 20.00 feet to a 5/8--inch rebar set flush with the aforesaid Helms survey cap at the west corner of the above--described 0.129--acre lease tract; thence South 59 degrees 57 minutes 28 seconds East 75.00 feet to the point of beginning.

The bearing system of these descriptions is based upon the Kentucky State Plane Coordinate System, South Zone, NAD 1983 (1993), as determined by G.P.S. observations made on February 3, 2010 using the National Geodetic Survey monument "BREEDING". These descriptions are based upon a survey completed by Landmark Surveying Co., Inc. and certified by Darren L. Helms, P.L.S. 3386, on February 23, 2010. This survey is hereby referenced and made a part of these descriptions.

SOURCE OF TITLE: Being a portion of and lying entirely within the land described in deed to David W. Branham and Lisa F. Branham on August 13, 2001 in Deed Book 119, page 443 and on November 9, 2004 in Deed Book 131, page 5; both documents being recorded in the Office of the County Clerk of Cumberland County, Kentucky.

Landmark Surveying Co., Inc.
15 N.E. 3rd Street
Washington, Indiana 47501
(812) 257--0950
Email: landmark97@sbcglobal.net
Project No. 10--02--0105

Lease Boundary Survey
7031 Columbia Road
Burkesville, Kentucky 42717

Bluegrass Cellular
2902 Ring Road
Elizabethtown, Kentucky 42701

REVISIONS	DATE

DATE 2--23--10 | DRAWN BY A. Winkler | CHECKED BY D.L.Helms

SHEET NO. 1 OF 3 SHEETS

FILE NO. smith.dwg

Site: Smith Bridge
Lease Boundary and Topographic Survey
Cumberland County, Kentucky

Course Table		
Course	Bearing	Length
L1	S30°02'32"W	20.00'(c)
L2	N59°57'28"W	27.50'(c)
L3	S30°02'32"W	42.61'(c)
L4	S46°02'53"W	85.65'(c)
L5	S43°57'07"E	37.24'(c)
L6	N72°27'04"E	53.93'(c)
L7	N54°17'51"E	83.00'(c)
L8	S72°44'36"E	104.39'(c)
L9	N71°38'36"E	402.67'(c)
L10	N29°09'01"E	92.37'(c)
L11	S60°50'59"E	50.56'(c)
L12	S57°39'51"E	184.13'(c)
L13	S79°46'06"E	184.80'(c)
L14	N23°26'59"E	126.26'(c)
L15	N30°10'14"E	195.57'(c)
L16	S48°12'50"E	20.42'(c)
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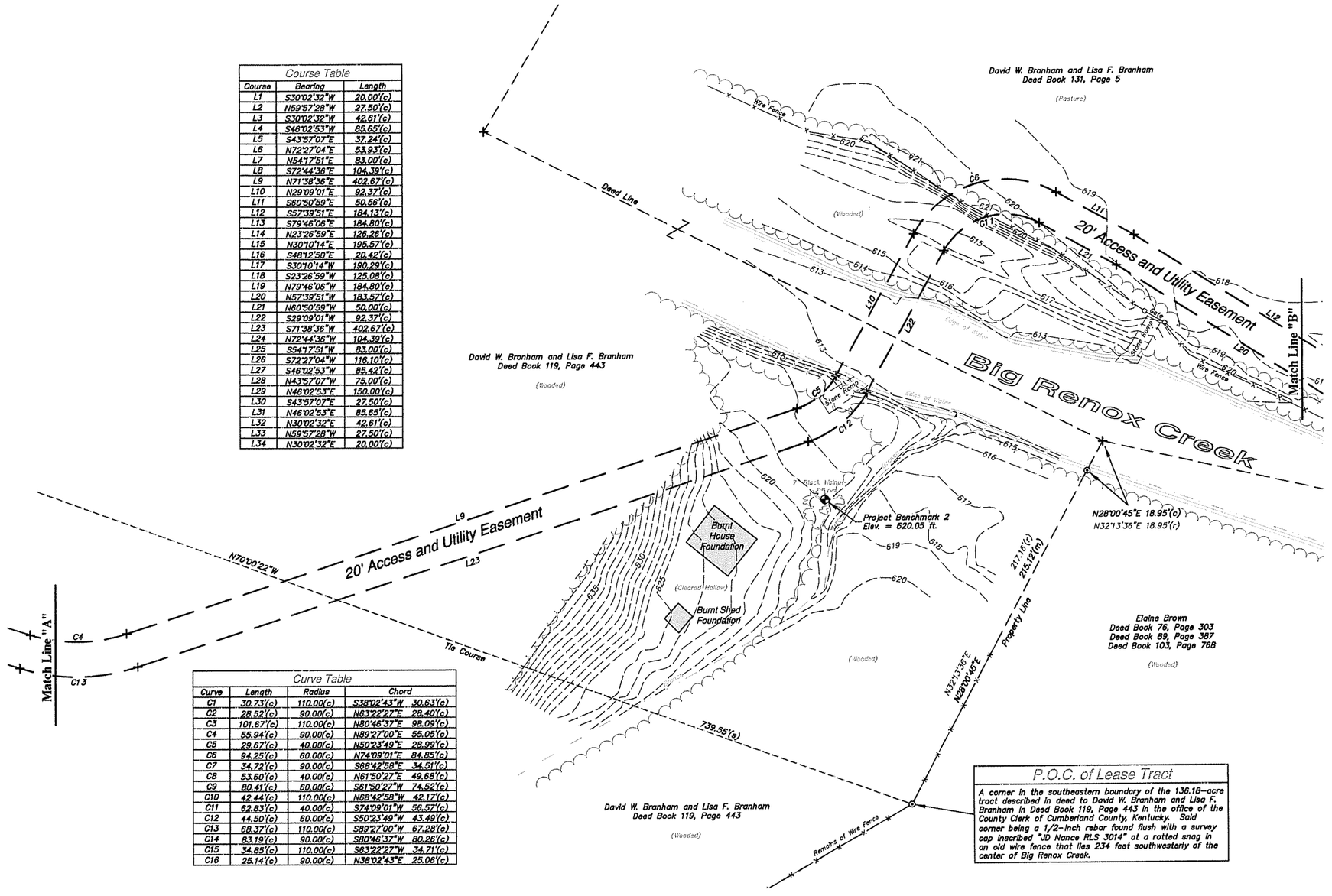
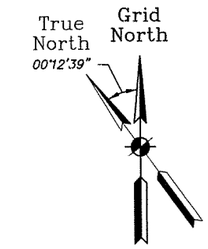
L24	N72°44'36"W	104.39'(c)
L25	S54°17'51"W	83.00'(c)
L26	S72°27'04"W	116.10'(c)
L27	S46°02'53"W	85.42'(c)
L28	N43°57'07"W	75.00'(c)
L29	N46°02'53"E	150.00'(c)
L30	S43°57'07"E	27.50'(c)
L31	N46°02'53"E	85.65'(c)
L32	N30°02'32"E	42.61'(c)
L33	N59°57'28"W	27.50'(c)
L34	N30°02'32"E	20.00'(c)



Curve Table			
Curve	Length	Radius	Chord
C1	30.73'(c)	110.00'(c)	S38°02'43"W 30.63'(c)
C2	28.52'(c)	90.00'(c)	N63°22'27"E 28.40'(c)
C3	101.67'(c)	110.00'(c)	N80°46'37"E 98.09'(c)
C4	55.94'(c)	90.00'(c)	N89°27'00"E 55.05'(c)
C5	29.67'(c)	40.00'(c)	N50°23'49"E 28.99'(c)
C6	94.25'(c)	60.00'(c)	N74°09'01"E 84.85'(c)
C7	34.72'(c)	90.00'(c)	S68°42'58"E 34.51'(c)
C8	53.60'(c)	40.00'(c)	N61°50'27"E 49.66'(c)
C9	80.41'(c)	60.00'(c)	S61°50'27"W 74.52'(c)
C10	42.44'(c)	110.00'(c)	N68°42'58"W 42.17'(c)
C11	62.83'(c)	40.00'(c)	S74°09'01"W 56.57'(c)
C12	44.50'(c)	60.00'(c)	S50°23'49"W 43.49'(c)
C13	68.37'(c)	110.00'(c)	S89°27'00"W 67.28'(c)
C14	83.19'(c)	90.00'(c)	S80°46'37"W 80.26'(c)
C15	34.85'(c)	110.00'(c)	S63°22'27"W 34.71'(c)
C16	25.14'(c)	90.00'(c)	N38°02'43"E 25.06'(c)



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 60 ft.

Contour Interval = 1-foot

Project Bench Mark 2

Northing: 1,838,009 feet (560,226 m)
Easting: 1,742,779 feet (531,200 m)
Elevation: 620.05 feet (188.992 m)
Description: A railroad spike set in the north side of a 7" black walnut, 10" above grade. The benchmark is 96' southwest of the center of Big Renox Creek and 44' southeast of the center of the access easement.

P.O.C. of Lease Tract

A corner in the southeastern boundary of the 136.18-acre tract described in deed to David W. Branham and Lisa F. Branham in Deed Book 119, Page 443 in the office of the County Clerk of Cumberland County, Kentucky. Said corner being a 1/2-inch rebar found flush with a survey cap inscribed "JD Nance RLS 3014" at a rotted snag in an old wire fence that lies 234 feet southwesterly of the center of Big Renox Creek.

Legend

- 5/8" Rebar Set Flush With A Survey Cap Inscribed "D.L. Helms PLS 3386"
- Mag Nail Set Flush In Rock
- 5/8" Rebar Set Flush – No Cap
- 1/2" Rebar Found Flush With A Survey Cap Inscribed "JD Nance RLS 3014"
- Calculated Position – No Monument Found or Set
- Subject Boundaries
- Proposed Easement
- Other Boundaries
- Right of Way
- Utility Pole
- (m) Electric Meter
- (r) Recorded
- (c) Calculated
- (s) Set

Reduced Copy

Landmark Surveying Co., Inc.
15 N.E. 3rd Street
Washington, Indiana 47501
(812) 257-0950
Email: landmark97@sbcglobal.net
Project No. 10-02-0105

Lease Boundary Survey
7031 Columbia Road
Burkesville, Kentucky 42717

Bluegrass Cellular
2902 Ring Road
Elizabethtown, Kentucky 42701

REVISIONS	DATE

DATE 2-23-10 | DRAWN BY A. Winkler | CHECKED BY D.L.Helms

SHEET NO. 2 OF 3 SHEETS

FILE NO. smith.dwg

Site: Smith Bridge
Lease Boundary and Topographic Survey
Cumberland County, Kentucky

Course Table		
Course	Bearing	Length
L1	S30°02'32"W	20.00'(c)
L2	N59°57'28"W	27.50'(c)
L3	S30°02'32"W	42.61'(c)
L4	S46°02'53"W	85.65'(c)
L5	S43°57'07"E	37.24'(c)
L6	N72°27'04"E	53.83'(c)
L7	N54°17'51"E	83.00'(c)
L8	S72°44'36"E	104.39'(c)
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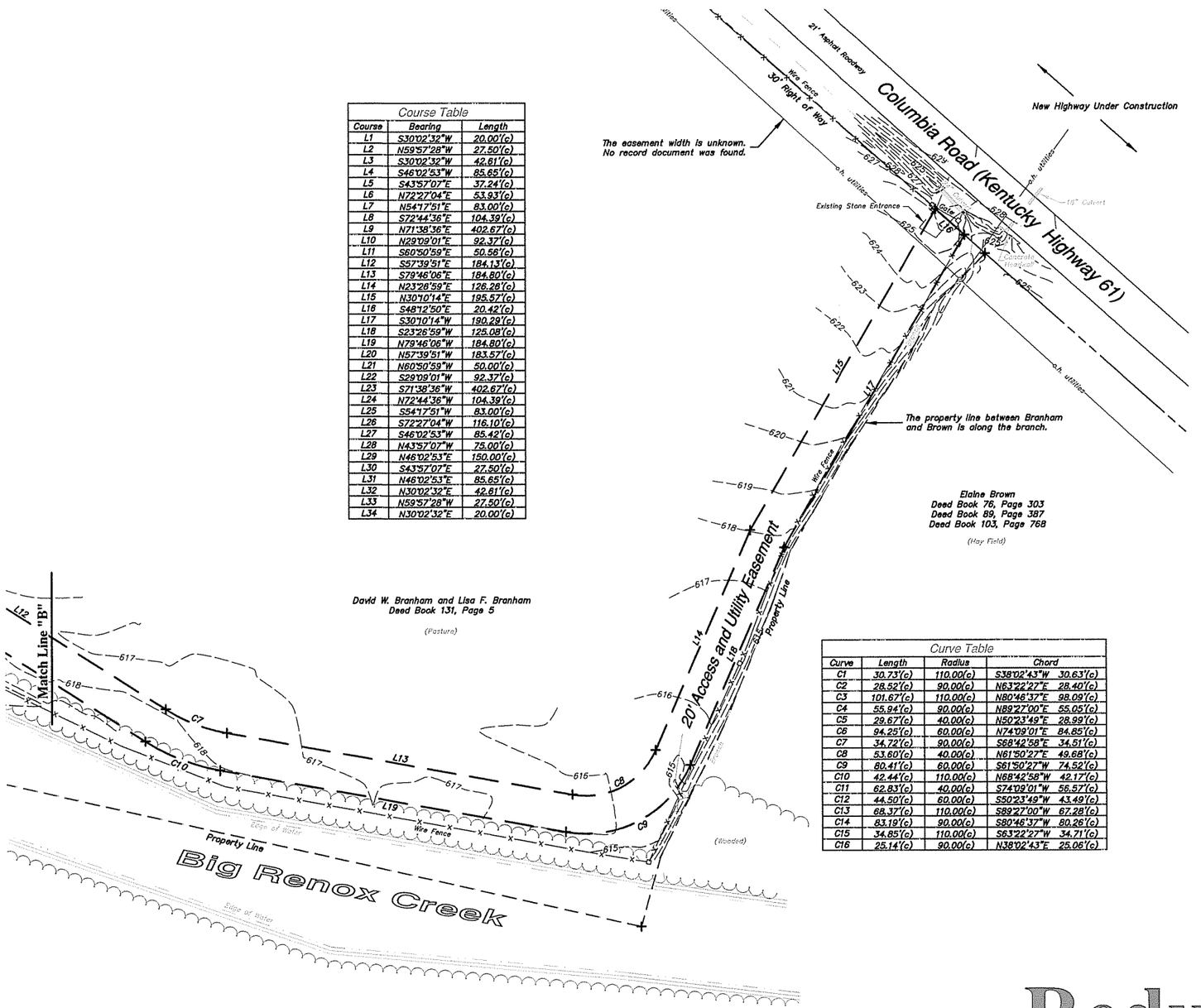
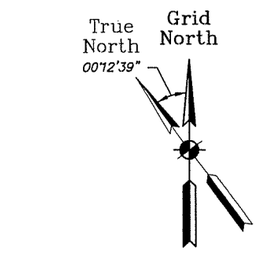
L12	S57°39'51"E	184.13'(c)
L13	S79°46'06"E	184.80'(c)
L14	N23°26'59"E	126.28'(c)
L15	N30°10'14"E	195.57'(c)
L16	S48°12'50"E	20.42'(c)
L17	S30°10'14"W	190.29'(c)
L18	S23°26'59"W	125.08'(c)
L19	N79°46'06"W	184.80'(c)
L20	N57°39'51"W	183.57'(c)
L21	N60°50'59"W	50.00'(c)
L22	S29°09'01"W	92.37'(c)
L23	S71°38'36"W	402.67'(c)
L24	N72°44'36"W	104.39'(c)
L25	S54°17'51"W	83.00'(c)
L26	S72°27'04"W	116.10'(c)
L27	S46°02'53"W	85.42'(c)
L28	N43°57'07"W	75.00'(c)
L29	N46°02'53"E	150.00'(c)
L30	S43°57'07"E	27.50'(c)
L31	N46°02'53"E	85.65'(c)
L32	N30°02'32"E	42.61'(c)
L33	N59°57'28"W	27.50'(c)
L34	N30°02'32"E	20.00'(c)



Curve Table			
Curve	Length	Radius	Chord
C1	30.73'(c)	110.00(c)	S38°02'43"W 30.63'(c)
C2	28.52'(c)	90.00(c)	N63°22'27"E 28.40'(c)
C3	101.67'(c)	110.00(c)	N80°46'37"E 98.09'(c)
C4	55.94'(c)	90.00(c)	N89°27'00"E 55.05'(c)
C5	29.67'(c)	40.00(c)	N50°23'49"E 28.99'(c)
C6	94.25'(c)	60.00(c)	N74°09'01"E 84.85'(c)
C7	34.72'(c)	90.00(c)	S88°42'58"E 34.51'(c)
C8	53.60'(c)	40.00(c)	N61°50'27"E 49.68'(c)
C9	80.41'(c)	60.00(c)	S61°50'27"W 74.52'(c)
C10	42.44'(c)	110.00(c)	N68°42'58"W 42.17'(c)
C11	62.83'(c)	40.00(c)	S74°09'01"W 56.57'(c)
C12	44.50'(c)	60.00(c)	S50°23'49"W 43.49'(c)
C13	68.37'(c)	110.00(c)	S89°27'00"W 67.28'(c)
C14	83.19'(c)	90.00(c)	S80°46'37"W 80.26'(c)
C15	34.85'(c)	110.00(c)	S63°22'27"W 34.71'(c)
C16	25.14'(c)	90.00(c)	N38°02'43"E 25.06'(c)



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Contour Interval = 1-foot

Legend

- ● 5/8" Rebar Set Flush With A Survey Cap Inscribed "D.L. Helms PLS 3386"
- △ Mag Nail Set Flush In Rock
- ○ 5/8" Rebar Set Flush – No Cap
- ⊙ 1/2" Rebar Found Flush With A Survey Cap Inscribed "JD Nance RLS 3014"
- \+ Calculated Position – No Monument Found or Set
- Subject Boundaries
- Proposed Easement
- Other Boundaries
- Right of Way
- Utility Pole
- (m) Electric Meter
- (r) Recorded
- (c) Calculated
- (s) Set

Reduced Copy

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Project No. 10-02-0105

Lease Boundary Survey
7031 Columbia Road
Burkesville, Kentucky 42717

Bluegrass Cellular
2902 Ring Road
Elizabethtown, Kentucky 42701

REVISIONS	DATE

DATE 2-23-10 | DRAWN BY A. Walder | CHECKED BY D.L.Helms

SHEET NO. 3 OF 3 SHEETS

FILE NO. smith.dwg

BLUEGRASS CELLULAR

APPROVAL SIGNATURES

BLUEGRASS CELLULAR PROJECT SUPERVISOR: _____

DATE: _____

CITY REPRESENTATIVE: _____

TITLE: _____

DATE: _____

PROPERTY OWNER/OWNERS: _____

_____

DATE: _____

TOWER OWNER/OWNERS: _____

_____

DATE: _____

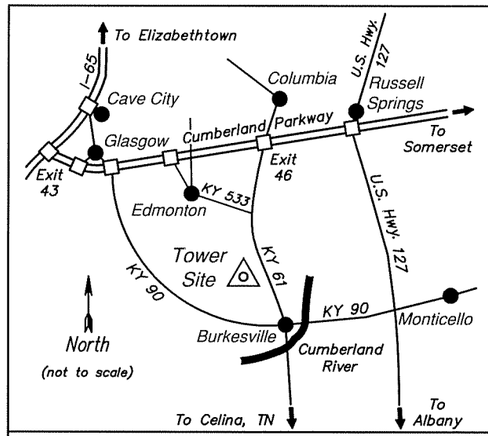
SITE NAME: SMITH BRIDGE

911 ADDRESS: 7031 COLUMBIA RD.
BURKESVILLE, KY. 42717

COUNTY: CUMBERLAND

TOWER LATITUDE & LONGITUDE

N36* 52' 32.54" W85* 24' 08.74"



VICINITY MAP
NOT TO SCALE

DIRECTIONS TO SITE

From Elizabethtown, Kentucky: travel south on I--65 for about 46 miles to Exit 43 and the Cumberland Parkway; travel east on the Cumberland Parkway for about 46 miles to Exit 46 and Kentucky Highway 61 near Columbia; travel south on Kentucky Highway 61 for 17.5 miles to the tower access lane on the right about 7 miles before reaching Burkesville; turn right onto the lane and travel southwesterly for 0.4 miles through a pasture, across Big Renox Creek and up a hill to the tower site on the north side of the hill overlooking Big Renox Creek.

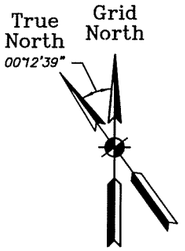
SHEET INDEX

SHEET NO.	DESCRIPTION	REVISION
TITLE SHEET	TITLE SHEET	
SURVEY	SURVEY	
A-1	SITE PLAN	
A-2	SITE PLAN PARKING DETAIL	
A-3	FENCE DETAILS	
ANTENNA DETAILS 1	ANT.SPECS/TOWER ELEV.	
ANTENNA DETAILS 2	ANTENNA DETAILS 2	
E-1	SITE PLAN - ELECTRICAL	
E-2	ELECTRICAL DETAILS	
LYNCOLE	LYNCOLE GROUNDING	
E-3	ELEC. PLAN - GROUNDING	
E-4	GROUNDING DETAILS	
S-1	FOUNDATION DETAILS	
GENERATOR DETAIL	GENERATOR DETAIL	
GENERAL NOTES	GENERAL NOTES	

SITE DATA

PROPERTY OWNER:	David Branham Burkesville, KY. (270) 459-0813
TOWER OWNER:	BLUEGRASS CELLULAR (270) 769-0339
POWER COMPANY:	TRI-COUNTY ELECTRIC CORP. (270) 864-3871
TELEPHONE COMPANY:	DUO COUNTY TELEPHONE COOP (270) 433-2121
BLUEGRASS PROJECT SUPERVISOR:	JEFF BREWER (270) 734-3436
RB DESIGN	ROBIN BECKER (502)231-3656 OFFICE/FAX

Site: Smith Bridge
Lease Boundary and Topographic Survey
Cumberland County, Kentucky



Basis of Bearings

The bearing system of this survey is based upon G.P.S. observations made on February 3, 2010 using the National Geodetic Survey monument "BREEDING" and the Kentucky State Plane Coordinate System, South Zone, NAD 1983 (1993). This system is grid north.

Tower Location Information

Designation: Smith Bridge
Site ID#: None
Horizontal Datum: NAD 1983 (1993)
Latitude: 36°52'32.54" North
Longitude: 85°24'08.74" West
Vertical Datum: NAVD 1988
Ground Elevation: 869.2 feet (264.93 m)
State Plane Coordinates
Northing: 1,838,073.91 feet (560,246.048 m)
Easting: 1,742,081.21 feet (530,987.415 m)

Landowner Information

Landowners: David W. and Lisa F. Branham
Address: 7167 Columbia Road
Burkesville, Kentucky 42717
Contact Person: David Branham
Phone: 270-433-5869 Cell: 270-459-0813
PVA Map Nos. 039-00-00-043.01 and 039-00-00-024.00

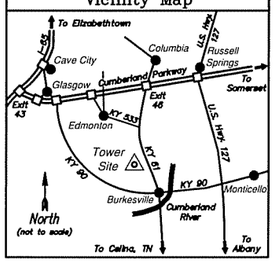
◆ Project Bench Mark 1 ◆

Northing: 1,837,996 feet (560,222 m)
Easting: 1,742,073 feet (530,985 m)
Elevation: 850.15 feet (259.126 m)
Description: A railroad spike set in the northwest side of a 16" red cedar, 12" above grade. The benchmark is 80' south of the center of the tower.

Flood Plain Statement

According to the Flood Hazard Boundary Map for the Unincorporated Areas of Cumberland County, Kentucky, Community Panel No. 210060 0001 A, dated December 16, 1977; the subject tower site does not lies within a Special Flood Hazard Area.

Vicinity Map



Directions to Site

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Course Table		
Course	Bearing	Length
L1	S30°02'32"W	20.00'(c)
L2	N59°57'28"W	27.50'(c)
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L32	N30°02'32"E	42.61'(c)
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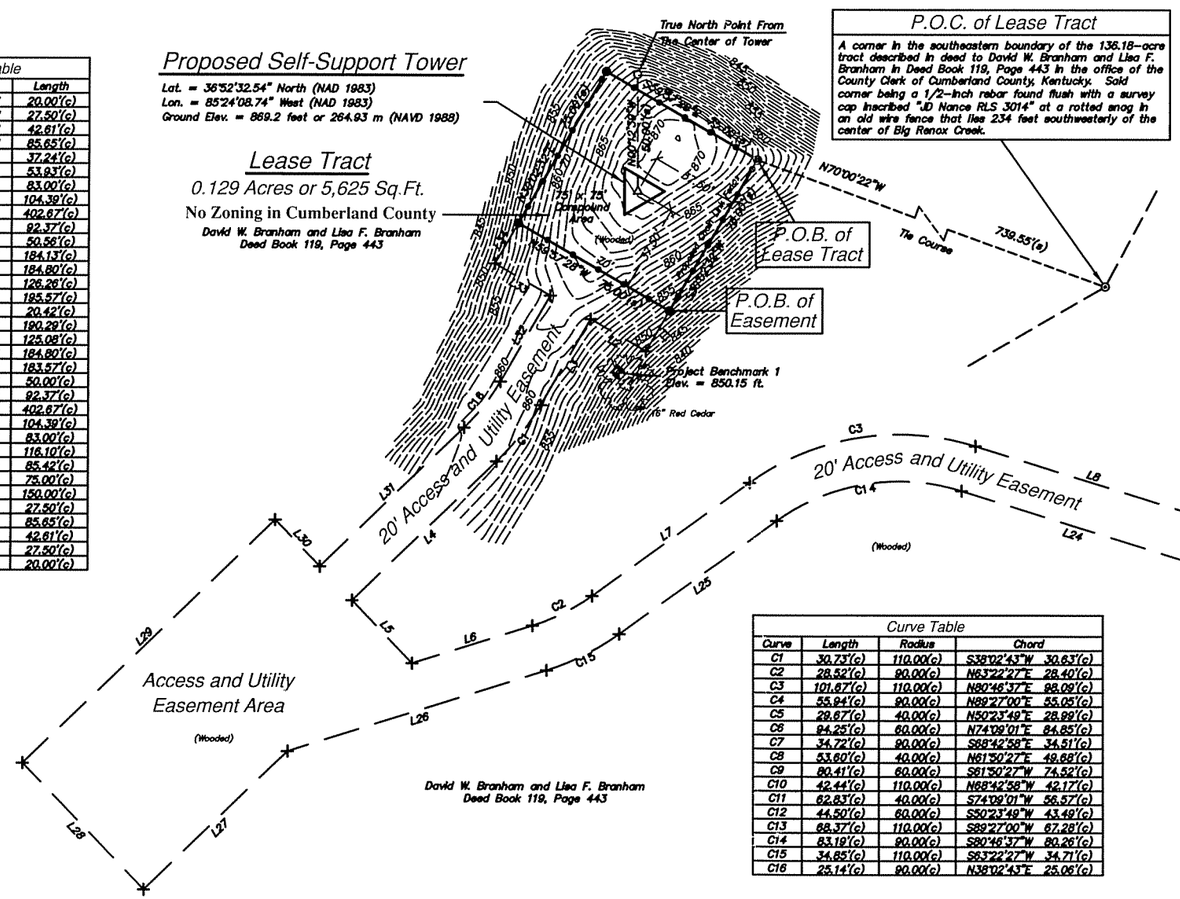
L34	N30°02'32"E	20.00'(c)



Curve Table			
Curve	Length	Radius	Chord
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C5	28.67'(c)	40.00'(c)	N50°23'49"E 28.99'(c)
C6	94.25'(c)	60.00'(c)	N74°09'01"E 84.85'(c)
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C8	53.60'(c)	40.00'(c)	N61°30'27"E 49.68'(c)
C9	80.41'(c)	60.00'(c)	S81°30'27"W 74.52'(c)
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C15	34.85'(c)	110.00'(c)	S83°22'27"W 34.71'(c)
C16	25.14'(c)	90.00'(c)	N38°02'43"E 25.06'(c)

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

Contour Interval = 1-foot

Surveyor's Notes

1. *This survey is subject to a statement of facts which may be disclosed by an Abstract of Title or a Title Commitment Policy. This documentation was not provided by the client.*
2. *No search of public records has been performed to determine any defects and/or ambiguities in the title of the parent tract.*
3. *The utilities shown on this plat may or may not represent all of the utilities located on the subject site. The presence of utilities was determined by a visual inspection of the property surface. No utility locate was called in prior to this survey. It shall be the responsibility of the contractor to locate utilities prior to construction.*
4. *The topographic information contained on this plat was as requested by the client and may or may not represent all of the topographic features located on the subject property.*
5. *According to Mr. Tim Hicks, County Judge Executive of Cumberland County, no local planning unit exists which has geographical jurisdiction of the subject tower site. The County Judge Executive's Office may be contacted at (270) 864-3444 for confirmation.*
6. *The proposed location of the Smith Bridge cell site will be located outside of an incorporated city.*

Legend

- ● *5/8" Rebar Set Flush With A Survey Cap Inscribed "D.L. Helms PLS 3386"*
- △ *Mag Nail Set Flush In Rock*
- ○ *5/8" Rebar Set Flush - No Cap*
- ⊙ *1/2" Rebar Found Flush With A Survey Cap Inscribed "JD Nance RLS 3014"*
- \+ *Calculated Position - No Monument Found or Set*

Subject Boundaries
Proposed Easement
Other Boundaries
Right of Way
Utility Pole
(m) Electric Meter
(r) Recorded
(c) Calculated
(s) Set

Surveyor's Certification

I hereby certify that this plat has been compiled from a survey actually made upon the ground under my direct supervision on February 3, 2010 by the method of random traverse with sideshots. The unadjusted precision ratio of the traverse was 1:23,900 and it was not adjusted. This survey is a Class B survey and the accuracy and precision of this survey meets all the specifications of this class.

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

Date

Lease Boundary and Easement Descriptions

A tract of land being located on the southwest side of Big Renox Creek about 7 miles north of Burkesville in Cumberland County, Kentucky; said tract being described as follows:

COMMENCING AT a corner in the southeastern boundary of the 136.18-acre tract described in deed to David W. Branham and Lisa F. Branham on August 13, 2001 in Deed Book 119, page 443 in the office of the County Clerk of Cumberland County, Kentucky; said corner being a 1/2-inch rebar found flush with a survey cap inscribed "JD Nance RLS 3014" at a rotted snag in an old wire fence that lies 234 feet southwesterly of the center of Big Renox Creek; thence North 70 degrees 00 minutes 22 seconds West 739.55 feet to a 5/8-inch rebar set flush with a survey cap inscribed "D.L. Helms PLS 3386" (referred to as a rebar in the remainder of this description) at the POINT OF BEGINNING of this description: thence South 30 degrees 02 minutes 32 seconds West 75.00 feet to a rebar set flush; thence North 59 degrees 57 minutes 28 seconds West 75.00 feet to a rebar set flush; thence North 30 degrees 02 minutes 32 seconds East 75.00 feet to a rebar set flush; thence South 59 degrees 57 minutes 28 seconds East 75.00 feet to the point of beginning and containing 0.129 acres (5,625 square feet), more or less.

TOGETHER WITH an access and utility easement from the above-described 0.129-acre lease tract to Columbia Road (Kentucky Highway 61); said easement being described as follows: BEGINNING AT a 5/8-inch rebar set flush with a survey cap inscribed "D.L. Helms PLS 3386" at the south corner of the above-described 0.129-acre lease tract; thence South 30 degrees 02 minutes 32 seconds West 20.00 feet; thence North 59 degrees 57 minutes 28 seconds West 27.50 feet; thence South 30 degrees 02 minutes 32 seconds West 42.61 feet; thence Southwesterly 30.73 feet along an arc to the right and having a radius of 110.00 feet and subtended by a long chord having a bearing of South 38 degrees 02 minutes 43 seconds West and a length of 30.63 feet; thence South 46 degrees 02 minutes 53 seconds West 85.65 feet; thence South 43 degrees 57 minutes 07 seconds East 37.24 feet; thence North 72 degrees 27 minutes 04 seconds East 53.93 feet; thence Northeasterly 28.52 feet along an arc to the left and having a radius of 90.00 feet and subtended by a long chord having a bearing of North 63 degrees 22 minutes 27 seconds East and a length of 28.40 feet; thence North 54 degrees 17 minutes 51 seconds East 83.00 feet; thence Northeasterly 101.67 feet along an arc to the right and having a radius of 110.00 feet and subtended by a long chord having a bearing of North 80 degrees 46 minutes 37 seconds East and a length of 98.09 feet; thence South 72 degrees 44 minutes 36 seconds East 104.39 feet; thence Easterly 55.94 feet along an arc to the left and having a radius of 90.00 feet and subtended by a long chord having a bearing of North 89 degrees 27 minutes 00 seconds East and a length of 55.05 feet; thence North 71 degrees 38 minutes 36 seconds East 402.67 feet; thence Northeasterly 28.67 feet along an arc to the left and having a radius of 40.00 feet and subtended by a long chord having a bearing of North 50 degrees 23 minutes 49 seconds East and a length of 28.99 feet; thence North 29 degrees 09 minutes 01 second East 92.37 feet; thence Northeasterly 94.25 feet along an arc to the right and having a radius of 60.00 feet and subtended by a long chord having a bearing of North 74 degrees 09 minutes 01 second East and a length of 84.85 feet; thence South 60 degrees 50 minutes 59 seconds East 50.56 feet; thence South 57 degrees 39 minutes 51 seconds East 184.13 feet; thence Southeasterly 34.72 feet along an arc to the left and having a radius of 90.00 feet and subtended by a long chord having a bearing of South 68 degrees 42 minutes 58 seconds East and a length of 34.51 feet; thence South 79 degrees 46 minutes 06 seconds East 184.80 feet; thence Northeasterly 53.60 feet along an arc to the left and having a radius of 40.00 feet and subtended by a long chord having a bearing of North 61 degrees 50 minutes 27 seconds East and a length of 49.68 feet; thence North 23 degrees 26 minutes 59 seconds East 126.26 feet; thence North 30 degrees 10 minutes 14 seconds East 195.57 feet to the southwestern right of way of Columbia Road (30 feet from the centerline); thence, along said southwestern right of way, South 48 degrees 12 minutes 50 seconds East 20.42 feet; thence South 30 degrees 10 minutes 14 seconds West 190.29 feet; thence South 23 degrees 26 minutes 59 seconds West 125.08 feet; thence Southwesterly 80.41 feet along an arc to the right and having a radius of 60.00 feet and subtended by a long chord having a bearing of South 61 degrees 50 minutes 27 seconds West and a length of 74.52 feet; thence North 79 degrees 46 minutes 06 seconds West 184.80 feet; thence Northwesterly 42.44 feet along an arc to the right and having a radius of 110.00 feet and subtended by a long chord having a bearing of North 68 degrees 42 minutes 58 seconds West and a length of 42.17 feet; thence North 57 degrees 39 minutes 51 seconds West 183.57 feet; thence North 60 degrees 50 minutes 59 seconds West 50.00 feet; thence Southwesterly 62.83 feet along an arc to the left and having a radius of 40.00 feet and subtended by a long chord having a bearing of South 74 degrees 09 minutes 01 second West and a length of 56.57 feet; thence South 29 degrees 09 minutes 01 second West 92.37 feet; thence Southwesterly 44.50 feet along an arc to the right and having a radius of 60.00 feet and subtended by a long chord having a bearing of South 50 degrees 23 minutes 49 seconds West and a length of 43.49 feet; thence South 71 degrees 38 minutes 36 seconds West 402.67 feet; thence Westerly 68.37 feet along an arc to the right and having a radius of 110.00 feet and subtended by a long chord having a bearing of South 89 degrees 27 minutes 00 seconds West and a length of 67.28 feet; thence North 72 degrees 44 minutes 36 seconds West 104.39 feet; thence Southwesterly 83.19 feet along an arc to the left and having a radius of 90.00 feet and subtended by a long chord having a bearing of South 80 degrees 46 minutes 37 seconds West and a length of 80.26 feet; thence South 54 degrees 17 minutes 51 seconds West 83.00 feet; thence Southwesterly 34.85 feet along an arc to the right and having a radius of 110.00 feet and subtended by a long chord having a bearing of South 63 degrees 22 minutes 27 seconds West and a length of 34.71 feet; thence South 72 degrees 27 minutes 04 seconds West 116.10 feet; thence South 46 degrees 02 minutes 53 seconds West 85.42 feet; thence North 43 degrees 57 minutes 07 seconds West 75.00 feet; thence North 46 degrees 02 minutes 53 seconds East 150.00 feet; thence South 43 degrees 57 minutes 07 seconds East 27.50 feet; thence North 46 degrees 02 minutes 53 seconds East 85.65 feet; thence Northeasterly 25.14 feet along an arc to the left and having a radius of 90.00 feet and subtended by a long chord having a bearing of North 38 degrees 02 minutes 43 seconds East and a length of 25.06 feet; thence North 30 degrees 02 minutes 32 seconds East 42.61 feet; thence North 59 degrees 57 minutes 28 seconds West 27.50 feet; thence North 30 degrees 02 minutes 32 seconds East 20.00 feet to a 5/8-inch rebar set flush with the aforesaid Helms survey cap at the west corner of the above-described 0.129-acre lease tract; thence South 59 degrees 57 minutes 28 seconds East 75.00 feet to the point of beginning.

The bearing system of these descriptions is based upon the Kentucky State Plane Coordinate System, South Zone, NAD 1983 (1993), as determined by G.P.S. observations made on February 3, 2010 using the National Geodetic Survey monument "BREEDING". These descriptions are based upon a survey completed by Landmark Surveying Co., Inc. and certified by Darren L. Helms, P.L.S. 3386, on February 23, 2010. This survey is hereby referenced and made a part of these descriptions.

SOURCE OF TITLE: Being a portion of and lying entirely within the land described in deed to David W. Branham and Lisa F. Branham on August 13, 2001 in Deed Book 119, page 443 and on November 9, 2004 in Deed Book 131, page 5; both documents being recorded in the Office of the County Clerk of Cumberland County, Kentucky.

Landmark Surveying Co., Inc.
15 N.E. 3rd Street
Washington, Indiana 47501
(812) 257-0950
Email: landmark97@sbcglobal.net
Project No. 10-02-0105

Lease Boundary Survey
7031 Columbia Road
Burkesville, Kentucky 42717

Bluegrass Cellular
2902 Ring Road
Elizabethtown, Kentucky 42701

REVISIONS	DATE

DATE: 2-23-10 | DRAWN BY: A. Winkler | CHECKED BY: D.L.Helms

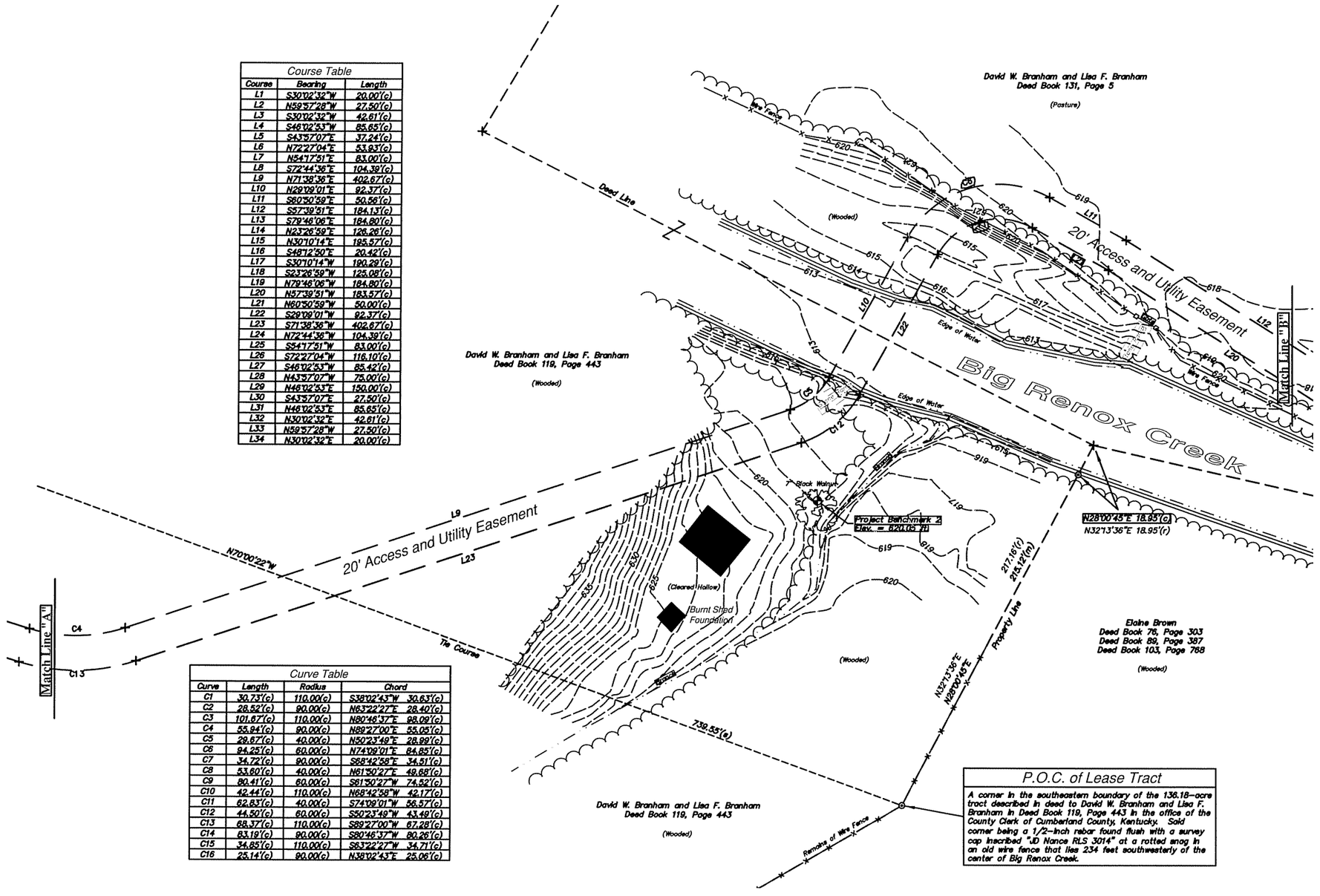
SHEET NO. 1 OF 3 SHEETS

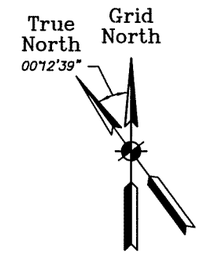
FILE NO. smith.dwg

Site: Smith Bridge
Lease Boundary and Topographic Survey
Cumberland County, Kentucky

Course Table		
Course	Bearing	Length
L1	S30°02'32"W	20.00'(c)
L2	N59°57'28"W	27.50'(c)
L3	S30°02'32"W	42.61'(c)
L4	S46°02'53"W	85.65'(c)
L5	S43°57'07"E	37.24'(c)
L6	N72°27'04"E	53.93'(c)
L7	N54°17'51"E	83.00'(c)
L8	S72°44'36"E	104.39'(c)
L9	N71°38'36"E	402.67'(c)
L10	N29°09'01"E	92.37'(c)
L11	S60°50'59"E	50.56'(c)
L12	S57°39'51"E	184.13'(c)
L13	S79°46'06"E	184.80'(c)
L14	N23°26'59"E	126.26'(c)
L15	N30°10'14"E	195.57'(c)
L16	S48°12'50"E	20.42'(c)
L17	S30°10'14"W	190.29'(c)
L18	S23°26'59"W	125.08'(c)
L19	N79°46'06"W	184.80'(c)
L20	N57°39'51"W	183.57'(c)
L21	N60°50'59"W	50.00'(c)
L22	S29°09'01"W	92.37'(c)
L23	S71°38'36"W	402.67'(c)
L24	N72°44'36"W	104.39'(c)
L25	S54°17'51"W	83.00'(c)
L26	S72°27'04"W	116.10'(c)
L27	S46°02'53"W	85.42'(c)
L28	N43°57'07"W	75.00'(c)
L29	N46°02'53"E	150.00'(c)
L30	S43°57'07"E	27.50'(c)
L31	N46°02'53"E	85.65'(c)
L32	N30°02'32"E	42.61'(c)
L33	N59°57'28"W	27.50'(c)
L34	N30°02'32"E	20.00'(c)

Curve Table			
Curve	Length	Radius	Chord
C1	30.73'(c)	110.00(c)	S38°02'43"W 30.63'(c)
C2	28.52'(c)	90.00(c)	N63°22'27"E 28.40'(c)
C3	101.67'(c)	110.00(c)	N80°46'37"E 98.09'(c)
C4	55.94'(c)	90.00(c)	N89°27'00"E 55.05'(c)
C5	29.67'(c)	40.00(c)	N50°23'49"E 28.99'(c)
C6	94.25'(c)	60.00(c)	N74°09'01"E 84.85'(c)
C7	34.72'(c)	90.00(c)	S68°42'58"E 34.51'(c)
C8	53.60'(c)	40.00(c)	N61°50'27"E 49.68'(c)
C9	80.41'(c)	60.00(c)	S81°50'27"W 74.52'(c)
C10	42.44'(c)	110.00(c)	N68°42'58"W 42.17'(c)
C11	62.83'(c)	40.00(c)	S74°09'01"W 56.57'(c)
C12	44.50'(c)	60.00(c)	S50°23'49"W 43.49'(c)
C13	68.37'(c)	110.00(c)	S89°27'00"W 67.28'(c)
C14	83.19'(c)	90.00(c)	S80°46'37"W 80.26'(c)
C15	34.85'(c)	110.00(c)	S63°22'27"W 34.71'(c)
C16	25.14'(c)	90.00(c)	N38°02'43"E 25.06'(c)





GRAPHIC SCALE

(IN FEET)
1 inch = 80 ft.

Contour Interval = 1-foot

Project Bench Mark 2

Northing: 1,838,009 feet (560,226 m)
Easting: 1,742,779 feet (531,200 m)
Elevation: 620.05 feet (188.992 m)
Description: A railroad spike set in the north side of a 7" black walnut, 10" above grade. The benchmark is 96' southwest of the center of Big Renox Creek and 44' southeast of the center of the access easement.

P.O.C. of Lease Tract

A corner in the southeastern boundary of the 136.18-acre tract described in deed to David W. Branham and Lisa F. Branham in Deed Book 119, Page 443 in the office of the County Clerk of Cumberland County, Kentucky. Said corner being a 1/2-inch rebar found flush with a survey cap inscribed "JD Nance RLS 3014" at a rotted snag in an old wire fence that lies 234 feet southwesterly of the center of Big Renox Creek.

Legend

- ● 5/8" Rebar Set Flush With A Survey Cap Inscribed "D.L. Helms PLS 3386"
- △ Mag Nail Set Flush In Rock
- ○ 5/8" Rebar Set Flush – No Cap
- ◉ 1/2" Rebar Found Flush With A Survey Cap Inscribed "JD Nance RLS 3014"
- \+ Calculated Position – No Monument Found or Set
- ——— Subject Boundaries
- —— —— Proposed Easement
- — — — Other Boundaries
- — - — - — Right of Way
- Ø Utility Pole
- (m) Electric Meter
- (r) Recorded
- (c) Calculated
- (s) Set

Landmark Surveying Co., Inc.
15 N.E. 3rd Street
Washington, Indiana 47501
(812) 257-0650
Email: landmark97@sbcglobal.net
Project No. 10-02-0105

Lease Boundary Survey
7031 Columbia Road
Burkesville, Kentucky 42717

Bluegrass Cellular
2902 Ring Road
Elizabethtown, Kentucky 42701

REVISIONS	DATE

DATE 2-23-10 | DRAWN BY A. Winkler | CHECKED BY D.L.Helms

SHEET NO. 2 OF 3 SHEETS

FILE NO. smith.dwg

Site: Smith Bridge
Lease Boundary and Topographic Survey
Cumberland County, Kentucky

Course Table		
Course	Bearing	Length
L1	S30°02'32"W	20.00'(c)
L2	N59°57'28"W	27.50'(c)
L3	S30°02'32"W	42.61'(c)
L4	S46°02'53"W	85.65'(c)
L5	S43°57'07"E	37.24'(c)
L6	N72°27'04"E	53.83'(c)
L7	N54°17'51"E	83.00'(c)
L8	S72°44'36"E	104.39'(c)
L9	N71°38'36"E	402.67'(c)
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L11	S60°50'59"E	50.56'(c)
L12	S57°39'51"E	184.13'(c)
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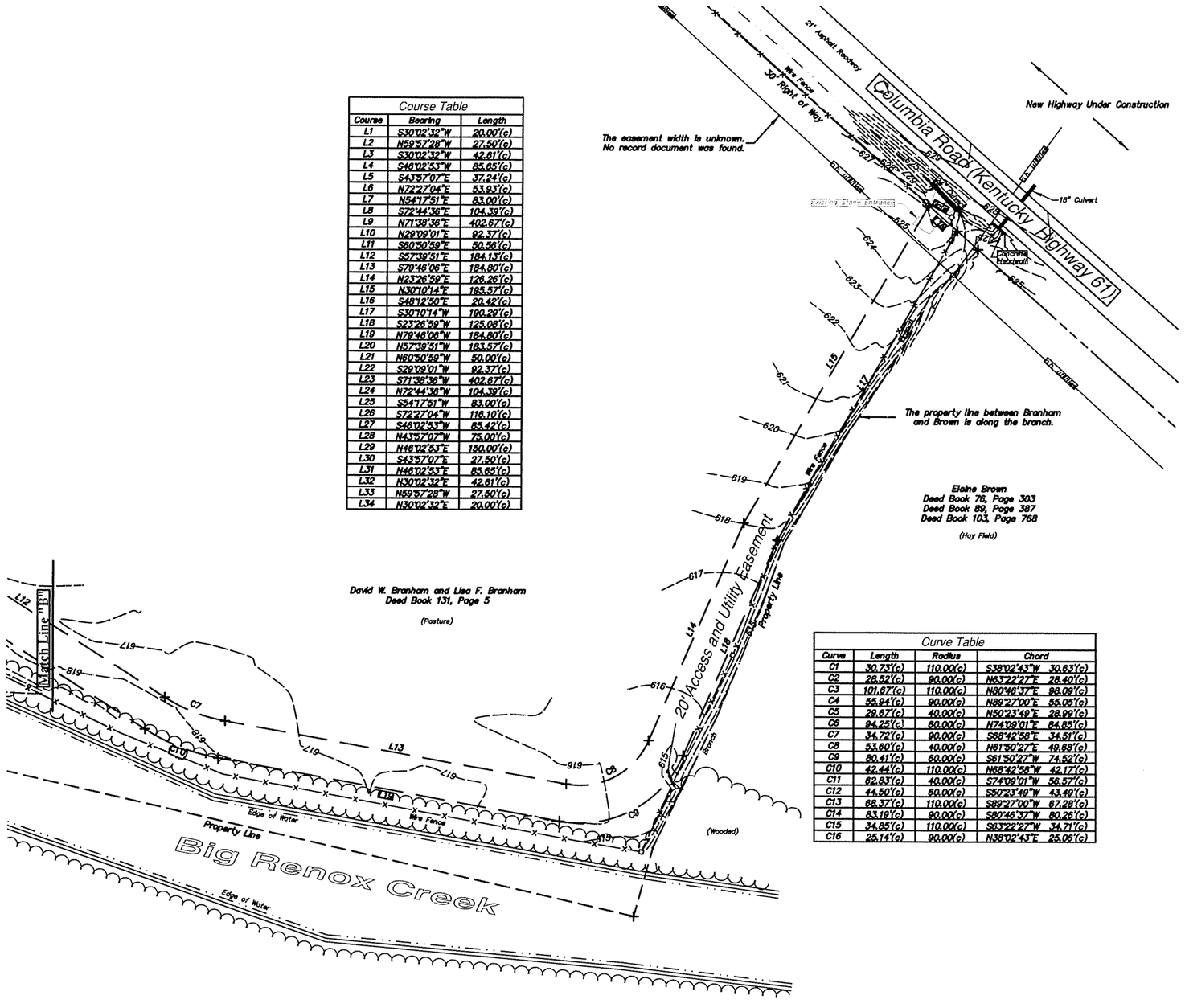
L14	N23°26'59"E	126.26'(c)
L15	N30°10'14"E	185.57'(c)
L16	S48°12'50"E	20.42'(c)
L17	S30°10'14"W	190.29'(c)
L18	S23°26'59"W	125.08'(c)
L19	N79°46'06"W	184.80'(c)
L20	N57°39'51"W	183.57'(c)
L21	N60°50'59"W	50.00'(c)
L22	S29°09'01"W	92.37'(c)
L23	S71°38'36"W	402.67'(c)
L24	N72°44'36"W	104.39'(c)
L25	S54°17'51"W	83.00'(c)
L26	S72°27'04"W	116.10'(c)
L27	S46°02'53"W	85.42'(c)
L28	N43°57'07"W	75.00'(c)
L29	N46°02'53"E	150.00'(c)
L30	S43°57'07"E	27.50'(c)
L31	N46°02'53"E	85.65'(c)
L32	N30°02'32"E	42.61'(c)
L33	N59°57'28"W	27.50'(c)
L34	N30°02'32"E	20.00'(c)



Curve Table			
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C6	94.25'(c)	60.00'(c)	N74°09'01"E 84.85'(c)
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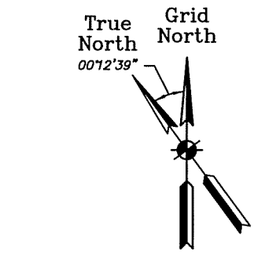
C8	53.60'(c)	40.00'(c)	N61°50'27"E 49.68'(c)
C9	80.41'(c)	60.00'(c)	S61°50'27"W 74.52'(c)
C10	42.44'(c)	110.00'(c)	N68°42'58"W 42.17'(c)
C11	62.83'(c)	40.00'(c)	S74°09'01"W 56.57'(c)
C12	44.50'(c)	60.00'(c)	S50°23'49"W 43.49'(c)
C13	68.37'(c)	110.00'(c)	S89°27'00"W 67.28'(c)
C14	83.18'(c)	90.00'(c)	S80°46'37"W 80.26'(c)
C15	34.65'(c)	110.00'(c)	S63°22'27"W 34.71'(c)
C16	25.14'(c)	90.00'(c)	N38°02'43"E 25.06'(c)



GRAPHIC SCALE

(IN FEET)
1 inch = 80 ft.

Contour Interval = 1-foot

Legend

- ● 5/8" Rebar Set Flush With A Survey Cap Inscribed "D.L. Helms PLS 3386"
- △ Mag Nail Set Flush In Rock
- ○ 5/8" Rebar Set Flush – No Cap
- ⊛ 1/2" Rebar Found Flush With A Survey Cap Inscribed "JD Nance RLS 3014"
- \+ Calculated Position – No Monument Found or Set
- Subject Boundaries
- Proposed Easement
- Other Boundaries
- Right of Way
- Utility Pole
- (m) Electric Meter
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Project No. 10-02-0105

Lease Boundary Survey
7031 Columbia Road
Burkesville, Kentucky 42717

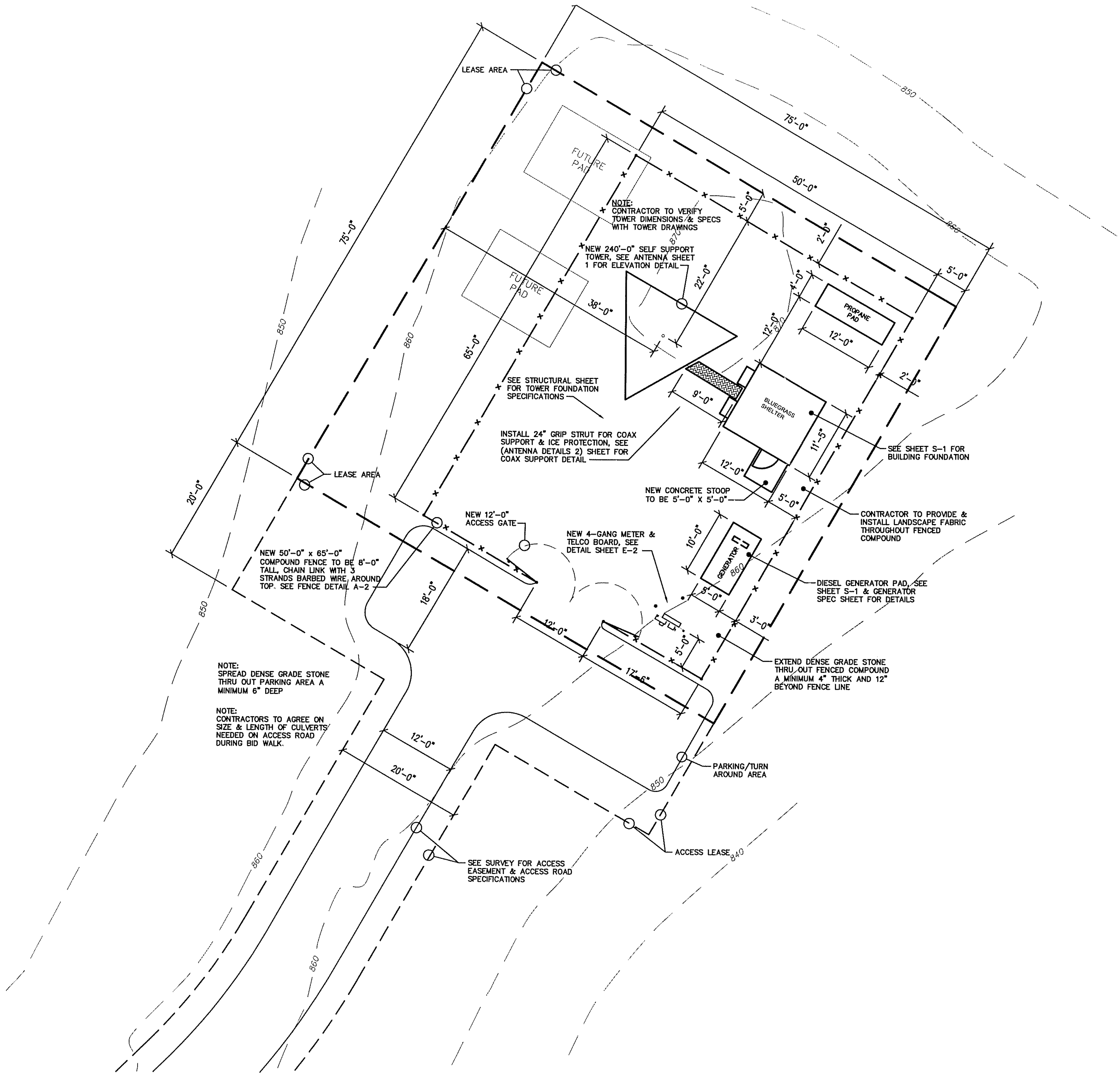
Bluegrass Cellular
2902 Ring Road
Elizabethtown, Kentucky 42701

REVISIONS	DATE

DATE 2-23-10 | DRAWN BY A. Winkler | CHECKED BY D.L.Helms

SHEET NO. 3 OF 3 SHEETS

FILE NO. smith.dwg



GENERAL NOTES:

1) EQUIPMENT PICK-UP AND DELIVERY TO SITE FROM BLUEGRASS CELLULAR STAGING FACILITY TO BE THE CONTRACTORS RESPONSIBILITY, INCLUDING CRANE SET, AND ALL COST INCURRED.

2) FOR, BUILDING AND ALL CONCRETE PAD DETAILS REFER TO STRUCTURALS AND SHEET S1.1

3) ANY DAMAGE DUE TO CONSTRUCTION, TO BE REPAIRED OR REPLACED TO ORIGINAL CONDITION. (SUBJECT TO BLUEGRASS CELLULAR'S APPROVAL).

4) ANY DAMAGE OF NATURAL SURROUNDINGS , INCLUDING BUT NOT LIMITED TO, GRASS, TREES, LANDSCAPING, ETC.. TO BE REPAIRED OR REPLACED TO ORIGINAL CONDITION AT BLUEGRASS CELLULAR'S APPROVAL.

5) ROADWAYS TO BE GRADED SMOOTH AND EVEN, REMOVING ALL POTHOLES. ROADS TO HAVE PROPER DRAINAGE AND RUNOFF PER BLUEGRASS CELLULAR'S APPROVAL.

6) ANY RELOCATION OF EXISTING UTILITIES TO BE DONE IN ACCORDANCE WITH LOCAL CODES AND RECOMMENDATIONS, CONSULTING ALL UTILITY COMPANIES INVOLVED FOR APPROVAL AND SPECIFICATIONS REQUIRED.

7) FOR GRADING DETAILS, SEE GENERAL NOTESHEET

8) CONTRACTOR TO FIELD VERIFY ALL TOWER DIMENSIONS WITH TOWER MANUFACTURER PRIOR TO JOB BIDDING OR START OF ANY CONSTRUCTION

9) CONTRACTOR RESPONSIBLE FOR APPLYING FOR SERVICE TO SITE AND PAYING ANY FEES REQUIRED FOR PERMITS, HOOKUP, ETC..

SITE PLAN

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

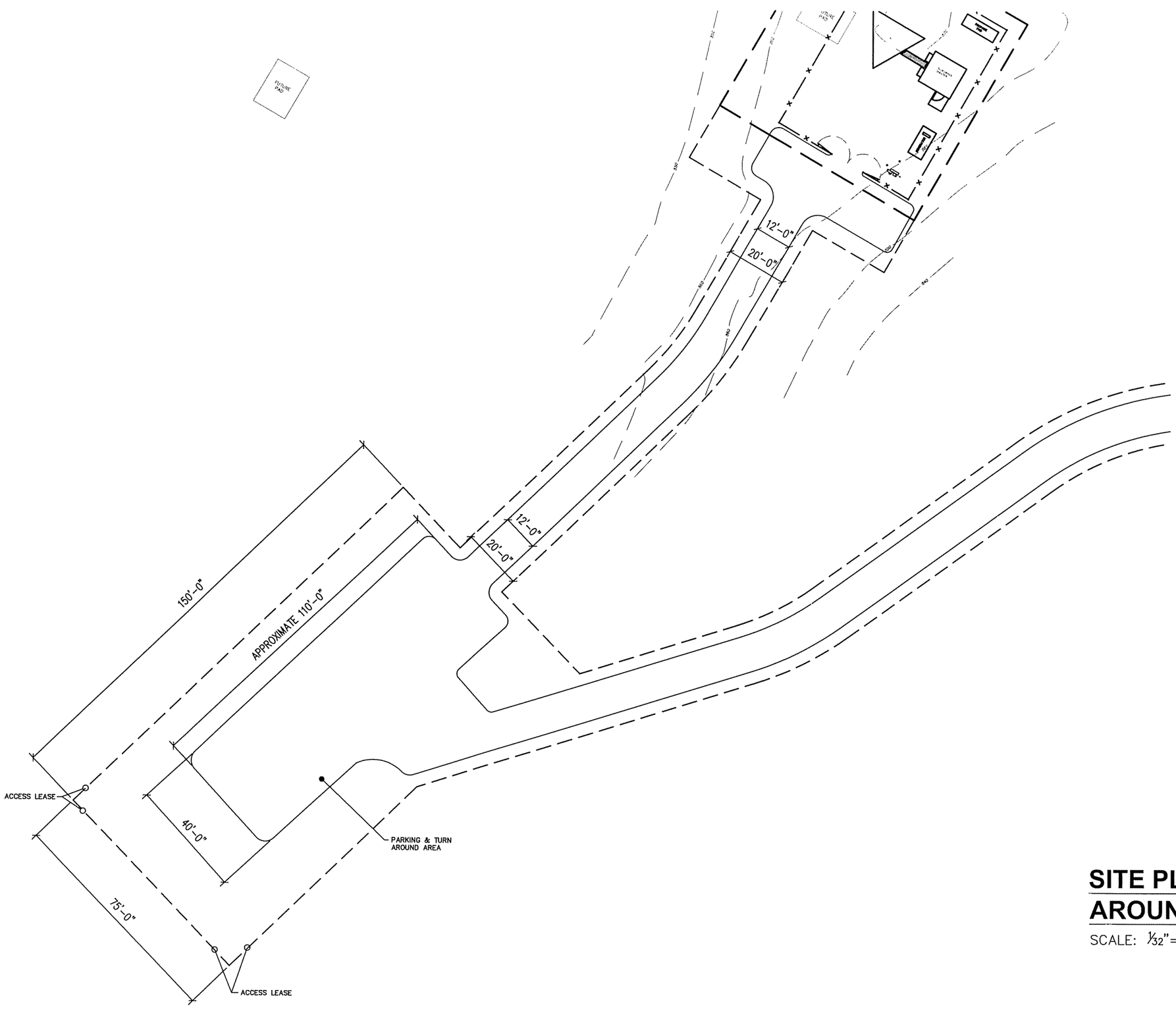
A&B DESIGN
6403 MERCURY DRIVE LOUISVILLE, KY. 40291
(502) 599-9427 Fx:(502)231-3656

NO.	DATE	REVISION

BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
SMITH BRIDGE
7031 COLUMBIA RD. BURKESVILLE, KY. 42717

DRAWN BY: R. BECKER
ISSUE DATE: 2-26-10
SCALE: LISTED

SHEET NUMBER
A-1



SITE PLAN-TURN AROUND DETAIL

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

GENERAL NOTES:

1) EQUIPMENT PICK-UP AND DELIVERY TO SITE FROM BLUEGRASS CELLULAR STAGING FACILITY TO BE THE CONTRACTORS RESPONSIBILITY, INCLUDING CRANE SET, AND ALL COST INCURRED.

2) FOR, BUILDING AND ALL CONCRETE PAD DETAILS REFER TO STRUCTURALS AND SHEET S1.1

3) ANY DAMAGE DUE TO CONSTRUCTION, TO BE REPAIRED OR REPLACED TO ORIGINAL CONDITION. (SUBJECT TO BLUEGRASS CELLULAR'S APPROVAL).

4) ANY DAMAGE OF NATURAL SURROUNDINGS , INCLUDING BUT NOT LIMITED TO, GRASS, TREES, LANDSCAPING, ETC.. TO BE REPAIRED OR REPLACED TO ORIGINAL CONDITION AT BLUEGRASS CELLULAR'S APPROVAL.

5) ROADWAYS TO BE GRADED SMOOTH AND EVEN, REMOVING ALL POTHOLES. ROADS TO HAVE PROPER DRAINAGE AND RUNOFF PER BLUEGRASS CELLULAR'S APPROVAL.

6) ANY RELOCATION OF EXISTING UTILITIES TO BE DONE IN ACCORDANCE WITH LOCAL CODES AND RECOMMENDATIONS, CONSULTING ALL UTILITY COMPANIES INVOLVED FOR APPROVAL AND SPECIFICATIONS REQUIRED.

7) FOR GRADING DETAILS, SEE GENERAL NOTESHEET

8) CONTRACTOR TO FIELD VERIFY ALL TOWER DIMENSIONS WITH TOWER MANUFACTURER PRIOR TO JOB BIDDING OR START OF ANY CONSTRUCTION

9) CONTRACTOR RESPONSIBLE FOR APPLYING FOR SERVICE TO SITE AND PAYING ANY FEES REQUIRED FOR PERMITS, HOOKUP, ETC..

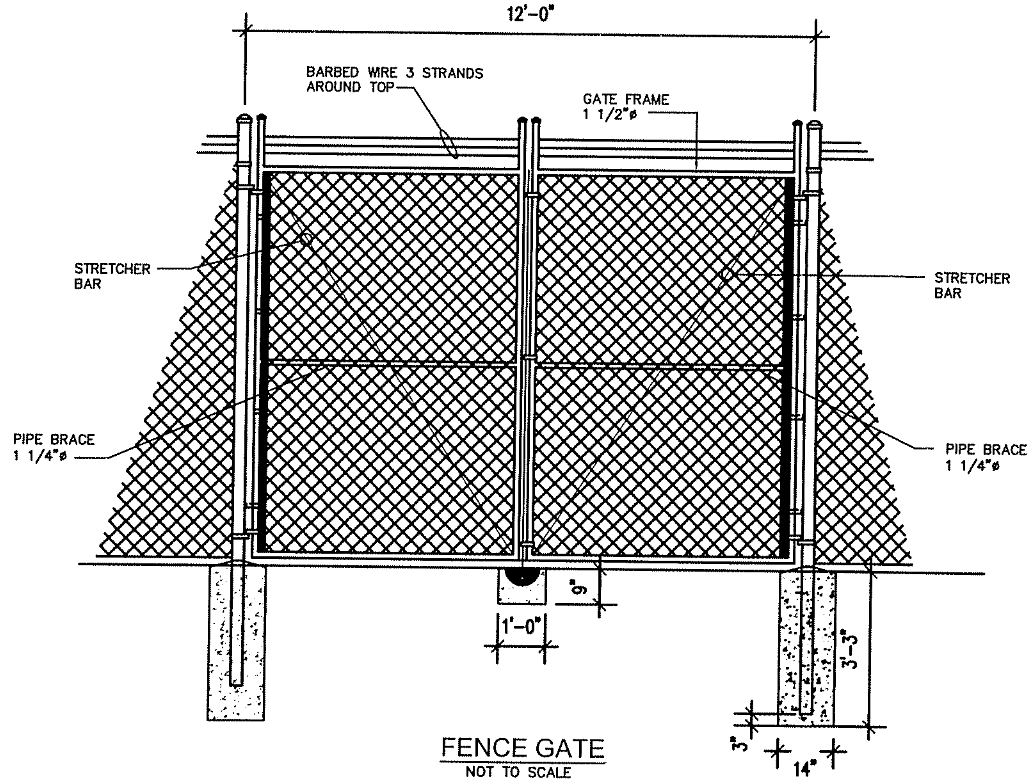
RF DESIGN
8403 MERCURY DRIVE LOUISVILLE, KY 40291
(502)499-9427 Fax:(502)231-3696

NO.	DATE	REVISION

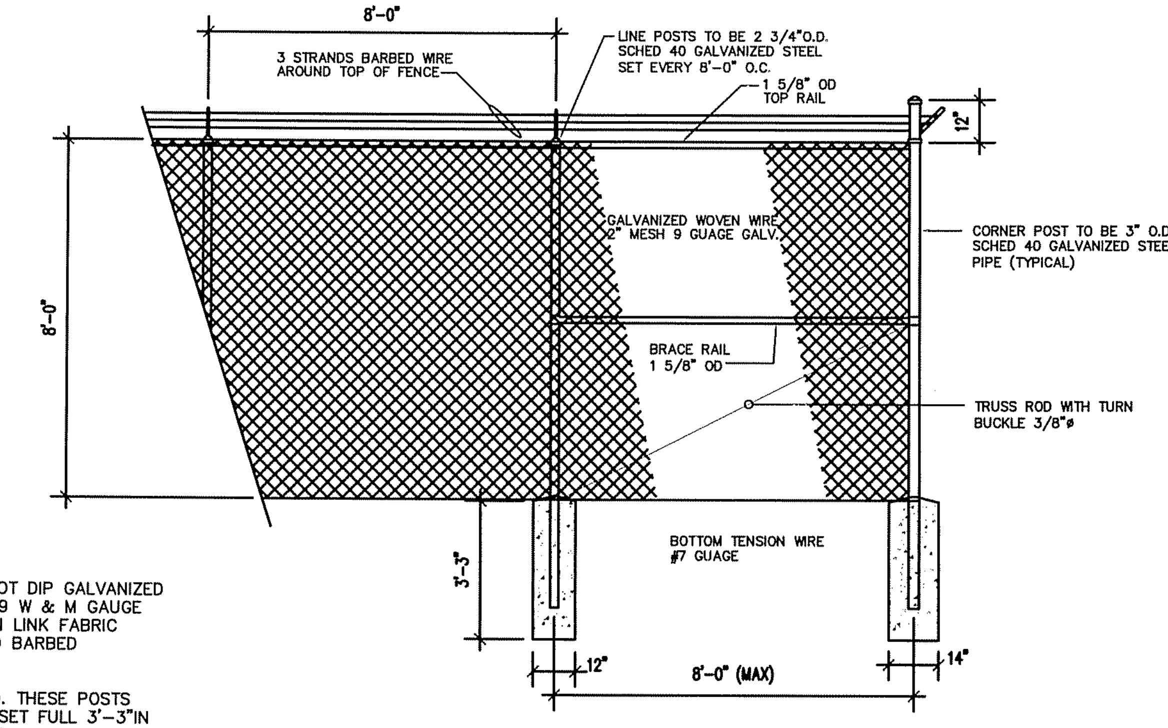
BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
SMITH BRIDGE
7031 COLUMBIA RD. BURKESVILLE, KY. 42717

DRAWN BY: R. BECKER
ISSUE DATE: 2-26-10
SCALE: LISTED

SHEET NUMBER
A-2



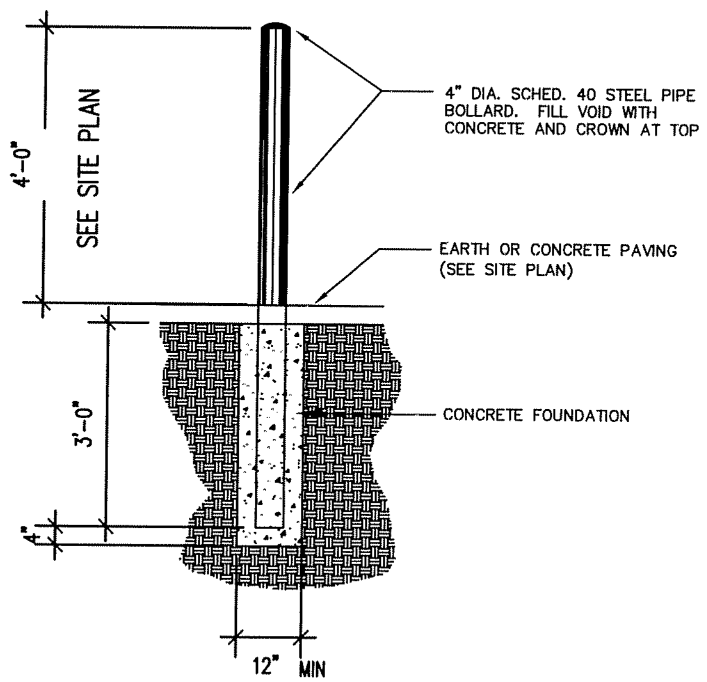
FENCE GATE
NOT TO SCALE



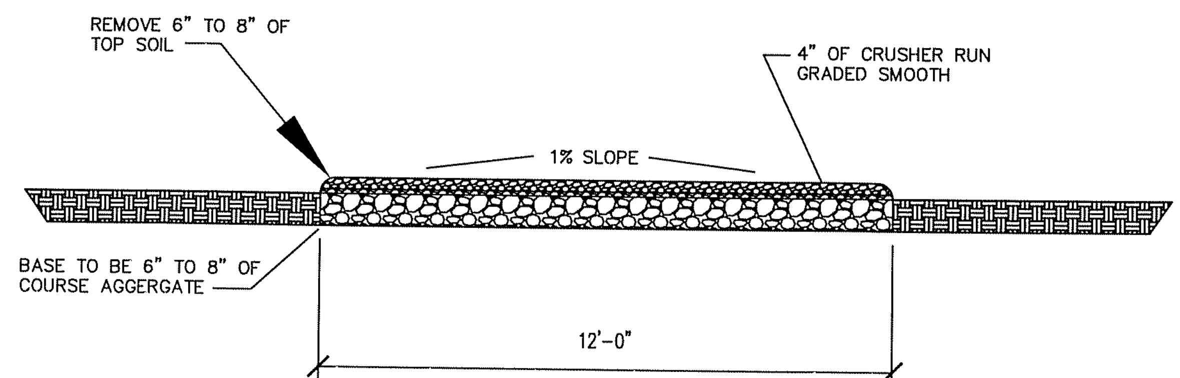
FENCE DETAIL END POLES
NOT TO SCALE

CHAIN LINK FENCING NOTES:

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



BOLLARD DETAIL
NOT TO SCALE



ROAD DETAIL
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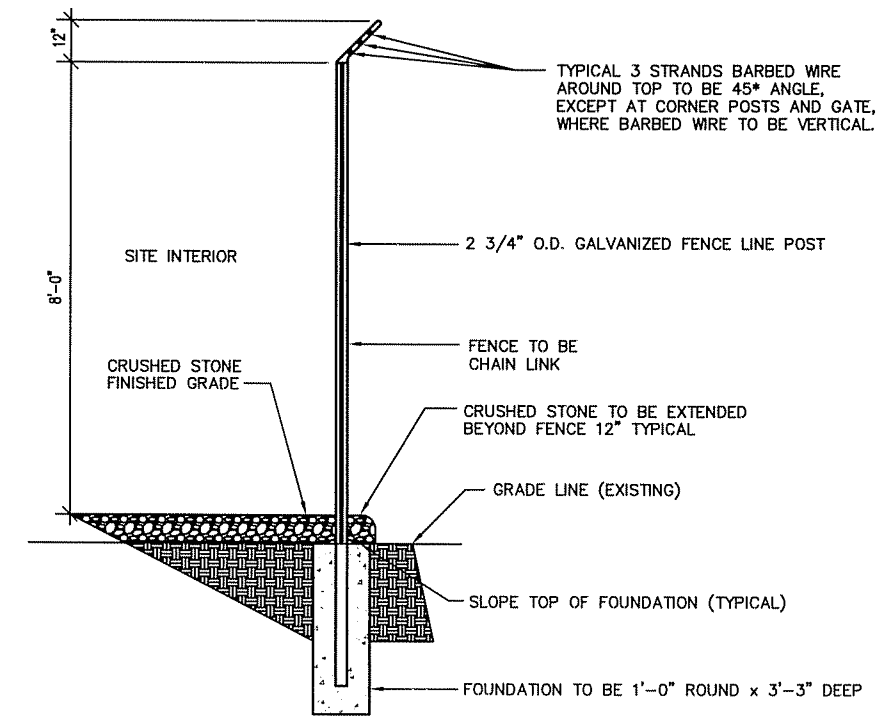

FENCE DETAIL LINE POLES
NOT TO SCALE

6403 MERCURY DRIVE LOUISVILLE, KY 40291
(502) 589-9427 Fax (502) 231-3656

NO.	DATE	REVISION

BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
SMITH BRIDGE
7031 COLUMBIA RD. BURKESVILLE, KY. 42717

DRAWN BY: R. BECKER
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A-3

BLUEGRASS CELLULAR GENERAL NOTES & ANTENNA SPECS

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

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

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

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

LINES ARE TO BE SECURED TO ICE BRIDGE

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

ALL COAX CONNECTIONS ARE TO BE WEATHER PROOFED.

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

ALL TRASH AND REFUGE IS TO BE PROPERLY DISPOSED OF.

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

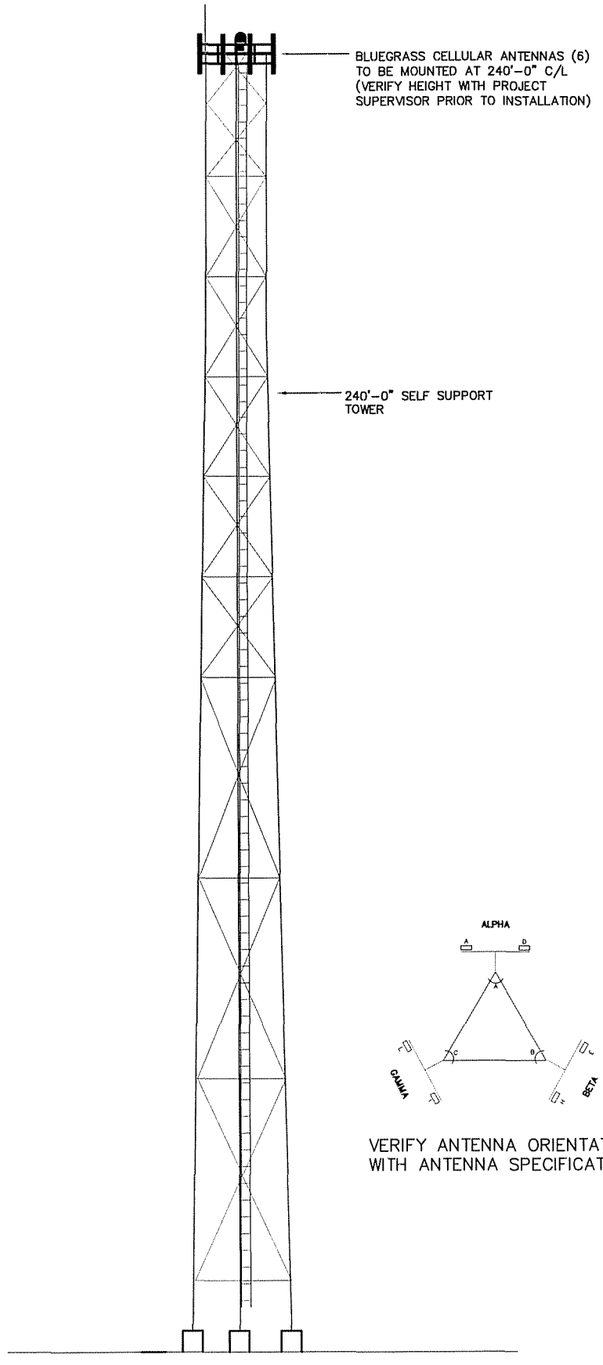
GENERAL CONTRACTOR TO MOUNT ANTENNA MOUNTS AT TOP OF STRUCTURE OR TOWER BY BLUEGRASS CELLULAR SPECIFICATIONS.

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

TRAPEZE KIT TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.

CONTRACTOR TO INSTALL GPS BRACKET & ANTENNAS COMPLETE.

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



SELF SUPPORT TOWER ELEVATION (TYPICAL)

VERIFY ANTENNA ORIENTATION WITH ANTENNA SPECIFICATIONS

TOWER HEIGHT & TYPE

240'-0" SELF SUPPORT TOWER

ANTENNA SPECS

	TYPE	SIZE L x W x D	NUMBER	AZIMUTH	MOUNTING HEIGHT
ANTENNA (PRIMARY)	DBB-LBX-9013DS-VTM	L=78.6 W=10.3 D=4.6	6	120*, 225*, 320*	240'-0" C/L VERIFY WITH CONSTRUCTION SUPERVISOR
ANTENNA (SECONDARY)					

ANTENNA MOUNTING HARDWARE SPECS

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

ANTENNA TRANSMISSION LINES SPECS

	TYPE	SIZE	NUMBER
TRANSMISSION LINE (PRIMARY)	ANDREW	1-5/8"	6
TRANSMISSION LINE (SECONDARY)			

DISH SPECS

	MICROWAVE/DONOR	SIZE	NUMBER	AZIMUTH	MOUNTING HEIGHT
DISH #1					
DISH #2					

DISH MOUNT SPECS

	TYPE	SIZE	NUMBER
MOUNT #1			
MOUNT #2			

DISH TRANSMISSION LINES

	TYPE	SIZE	NUMBER
TRANSMISSION LINE #1			
TRANSMISSION LINE #2			

ANTENNA SYNOPSIS

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

BRE
6403 MERCURY DRIVE LOUISVILLE, KY 40291
(502) 599-9427 FAX (502) 231-3816

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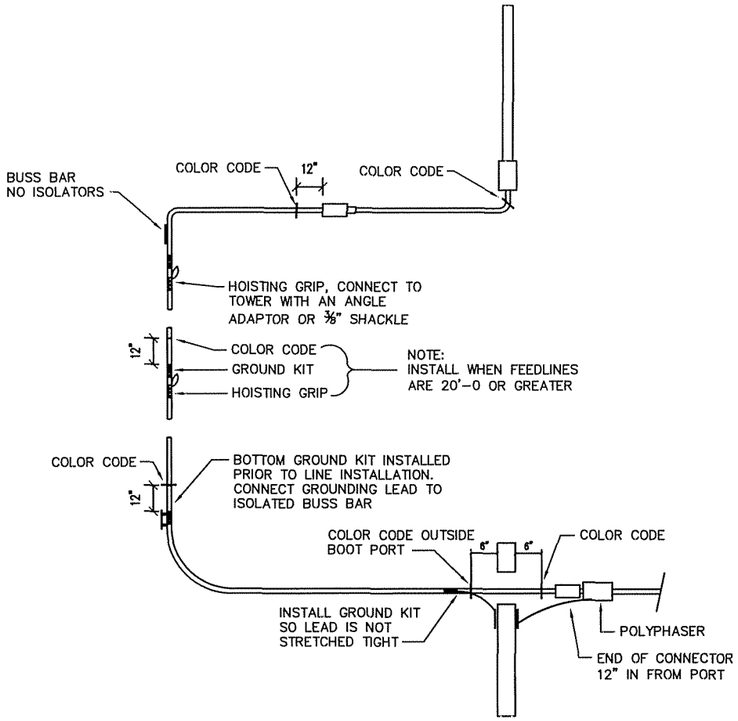
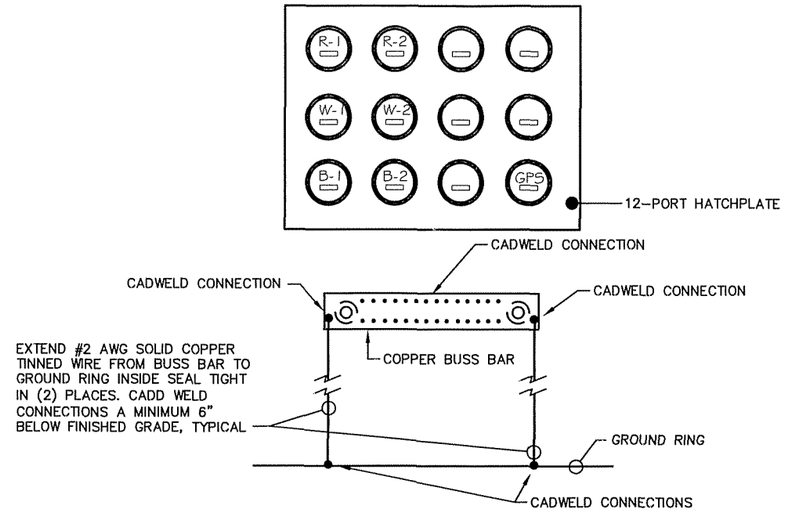
ANTENNA DETAILS 1



COLOR CODING DETAIL
NO SCALE



BOOT PORT GROUNDING DETAIL
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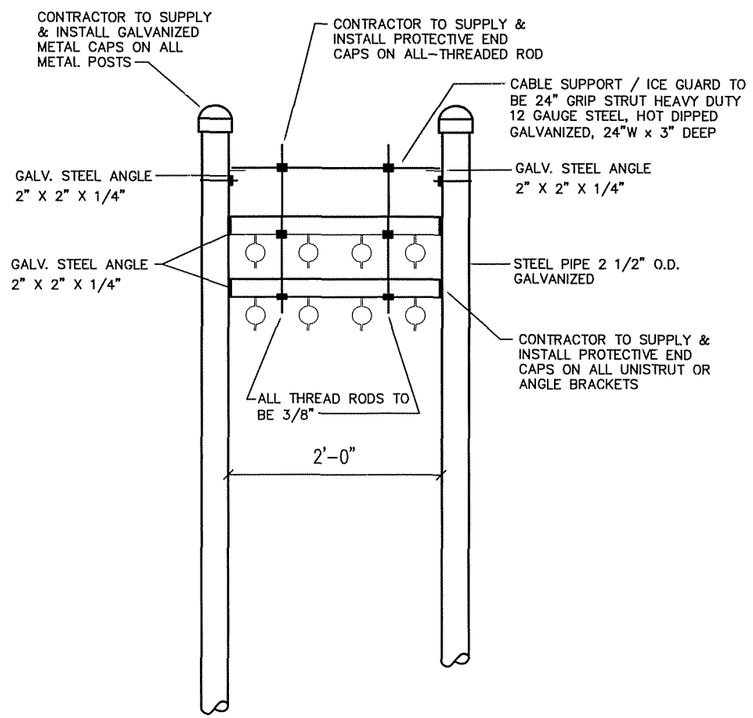
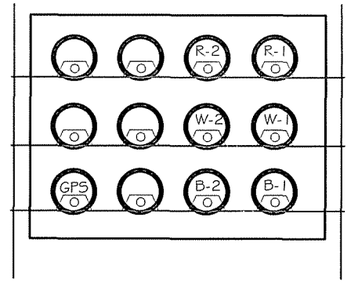
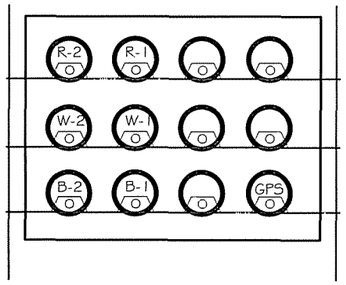


ICE BRIDGE / COAX SUPPORT DETAIL
NO SCALE



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



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

BESIGN
8403 MERCURY DRIVE LOUISVILLE, KY. 40291
(502) 239-9427 Fax (502) 231-3656

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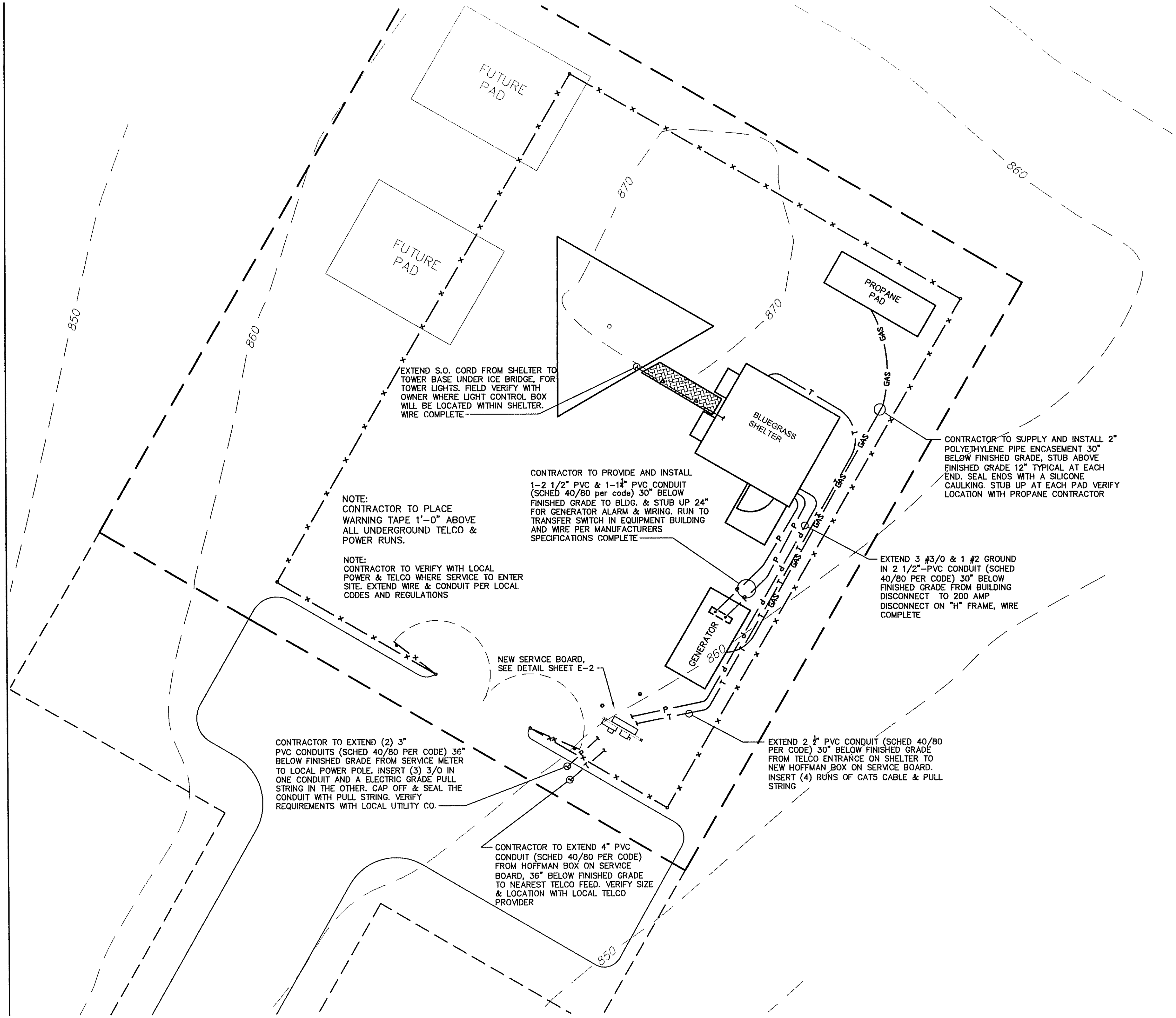
SHEET NUMBER
ANTENNA DETAILS 2



GENERAL ELECTRICAL NOTES:

1) CONTRACTOR RESPONSIBLE FOR MAKING ALL ARRANGEMENTS WITH THE LOCAL UTILITIES FOR SERVICE AND FEE PAYMENTS REQUIRED TO OBTAIN SERVICE.

2) CONTRACTOR RESPONSIBLE FOR MAKING ALL ARRANGEMENTS WITH THE LOCAL TELEPHONE COMPANY FOR SERVICE AND FEE PAYMENTS REQUIRED TO OBTAIN SERVICE.

3) GROUND RING TO BE CONTAINED WITH IN THE COMPOUNDS FENCED AREA.

4) FENCE TO BE GROUNDED FROM GROUND RING TO ALL CORNER POST & GATES. SPACE FENCE GROUNDING APPROXIMATELY 20'-0" O/C. (CAD WELD ALL CONNECTIONS)

5) ALL GROUND RING CONNECTIONS TO BE AS CLOSE AS POSSIBLE, SHARP BENDS WILL NOT BE PERMITTED AS WELL AS "T" CONNECTIONS. ALL CONNECTIONS TO HAVE A SWEEPING RADIUS OF 8" MINIMUM. GROUNDING CONFIGURATION TO BE IN PARALLEL.

6) CONTACT POINTS FOR GROUNDING TO BE CLEANED OF ANY RUST, PAINT, DIRT, ETC. TO CREATE A GOOD BOND FOR CONDUCTOR. AREA THAT HAS BEEN CLEANED TO BE RESEALED TO PREVENT RUSTING.

7) PROPERLY GROUND ANY EXPOSED METAL THAT MAY EXIST ON EXTERIOR OF EQUIPMENT SHELTER OR CABINET.

8) WHERE GROUND CONDUCTORS REQUIRE MECHANICAL BONDING, STAINLESS STEEL CONNECTORS ARE REQUIRED AT EACH CONNECTING POINT USING LOCK WASHERS.

9) CONTRACTOR RESPONSIBLE FOR SEEING THAT UTILITY PERSONNEL MAKE FINAL CONNECTIONS, MAKING SURE THE TOWER ALARM IS CONNECTED AND WORKING. A TELEPHONE NUMBER FOR THE ALARM MUST BE SUPPLIED.

10) CONTRACTOR RESPONSIBLE FOR MEG TESTING THE SITE AND SUPPLYING OWNER WITH FINAL READINGS IN OWNERS SPECIFICATIONS.

11) IF CONDUIT RUNS BURIED LESS THAN REQUIRED DEPTHS, CONTACT BLUEGRASS CELLULAR FOR FURTHER INSTRUCTIONS

NOTE:
CONTRACTOR TO PROVIDE WARNING TAPE IN TRENCHES FOR ALL POWER AND TELCO RUNS UNDER GROUND. TAPE TO BE INSTALLED 1'-0" ABOVE CONDUIT RUNS. (TAKE PICTURES)

SYMBOLS LEGEND

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

SITE PLAN- ELECTRICAL

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

6403 MERCURY DRIVE LOUISVILLE, KY. 40291 (502) 599-9427 Fx:(502)231-3556

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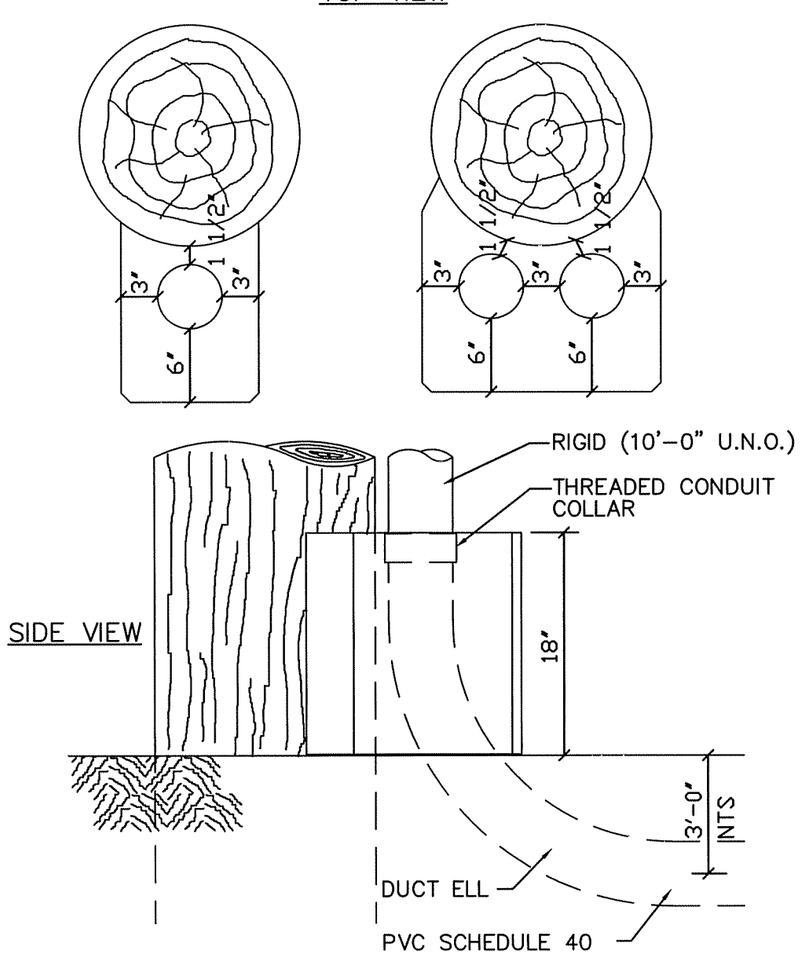
E-1



HUB-BAND DETAIL

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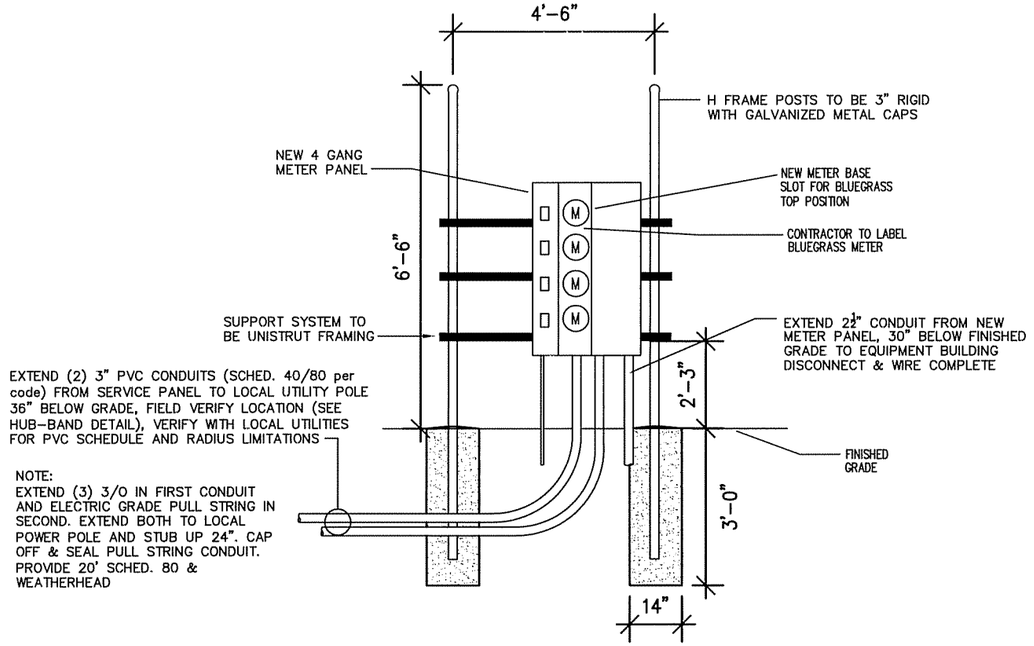

SERVICE BOARD DETAIL

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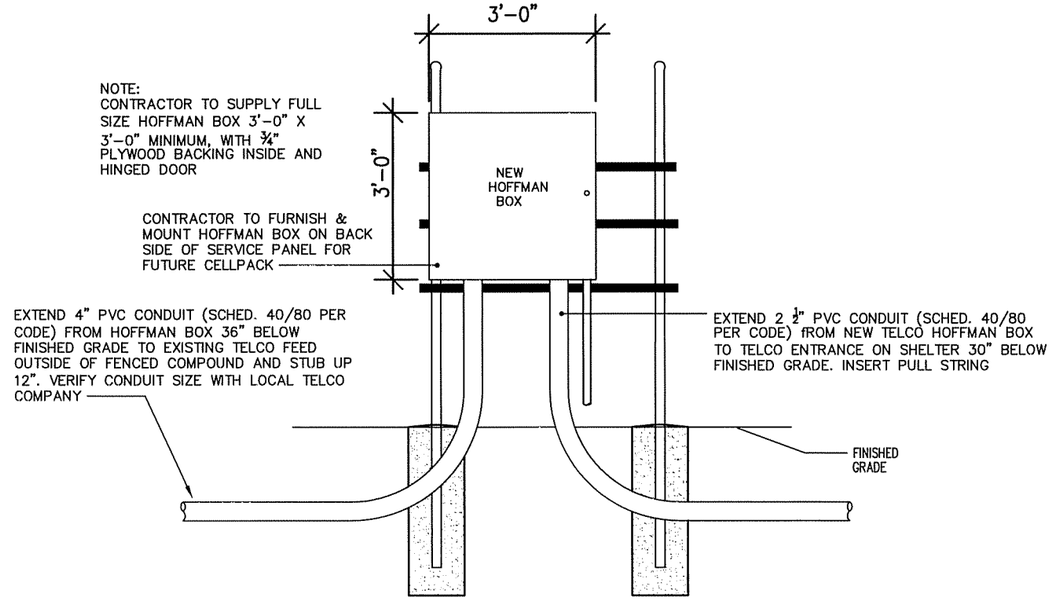

BACKBOARD DETAIL

NO SCALE

BLUEGRASS FIELD SERVICES, INC.
8435 MERCURY DRIVE LOUISVILLE, KY. 40291
(502) 231-3656 Fax (502) 968-9427

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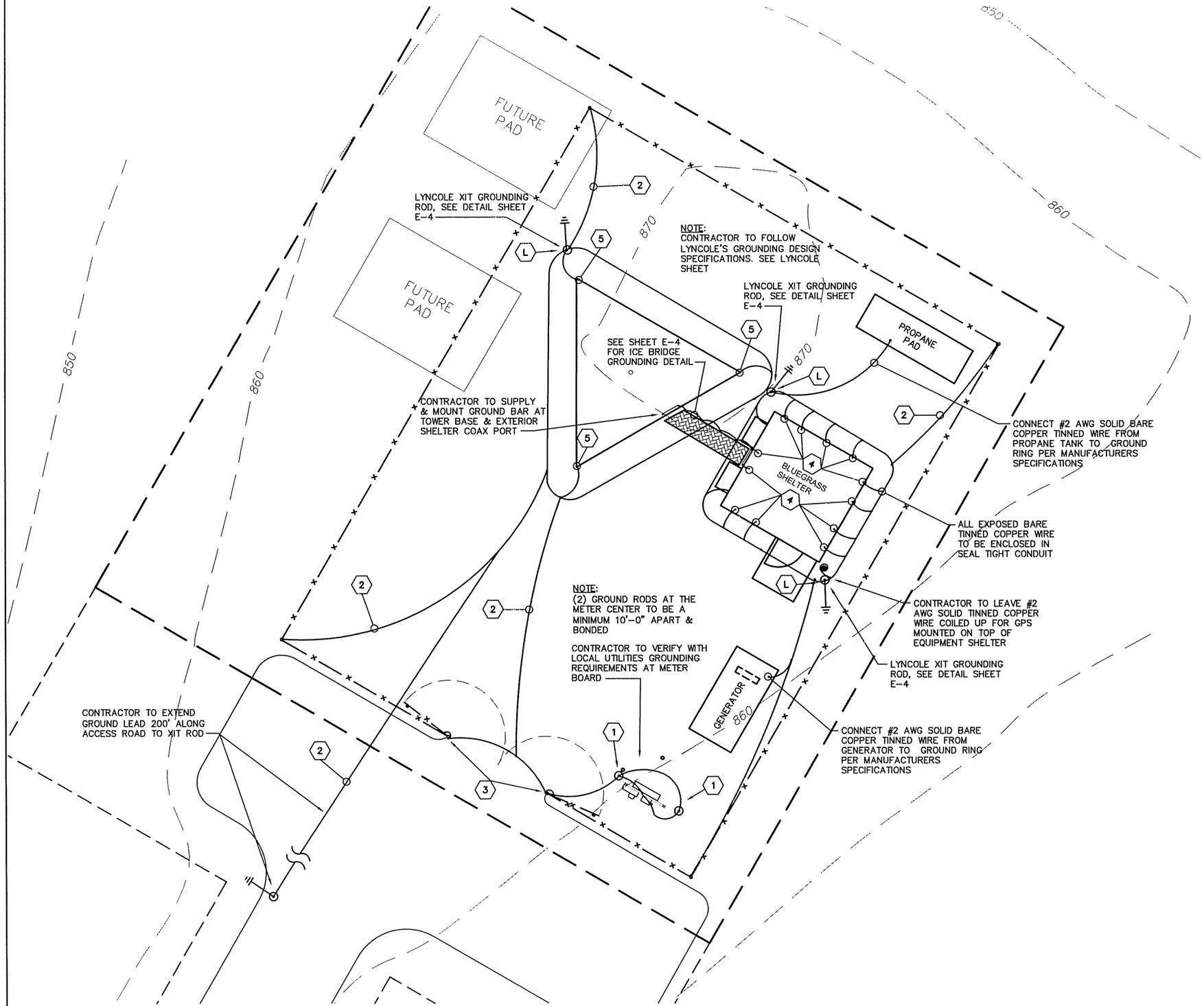

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10) CONTRACTOR RESPONSIBLE FOR MEG TESTING THE SITE AND SUPPLYING OWNER WITH FINAL READINGS IN OWNERS SPECIFICATIONS.

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

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

KEYNOTES:

(L) LYNCOLE XIT GROUNDING ROD TO BE INSTALLED WHERE SHOWN AND TO MANUFACTURERS SPECIFICATIONS. (SEE LYNCOLE SPECIFICATIONS)

(1) GROUNDING RODS 10'-0" LONG x 3/4" COPPER BONDED GROUND RODS

(2) INSTALL AND PROVIDE SOLID BARE TINNED COPPER WIRE #2 AWG, GROUND RING BELOW GRADE 30". USE #2 AWG SOLID BARE TINNED COPPER GROUND "TAP" CONNECTING CONDUCTORS. (CONNECTIONS FOR ALL TAP CONDUCTORS TO BE PARALLEL AND "CAD WELD" CONNECTIONS)

(3) FLEXIBLE GROUNDING STRAP TO BE USED TO PROVIDE A COMMON BOND BETWEEN GATE AND CHAIN LINK FENCE, #2 AWG SOLID COPPER BARE TINNED CONDUCTOR FROM GROUND RING TO FENCE USING CAD WELD CONNECTIONS. GROUND TAP TO BE PROVIDED ON EACH 4 SIDES TO GROUND RING AS DESCRIBED ABOVE.

(4) BONDED GROUND TO BE PROVIDED TO GROUND RING FOR EACH OF THE FOLLOWING: BUILDING STEEL, HATCH PLATE, EMERGENCY RECEPTACLE, WAVE GUIDE STRUCTURE, FRAME WORK, BUILDING DISCONNECT.

(5) FOR TOWER FRAME GROUNDING, REMOVE GALVANIZED COATING COMPLETELY AT SPOT TO "CAD WELD" TO AND CLEAN. #2 AWG SOLID BARE TINNED COPPER CONDUCTOR TO BE CAD WELDED APPROXIMATELY 1'-0" ABOVE FOUNDATION OR AT FLANGE IF PROVIDED BY TOWER MANUFACTURER.

EXTEND CONDUCTOR TO GROUND RING. RIGHT ANGLES NOT ACCEPTED ALL BENDS TO BE SWEEPING.

SITE PLAN-GROUNDING

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

A&B DESIGN
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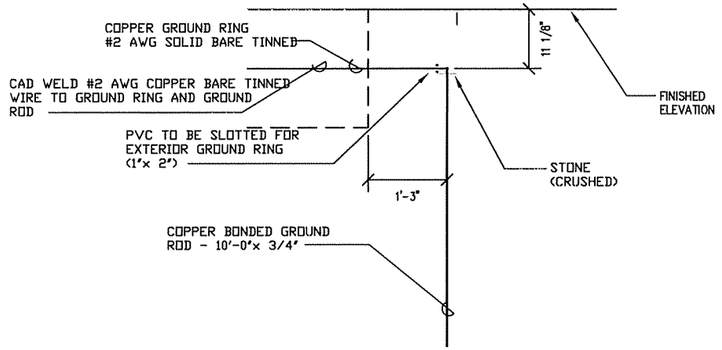

GROUND ROD DETAIL

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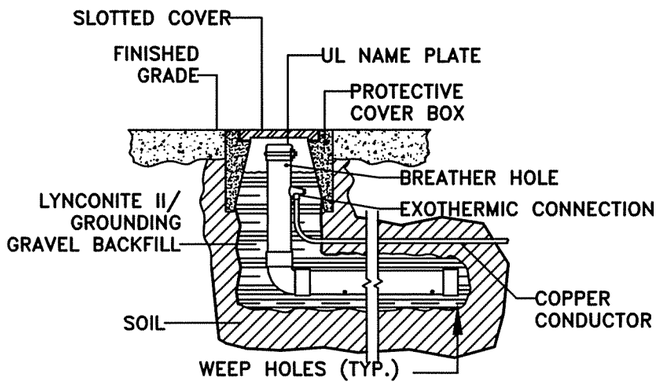
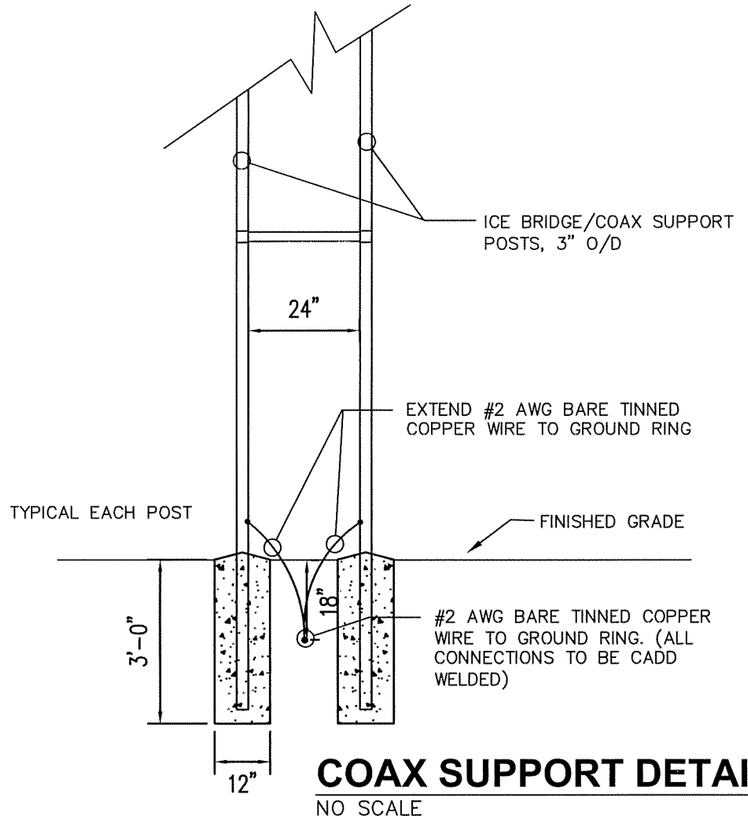


L-SHAPE MODEL
LYNCOLE XIT GROUNDING
(800) 962-2610

LYNCOLE XIT ROD DETAIL

NO SCALE



COAX SUPPORT DETAIL

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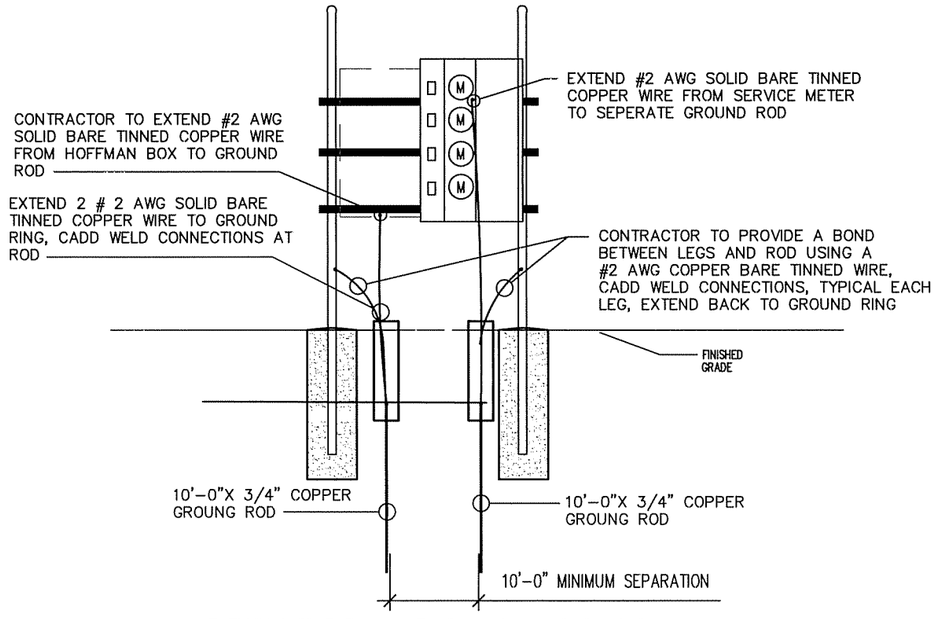

SERVICE BOARD DETAIL

NO SCALE

RF DESIGN
8403 MERCURY DRIVE LOUISVILLE, KY 40291
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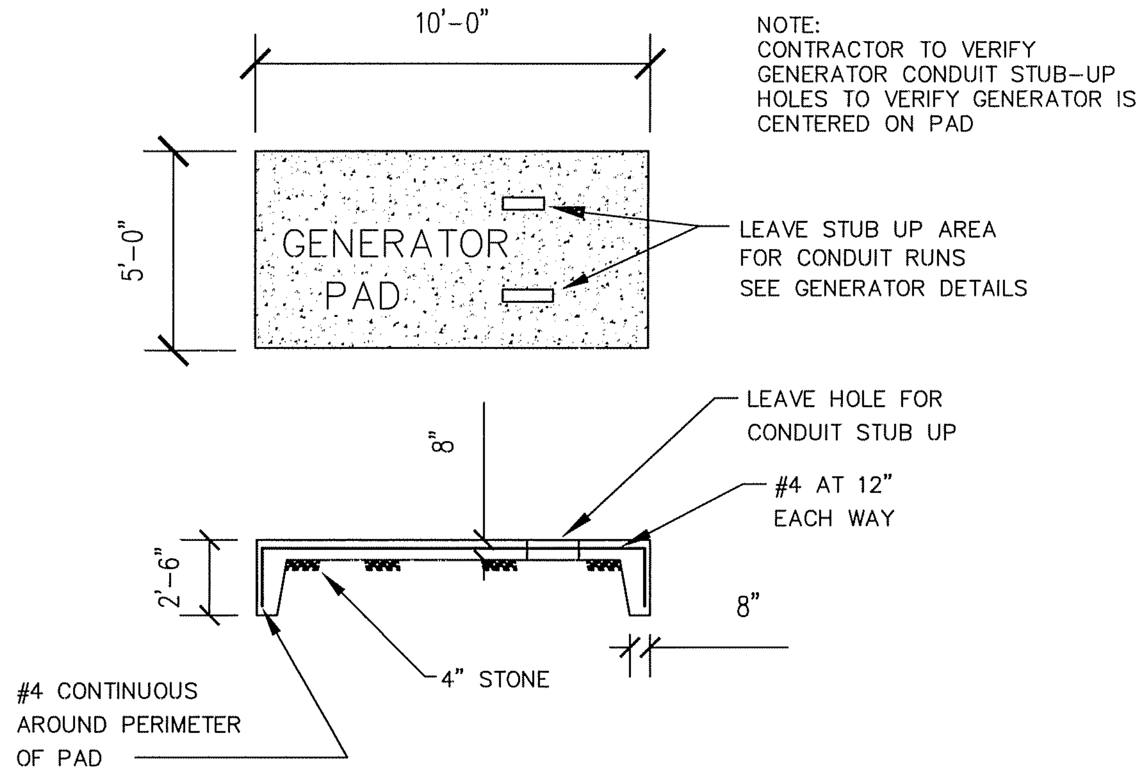

FOUNDATION DETAIL

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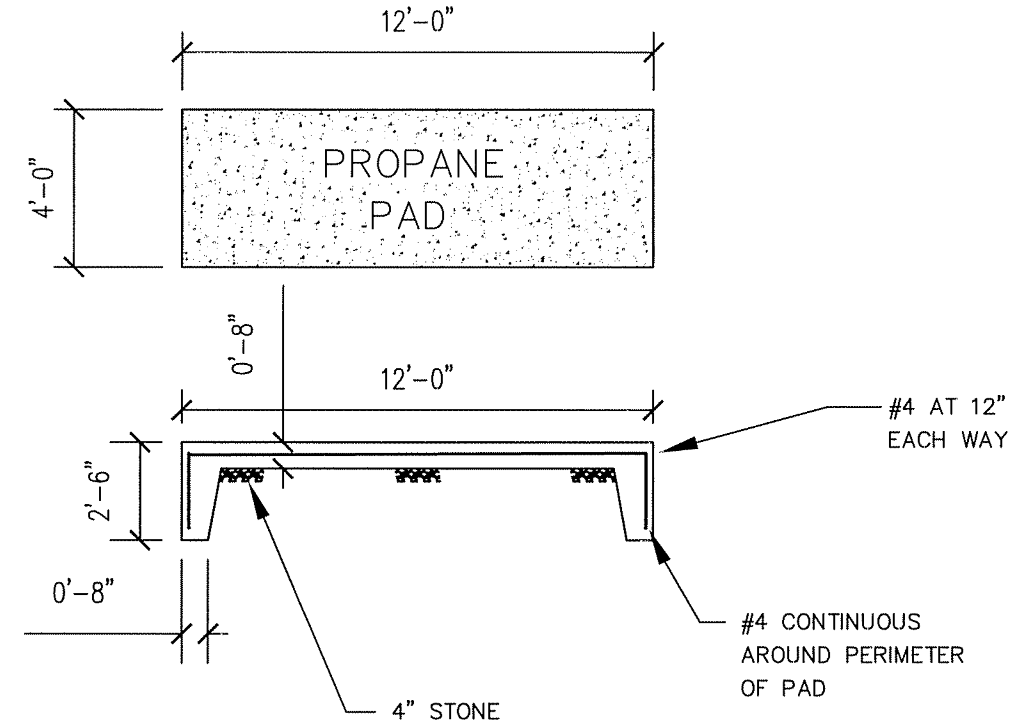

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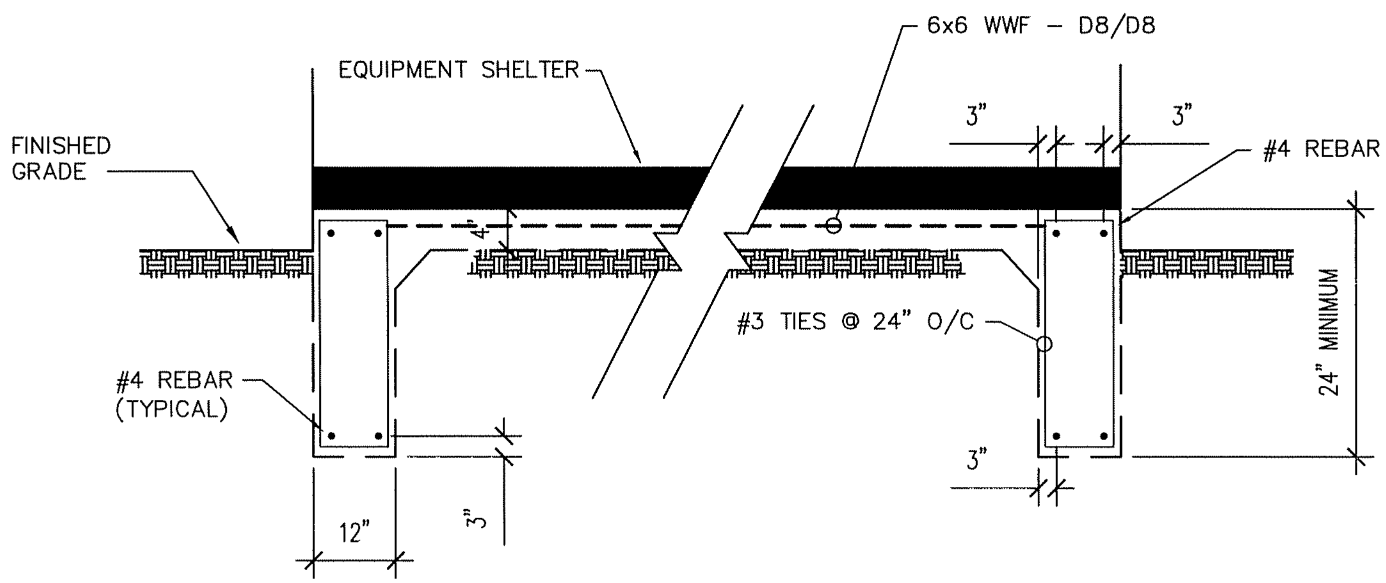

SHELTER FOUNDATION PLAN

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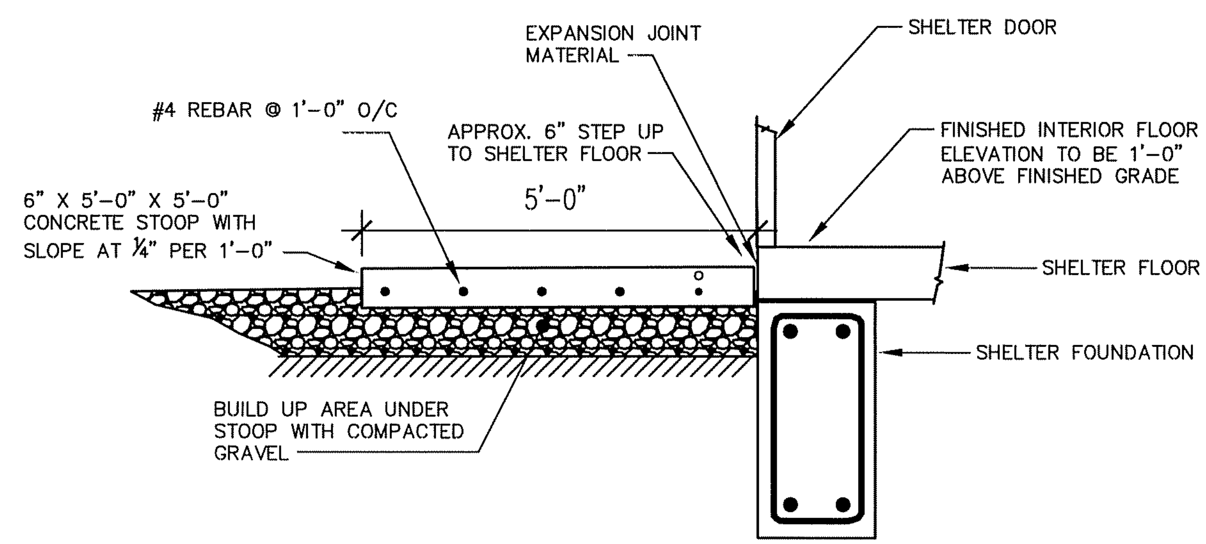

CONCRETE STOOP DETAIL

NO SCALE

B DESIGN
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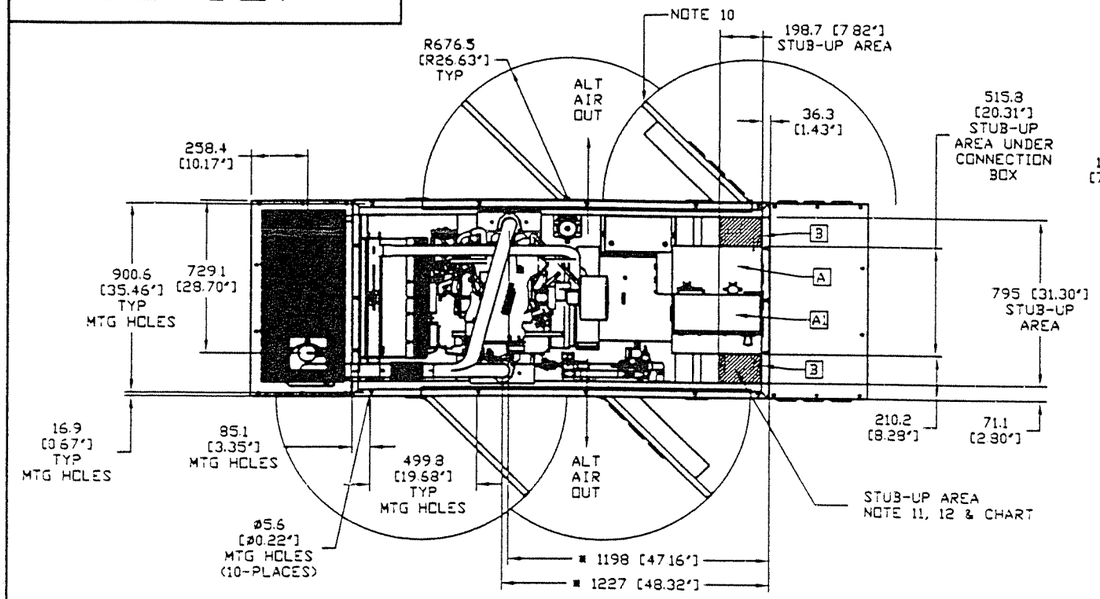
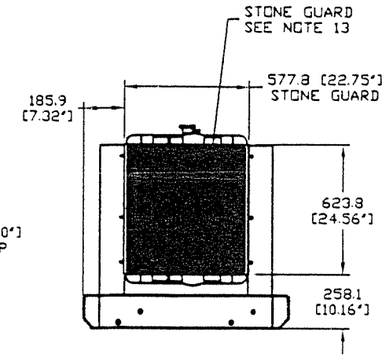
SHEET NUMBER
S-1

0G7627



TOP OR PLAN VIEW



RADIATOR END VIEW WITH STONE GUARD OPTION

RECOMMENDED FUEL/ELECTRICAL STUB-UPS (SEE TOP VIEW)	
DESCRIPTION	INSIDE BASE
AC LOAD LEAD CONDUIT (RIGHT) (LEFT)	A A1
ADDITIONAL STUB UP AREA FOR 120VAC GFCI OUTLET, (STANDARD BLOCK HEATER, BATTERY CHARGER, AND OTHER 120 VAC OPTIONS).	B

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

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

UNITS: mm [INCHES]

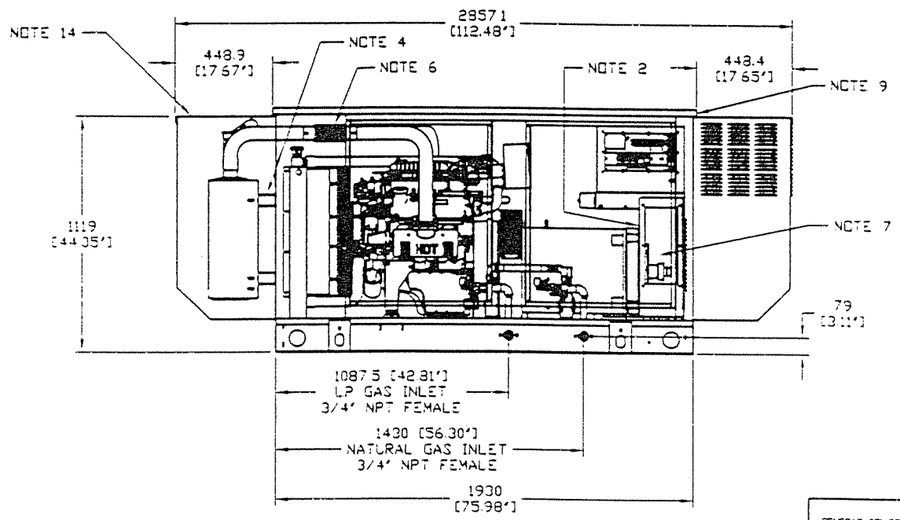
ENGINE SERVICE CONNECTIONS

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

NOTES:

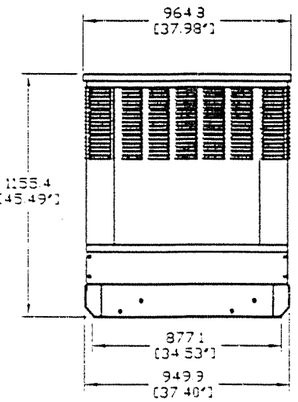
1. CONTROL PANEL MAY BE ROTATED 180° IN EITHER DIRECTION.
2. STANDARD 20A GFCI DUPLEX OUTLET - 120VAC REQUIRED.
3. CONNECTION POINTS FOR CONTROL WIRES PROVIDED IN AC CONNECTION PANEL.
4. EXHAUST MUFFLER SUPPORT BRACKETS SUPPLIED WITH OPTIONAL ENCLOSURE.
5. 12 VOLT NEGATIVE GROUND SYSTEM.
6. 2.5" I. D. FLEX EXHAUST, STANDARD WITH ENCLOSURE UNITS, OPTIONAL WITHOUT.
7. MAIN LINE CIRCUIT BREAKER (MLCB) AND AC LOAD LEAD CONNECTION.
8. REMOVABLE BLANK PANEL FOR OPTIONAL 2nd MAIN LINE CIRCUIT BREAKER.
9. OPTIONAL ENCLOSURE.
10. DOORS MUST BE ABLE TO OPEN 90 DEG. TO BE REMOVED.
11. STUB-UPS:
    STANDARD BASE TANK REQUIRES ALL STUB-UPS TO BE OUTSIDE OR IN THE REAR TANK STUB-UP AREA.
12. A OR A1 IS THE STUB UP AREA UNDER THE MLCB, DEPENDING ON CIRCUIT BREAKER LOCATION. AREA B IS STUB UP AVAILABLE FOR UNITS WITH A BASE TANK.
13. STONE GUARD AND AIR DUCT ADAPTER STANDARD WITH OPEN SET ONLY.
14. SEE DRAWING 0C3850 FOR DUCT REMOVAL. REMOVAL OF FRONT DUCT WILL PROVIDE ACCESS TO MUFFLER FOR SERVICING.

*NOTE: DIMENSIONS TO THE CENTER OF EXHAUST FLANGE SHOULD BE USED AS A REFERENCE WHEN EXHAUST SYSTEM IS NOT ORDERED. APPLIES TO OPEN SET ONLY.

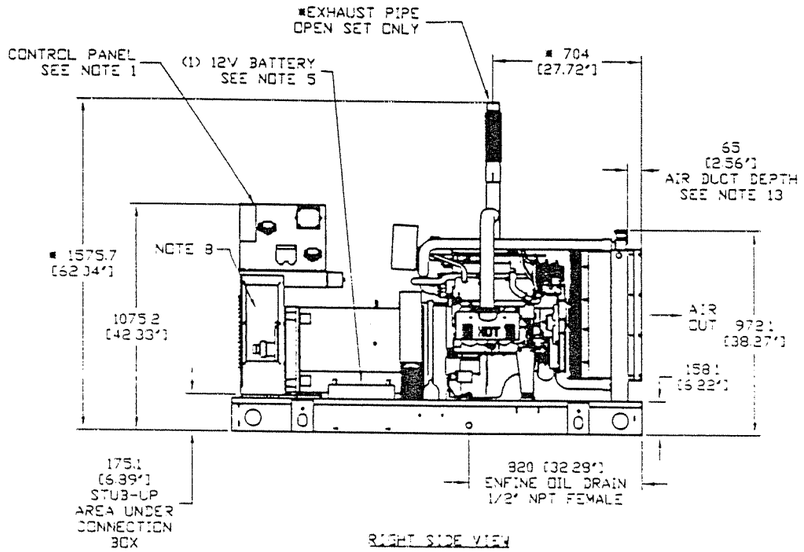


LEFT SIDE VIEW

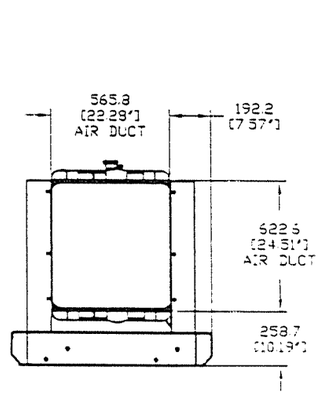
APPLICABLE TO 4.5L G3 35, 40 & 45KW



REAR VIEW



RIGHT SIDE VIEW



RADIATOR END VIEW WITH AIR DUCT ADAPTER OPTION

INSTALLATION DRAWING

SG 35, 40, 45 KW (UPSIZED 100 KW)

4.2L DIRECT DRIVE

ACOUSTIC ENCLOSURE

ISSUE DATE: 11/13/07

GENERAC POWER SYSTEMS
Waukesha
P.O. BOX 8
WAUKESHA, WIS. 53187

FILE NAME	0G7627-A.DWG	SIZE E
SCALE	NTS	FIRST USE 4.2L G3
DWG NO.	0G7627	REV A

GENERAL NOTES:

1) THE CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT PICK UP DELIVERY TO SITE, ERECTION OF TOWER, AND CRANE SET, ALL COSTS INCURRED.

2) THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE PRIOR TO BIDDING AND REVIEWING EXISTING STRUCTURES OR UTILITIES THAT MIGHT BE LOCATED ON OR AROUND THE COMPOUND THAT COULD INTERFERE.

3) THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING LOCAL AUTHORITIES NECESSARY FOR INSPECTIONS IF REQUIRED, PLEASE PROVIDE AMPLE NOTICE.

4) THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING PERSONS RESPONSIBLE FOR ANY MATERIALS TESTING, PLEASE PROVIDE AMPLE NOTICE.

5) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER WITH FINAL TEST RESULTS ON ALL MATERIALS TESTING. IF ANY PROBLEMS ARE FOUND PRIOR TO FINAL RESULTS PLEASE NOTIFY A&E OR OWNER IMMEDIATELY.

6) THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ADJOINING PROPERTY, AND REPAIRING OR REPLACING WHAT IS NECESSARY TO OWNERS APPROVAL.

7) THE CONTRACTOR IS TO VERIFY DIMENSIONS ON SITE PRIOR TO CONSTRUCTION STARTING, ANY PROBLEMS OR CHANGE FOUND CONTACT A&E OR OWNER TO VERIFY.

8) THE CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY LIGHTING ON THE TOWER AND CONTACTING PROPER AUTHORITIES IF ANY LIGHTING PROBLEMS OCCUR, ALL FINAL LIGHTING TO BE MOUNTED ON TOWER DURING CONSTRUCTION, NOTIFY OWNER WHEN TOWER HAS REACHED FINAL HEIGHT.

9) THE CONTRACTOR IS RESPONSIBLE FOR ALL ON SITE WORK MEANS AND METHODS.

10) CONTRACTOR, ANY CONTRACTOR EMPLOYEES OR REPRESENTATIVES, OR SUB-CONTRACTOR, ANY SUB-CONTRACTOR EMPLOYEES OR REPRESENTATIVES, WILL CONFORM TO ALL LAWS AND REGULATIONS APPLICABLE TO THE WORK BEING PERFORMED, INCLUDING BUT NOT LIMITED TO, ALL OCCUPATIONAL SAFETY AND HEALTH ACT ("OSHA") STATUTES AND REGULATIONS AS WELL AS ALL OTHER FEDERAL, STATE AND/OR LOCAL LAWS OR REGULATIONS APPLICABLE TO THE WORK BEING PERFORMED BY CONTRACTOR.

11) THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL SITE DRAINAGE, AND PROVIDING SILT AND EROSION CONTROL NECESSARY TO MAINTAIN ANY RUN OFF.

12) THE CONTRACTOR IS RESPONSIBLE FOR ALL SEED AND STRAW WORK NECESSARY TO REPAIR DAMAGED AREAS.

13) CONTRACTOR TO GRADE SMOOTH OR REPAIR ANY POT HOLES OR DITCHING ON PROPERTY OR ROAD THAT HAS OCCURRED DURING CONSTRUCTION AT CONTRACTORS EXPENSE.

14) CONTRACTOR'S RESPONSIBILITIES REGARDING BUILD OUT ON FIBREBOND EQUIPMENT SHELTERS TO INCLUDE:

- INSTALLING THE DOOR CANOPY & BOND TO DOOR FRAME
- INSTALLING EXTERIOR LIGHT ON WALL DETERMINED BY PROJECT SUPERVISOR AND PHOTOCELL REQUIREMENTS
- INSTALLING INTRUDER ALARMS
- CHECK OPERATIONS OF DOOR AND DOOR HARDWARE
- ADJUST WEATHERSTRIPPING ON DOORS AS NEEDED
- INSPECT ROOF FOR DAMAGE AND POSSIBLE LEAKS
- INSPECT INTERIOR FINISH FOR IMPERFECTIONS AND REPAIR AS NEEDED
- CHECK OPERATION OF LIGHTS AND ELECTRICAL OUTLETS
- INSTALL GUTTER SYSTEM
- CHECK OPERATION OF ENVIRONMENTAL CONTROLS AND HVAC UNITS
- INSTALL AND PAINT SHELTER TIE-DOWNS TO MATCH

15) INSTALL CONCRETE PADS FOR BUILDING, PROPANE TANK, GENERATOR PAD.

16) INSTALL ELECTRIC AND GROUND FIELD FOR COMPOUND.

17) GC WILL BE RESPONSIBLE FOR ALL CRANE OPERATIONS IN ORDER TO SET FIBREBOND BUILDING. COORDINATE BUILDING DELIVERY DATE THROUGH BLUEGRASS CELLULAR.

18) GC WILL BE RESPONSIBLE FOR OFF LOADING AND STACKING OF TOWER WHEN APPLICABLE.

19) GC WILL BE RESPONSIBLE FOR MOUNTING ALL LINES AND ANTENNAS.

20) GC WILL BE RESPONSIBLE FOR SUPPLYING AND INSTALLING ICE BRIDGE.

21) GC WILL BE RESPONSIBLE FOR SCHEDULING PROPANE TANK DELIVERY AND HOOK-UP. PREFERRED SUPPLIERS ARE EMPIRE & AMERIGAS

22) GC WILL BE RESPONSIBLE FOR COORDINATING THE CLEANING OF THE INSIDE OF THE BUILDING WITH THE PROJECT SUPERVISOR AFTER THE SITE HAS BEEN TURNED OVER TO THE OPERATIONS DEPARTMENT AND ALL TURN-UP PROCEDURES HAVE BEEN COMPLETED. THIS WILL INCLUDE SUPPLYING A 30 GALLON TRASHCAN, 30 GALLON TRASH BAGS, BROOM, DUST PAN AND DOORMAT FOR BUILDING.

23) GC TO VERIFY ALL BLUEGRASS CELLULAR EQUIPMENT DIMENSIONS & SPECIFICATIONS WITH MANUFACTURER'S DRAWINGS, (FIBREBOND, GENERAC, EASTPOINTE ETC.) PRIOR TO CONSTRUCTION. ADDRESS ANY ISSUES WITH PROJECT SUPERVISOR BEFORE WORK BEGINS.

24) ALL WAREHOUSE MATERIAL (LINES, ANTENNAS, MOUNTING HARDWARE, GENERATOR, TOWER FOUNDATION KIT, ETC.) WILL NEED TO BE PICKED UP BY GC.

25) GC WILL BE RESPONSIBLE FOR SCHEDULING GENERATOR START-UP WITH CONTACT SCOTT ANDERSON (EVAPAR) 502-267-6315

26) GC TO LABEL BLUEGRASS CELLULAR METER WITH NAME PLATE ON METER BACKBOARD.

27) GC WILL BE RESPONSIBLE FOR INSTALLATION OF ALL FENCING.

28) ALL TRASH AND DEBRIS TO BE REMOVED BY GC

29) GC WILL BE RESPONSIBLE FOR APPLYING FOR ELECTRICAL SERVICE AND PAYING NECESSARY FEES REQUIRED.

30) GC WILL BE RESPONSIBLE FOR SUPPLYING & INSTALLING PROTECTIVE END CAPS ON ANY EXPOSED THREADED ROD OR UNISTRUT USED ON SITE. VERIFY TYPE WITH PROJECT SUPERVISOR PRIOR TO INSTALLATION.

31) GC WILL BE RESPONSIBLE FOR HAVING A CERTIFIED ELECTRICIAN HOOK UP THE BATTERIES (IMMEDIATELY) AFTER POWER HAS BEEN TURNED UP AT THE SITE, PREVENTING THE DELAY OF ANY WORK FOR OPERATIONS. THE GENERAL CONTRACTOR MUST NOTIFY THE PROJECT SUPERVISOR IMMEDIATELY AT THIS TIME SO HE CAN COORDINATE A CELL TECH TO BE ONSITE WHEN THIS OCCURS.

32) GC WILL BE RESPONSIBLE FOR RUNNING (CAT5) FROM THE GENERATOR ALARM PANEL MOUNTED ON THE SIDE OF THE TRANSFER SWITCH (BY THE CONTRACTOR), THROUGH THE TRANSFER SWITCH AND UP TO THE EXISTING CONDUIT BESIDE THE A/C POWER FAIL RELAY. THE (CAT5) WILL BE PULLED THROUGH EXISTING CONDUIT AROUND THE SHELTER AND EXTENDED TO THE ALARM BLOCK. THERE SHOULD BE A MINIMUM 3'-0" OF (CAT5) LEFT HANGING ON EACH END FOR THE CELL TECH TO HOOK UP THE GENERATOR ALARMS.

33) GC MUST SUBMIT A COPY OF THE BUILDING PERMIT AND CONSTRUCTION SCHEDULE TO THE PROJECT SUPERVISOR PRIOR TO RECEIVING (NTP) TO BEGIN CONSTRUCTION (NO EXCEPTIONS).

34) GC MUST DISPLAY FCC TOWER REGISTRATION NUMBER AND EMERGENCY PHONE NUMBERS ON 3'-0 X 4'-0" MINIMUM WOODEN BACKBOARD SOMEWHERE ON SITE LOCATION PRIOR TO BREAKING GROUND.

GRADING & EXCAVATING NOTES:

1) ANY DAMAGE TO EXISTING UTILITIES, STRUCTURES, ROADS AND PARKING AREAS TO BE REPAIRED OR REPLACED TO OWNERS SATISFACTION.

2) PREPARATION FOR FILL:
REMOVAL OF ALL DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, TOPSOIL, VEGETATION, AND HARMFUL MATERIALS FROM SURFACE OF GROUND PRIOR TO PLOWING, STRIPPING, PLACING FILLS OR BREAKING UP OF SLOPED SURFACES GREATER THAN 1 VERTICAL TO 4 HORIZONTAL SO MATERIAL FOR FILL WILL BOND TO EXISTING SURFACE. WHEN AREA TO RECEIVE FILL HAS A DENSITY LESS THAN REQUIRED, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, AERATE, MOISTURE - CONDITION, OR PULVERIZE SOIL AND RECOMPACT TO REQUIRED DENSITY.

3) BACK FILLING:
- EXCAVATED AREA SHALL BE CLEARED FROM STONES OR CLODS OVER 2 1/2" MAXIMUM DIAMETER
- SHALL BE PLACED IN LAYERS OF 6" AND COMPACTED TO A 95% STANDARD PROCTOR, USE A 90% PROCTOR IN GRASSED / LANDSCAPED AREAS WHERE REQUIRED.
- SHALL BE APPROVED MATERIALS CONSISTING OF SANDY CLAY, GRAVEL AND SAND, SOFT SHALE, EARTH OR LOAM. CONSULT WITH OWNER PRIOR TO FILL BEING ADDED.

4) ALL MATERIAL FOR FILL TO BE APPROVED BY OWNER AND ALL COMPACTING TEST TO BE COMPLETED TO SPEC'S ALL COMPACTING RESULTS TO BE TURNED OVER TO OWNER.

5) AFTER COMPLETION OF BELOW GRADE EXCAVATING, AREA TO BE CLEANED AND CLEARED OF ANY UNSUITABLE MATERIALS, SUCH AS TRASH, DEBRIS, VEGETATION AND SO FORTH.

6) ANY EXCAVATING IN WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE OF ANY LOOSE MATERIAL AND EXCESS GROUND WATER.

7) IF SOUND SOIL IS NOT REACHED AT DESIGNATED EXCAVATION DEPTH, THE POOR SOIL IS TO BE EXCAVATED TO ITS FULL DEPTH AND EITHER REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION TO BE FILLED WITH THE SAME QUALITY CONCRETE SPECIFIED FOR THE FOUNDATION. PLEASE NOTIFY THE PROJECT SUPERVISOR AND THEY WILL HAVE A 3RD PARTY ENGINEERING FIRM CONTACT YOU WITH RECOMMENDATIONS.

8) MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATIONS TO BE USED IF EXCAVATION EXCEEDED THE OVERALL REQUIRED DEPTH. FOR STABILIZATION OF THE BOTTOM OF THE EXCAVATION, CRUSHED STONE MAY BE USED. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS. PLEASE NOTIFY THE PROJECT SUPERVISOR AND THEY WILL HAVE A 3RD PARTY ENGINEERING FIRM CONTACT YOU WITH RECOMMENDATIONS.

9) EXCAVATION TO COMPOUND TO INCLUDE WEED CONTROL MAT.

10) SITE TO HAVE PROPER DRAINAGE & EROSION CONTROL (CROWNED FORMATION)

11) GC WILL BE RESPONSIBLE FOR REPAIR OF ALL AREAS DISTURBED DURING CONSTRUCTION. (EXCAVATING ISSUES)

"CALL BEFORE YOU DIG"

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

SYMBOLS LEGEND

Symbol	Description
⬡	KEYNOTE
←—⊙	INSPEC. SLEEVE / GRND ROD
⊙	INSPECTION SLEEVE
•	CAD WELD CONNECTION
T	TRANSFORMER
	LIGHTNING SUPPRESSOR
	SWITCH (DISCONNECT)
M	METER PACK
——P——	POWER
——G——	GAS LINE
——W——	WATER LINE
——SS——	SANITARY SEWER
——T——	TELEPHONE
——SSD——	STORM SEWER DRAIN
——X——	FENCE

6403 MERCURY DRIVE LOUISVILLE, KY. 40291
(502) 599-9427 Fax (502) 231-3656

NO.	DATE	REVISION

BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
SMITH BRIDGE
7031 COLUMBIA RD. BURKESVILLE, KY. 42717

DRAWN BY: R. BECKER
ISSUE DATE: 2-26-10
SCALE: LISTED

SHEET NUMBER
General Notes

Landmark Surveying Co., Inc.

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

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

Directions to the Site
From the County Seat of Cumberland County, Kentucky

Smith Bridge Site

From the Cumberland County Courthouse in Burkesville, Kentucky: travel north on Kentucky Highway 61 for 7.1 miles to the tower access lane on the left, which is about 0.5 miles after passing Jones Ridge Road; turn left onto the lane and travel southwesterly for 0.4 miles through a pasture, across Big Renox Creek and up a hill to the tower site on the north side of the hill overlooking Big Renox Creek. The address of the site is 7031 Columbia Road, Burkesville, Kentucky 42717

Darren L. Helms

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

STATE of KENTUCKY
DARREN L. HELMS
3386
LICENSED
PROFESSIONAL
LAND SURVEYOR

FEB. 23, 2010
Date

Site Name: Smith Bridge

OPTION TO LEASE AND LEASE AGREEMENT

I.

OPTION TO LEASE REAL PROPERTY

THIS OPTION TO LEASE REAL PROPERTY (the "Option Agreement") is made and entered into this 8th day of Dec., 2009, by and between David W. Branham and Lisa F. Branham, husband and wife, whose mailing address is 7167 Columbia Rd., Burkesville, KY 42717 (the "Optionor (s)" and Cumberland Cellular Partnership, d/b/a Bluegrass Cellular, a Kentucky general partnership with principal office and place of business at 2902 Ring Road, Elizabethtown, KY 42701 (the "Optionee").

W I T N E S S E T H:

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

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

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

Site Name: Smith Bridge

1. In consideration of **One Thousand Eight Hundred Dollars and Zero Cents ($1,800.00)** paid by the Optionee to the Optionor(s) (the "Option Consideration"), the receipt of which is hereby acknowledged by the Optionor(s), the Optionor(s) hereby grants to the Optionee an exclusive and irrevocable option to lease the Property (the "Option"), upon the terms and conditions hereinafter set forth, upon the exercise of the Option at any time before 4:00 p.m. prevailing time on 8 June 2011, (the "Option Period") as set forth in Paragraph 5 thereof.

2. The parties hereto anticipate that the Property comprises approximately a **One Hundred Foot by One Hundred Foot** area, and that a right of way will be given by the Optionor(s) for the purposes of ingress and egress throughout the term of the lease. The Optionee shall obtain an accurate survey of the Property by a registered land surveyor licensed in the Commonwealth of Kentucky at the sole expense of the Optionee. A copy of the survey shall be provided to the Optionor(s). The description of the Property shall include the number of acres determined by the surveyor. The Optionee shall obtain said survey within a reasonable time following the date of the Option Agreement.

3. During the term of the Option, the Optionee may enter onto the Property at its own risk to obtain soil samples and to bore soil for the purposes of determining the suitability of the Property for a communications tower.

4. Upon the Optionee's proper exercise of the Option in accordance with Paragraph **5** hereof, the Optionor(s) shall be deemed to have immediately executed, acknowledged and delivered to the Optionee the Lease Agreement contained in Section II hereof. The description of the Property shall be that determined by the registered land surveyor in accordance with Paragraph 2 hereof.

5. If the Optionee elects to exercise the Option in accordance with the terms hereof, notice of such election shall be deemed sufficient if personally delivered or sent by registered or certified mail, return receipt requested, to the address of the Optionor(s) set forth in Paragraph **14** hereof.

6. The Optionor(s) agrees not to sell, lease or offer for sale or lease the Property during the term of this Option or any renewal or extension of the Option.

7. In the event the Optionee fails to exercise the Option as set forth herein (unless such failure is due to the discovery of a defect in the Property or other matter unsatisfactory to the Optionee), the Optionor(s) shall have the right to retain the Option Consideration.

8. The Optionee may assign this Option with written consent of the Optionor(s), which consent shall not be unreasonably withheld, and upon any assignment such assignee shall have all the rights, remedies and obligations as if it were the original Optionee hereunder. From and after any such assignment, the term "Optionee" shall refer to such assignee.

9. Each party hereto shall bear any and all of its own expenses in connection with the negotiation, execution or settlement of this Option.

10. Risk of loss with respect to the Property during the term of this Option and during the term of the lease shall be upon the Optionor(s). If, during the term of the Option, any portion of the Property shall be acquired by public authority under the right or threat of eminent domain, the Optionee may, at its sole option, either (i) exercise the

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

11. The parties hereto represent to each other that neither has engaged any broker to represent their interests in connection with the transactions contemplated hereby, and each agrees to indemnify the other against any and all claims made by any brokers engaged or purported to be engaged by the other for brokerage commissions or fees in connection with the transactions contemplated hereby.

12. The Optionor(s) represents, warrants and covenants to the Optionee that the Optionor(s) has not caused or permitted, and shall not cause or permit, and to the best of Optionor(s)' knowledge no other person has caused or permitted any hazardous material (as defined by any applicable federal, state or local law, rule or regulation) to be brought upon, placed, held, located or disposed of at the Property. In the event any such contamination occurs for which the Optionee becomes legally liable, the Optionor(s) shall indemnify the Optionee against all claims, damages, judgments, penalties and costs and expenses, including reasonable attorneys' fees, which Optionee may incur.

13. This Option Agreement and the rights and obligations of the parties hereto shall be construed in accordance with the laws of the Commonwealth of Kentucky.

14. For the purposes of giving notice as permitted or required herein, the address of the Optionor(s)shall be: **7167 Columbia Rd., Burkesville, KY 42717**; the Optionee's address shall be: **2902 Ring Road, Elizabethtown, KY 42701.** Any inquiry by the Optionor to the Optionee regarding the terms and conditions of the Option Agreement or Lease Agreement, or otherwise related to the Option Agreement or Lease Agreement, shall be made in writing and submitted to the attention of the Optionee's Lease Administrator at the above address.

15. The Optionee shall have the right, in its sole discretion, to record this Option in the Office of the Clerk of the County Court of Cumberland County, Kentucky.

II.

LEASE AGREEMENT

16. In the event the Optionee elects to exercise the Option to lease the Property, the terms of the Lease Agreement ("Lease Agreement" or "Lease") shall become immediately effective upon such exercise and shall be as follows.

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

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

2. The Optionee shall pay to the Optionor(s) rent for the Property in the sum of Four Thousand Eight Hundred Dollars and Zero Cents ($4,800.00) yearly, to be paid in advance. All rent payments shall be personally delivered or mailed to the Optionor(s) at the address set forth in Paragraph 14 hereof. Any check payment of the rent due under the Lease shall be payable to the order of Optionor(s).

3. The Optionee shall be entitled to use and occupy the Property for the purpose of erecting, maintaining and operating a communications tower and communications facilities thereon and for all such other uses as Optionee may, in its sole discretion, deem necessary in connection therewith.

4. The Optionor(s) shall be responsible for the payment of all real estate taxes which shall be assessed against the Property during the term of the lease. The Optionee shall pay all charges for heat, water, gas, electricity, sewer use charges and any other utility used or consumed on the Property. The Optionee shall, at its own cost and expense, maintain and keep in full force and effect during the term of the lease public liability insurance with coverage in the amount of at least one million dollars ($1,000,000.00) per person for bodily injury, disease, or death and shall maintain property insurance on any property the Optionee located on the Property.

5. The Optionee may assign the lease. The Optionee may sublet all or part of the space on the tower or ground space.

6. The Optionor(s) covenants that upon the Optionee's payment of the rent agreed upon herein, as well as Optionee's observing and performing all of the covenants and conditions contained in the Lease, the Optionee may peacefully and quietly enjoy the Property subject to the terms and conditions set forth in the Lease.

7. The Optionee agrees to maintain an access road in a passable manner for the term of the lease.

8. Optionee's Payment of Taxes, Fees and Assessments. Optionee shall pay directly to the applicable federal, state or local governmental unit or agency ("Governmental Entity") or to Optionor if Optionor is invoiced by such Governmental Entity, all taxes, fees, assessments or other charges assessed by any Governmental Entity directly against Optionee's Equipment and/or Optionee's use of the Facility. Optionee shall also pay to Optionor Optionee's Pro Rata Share of all taxes, fees, assessments or charges including, but not limited to, personal property taxes attributable to Optionee's equipment and antenna(s), municipal franchise fees, use fees, municipal application fees, installation fees and increases thereof. "Pro Rata Share" shall mean the fraction of decimal equivalent of dividing one (1) by the total number of then existing users occupying a tower on the last day of the applicable calendar year.

17. This Option and Lease Agreement contains the entire agreement between the parties hereto and no modification or amendment shall be binding upon any party unless made in writing and signed by each of the parties hereto.

18. Upon the termination or other end of this Lease Agreement, Optionee shall have the right to remove any and all of its property (real or personal) from the Property regardless of whether or not such property may be considered a fixture thereto.

19. Upon abandonment of the property, Optionee shall have thirty (30) days to dismantle and remove the cellular antenna tower and any/all equipment located on Optionor's property.

[Remainder of Page Intentionally Left Blank]

Site Name: Smith Bridge

EXECUTION OF AGREEMENT(S)

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

David W. Br

Date: 12/2/2009

Lisa F. Branham

Date: 12-2-09

("Optionor(s)")

By: David W. Branham and Lisa F. Branham
Property Owner (s)

Date: 12/8/9

("Optionee")

By: Ron Smith
Authorized Representative

STATE OF Kentucky

COUNTY OF Cumberland

The foregoing instrument was acknowledged before me this 2nd day of Dec, 2009, by David W. Brathem to be his/her free act and deed.

Robin R. Nantt

NOTARY PUBLIC STATE AT LARGE

My commission expires: 3/22/2011

Site Name: Smith Bridge

STATE OF Kentucky
COUNTY OF Cumberland

The foregoing instrument was acknowledged before me this 2nd day of Dec., 2009, by Lisa F. Branham. to be his/her free act and deed.

Robin R. Nelson
NOTARY PUBLIC STATE AT LARGE
My commission expires: 3/22/2011

STATE OF KENTUCKY
COUNTY OF HARDIN

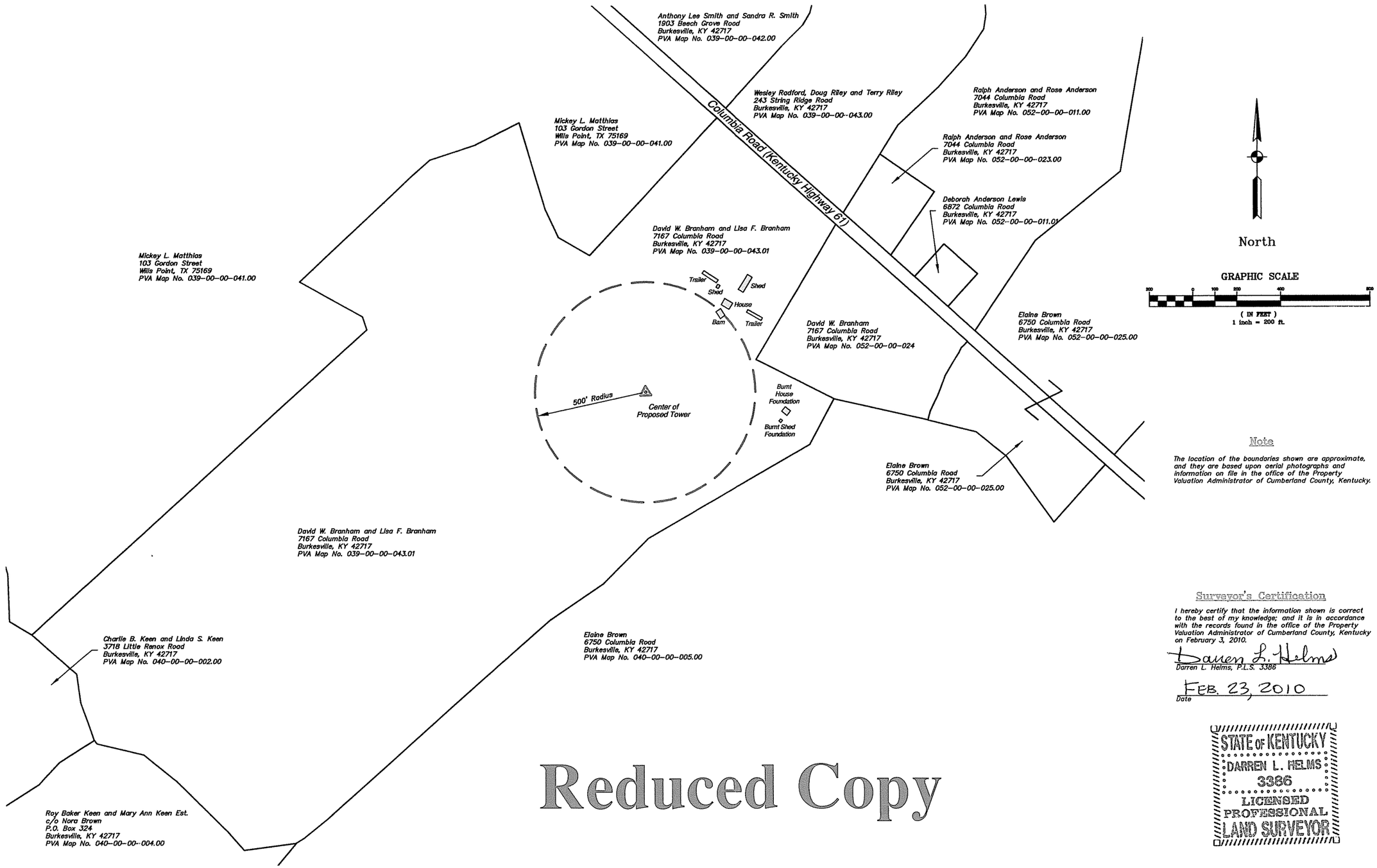
The foregoing instrument was acknowledged before me this 8 day of December, 2009, by **Ron Smith**, to be his free act and deed.

Gail L. Vice
NOTARY PUBLIC STATE AT LARGE
My commission expires: 1-21-13

This instrument prepared by:

John E. Selent
DINSMORE & SHOHL LLP
1400 PNC Plaza
500 West Jefferson Street
Louisville, KY 40202
(502) 540-2300

Site: Smith Bridge
500-Foot Radius Map for Structures and Landowners
Cumberland County, Kentucky



Note

The location of the boundaries shown are approximate, and they are based upon aerial photographs and information on file in the office of the Property Valuation Administrator of Cumberland County, Kentucky.

Surveyor's Certification

I hereby certify that the information shown is correct to the best of my knowledge; and it is in accordance with the records found in the office of the Property Valuation Administrator of Cumberland County, Kentucky on February 3, 2010.

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

FEB. 23, 2010
Date

STATE OF KENTUCKY
DARREN L. HELMS
3386
LICENSED PROFESSIONAL LAND SURVEYOR

Reduced Copy

Landmark Surveying Co., Inc.
15 N.E. 3rd Street
Washington, Indiana 47501
(812) 257-0950
Email: landmark97@sbcglobal.net
Project No. 10-02-0105

500-Foot Radius Map
7031 Columbia Road
Burkesville, Kentucky 42717

Bluegrass Cellular
2902 Ring Road
Elizabethtown, Kentucky 42701

REVISIONS	DATE

DATE 2-23-10 | DRAWN BY A. Winkler | CHECKED BY D.L.Helms

SHEET NO. 1 OF 1 SHEETS

FILE NO. smith-radius.dwg

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

CASE NO. 2010-00108

AFFIDAVIT OF HOLLY C. WALLACE

I, Holly C. Wallace, being duly sworn, depose and state as follows:

1. My name is Holly C. Wallace and I am a member of the Kentucky Bar Association. I am legal counsel to Cumberland Cellular Partnership and am submitting this affidavit in conjunction with the above referenced matter.

2. In order to demonstrate compliance with 807 KAR 5:063 §1(1)(l) & (m), Exhibit 1 identifies, with the exception of the individual identified in paragraph 4, the names of the residents/tenants and property owners contiguous to or within 500 feet of the proposed tower who have been: (i) notified by written notice of the proposed construction, sufficient postage prepaid, by United States Certified Mail, return receipt requested; (ii) given the Commission docket number under which the application will be processed; and (iii) informed of the right to request intervention.

3. Attached as Exhibit 2 is a copy of the United States Certified Mail return receipt requested that demonstrates proof of service of the written notice of the proposed construction upon: (1) Roy Barker Keen and Mary Ann Keen, Est. c/o Nora Brown; (2) Wesley Radford, Doug Riley and Terry Riley; (3) David Branham and Lisa F. Branham; (4) Elaine Brown; (5)

4. Affiant attempted to serve written notice of the proposed construction upon Mickey L. Matthias, (see Exhibit 1) via United States Certified Mail pursuant to 807 KAR 5:063 §1(1)(l) & (m). Service of the written notice of the proposed construction to Mickey L. Matthias was attempted via United States Certified Mail and was returned marked "Return to Sender - Not Deliverable as Addressed - Unable to Forward." (See attached Exhibit 3) Therefore, Mickey L. Matthias has not been served with a copy of the written notice of the proposed construction. (See Exhibit 1.)

Further Affiant saith not.

Holly C. Wallace

COMMONWEALTH OF KENTUCKY)
)SS:
COUNTY OF JEFFERSON)

SUBSCRIBED AND SWORN to before me this 22nd day of April, 2010.

My commission expires: 11/20/2011

Notary Public

775658_1
21965-49

Landmark Surveying Co., Inc.

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

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

Landowner and Adjacent Landowner List

Bluegrass Cellular, Inc.
Smith Bridge Site
Cumberland County, Kentucky

Mickey L. Matthias
103 Gordon Street
Wills Point, TX 75169

Charlie B. Keen and Linda S. Keen
3718 Little Renox Road
Burkesville, KY 42717

Roy Barker Keen and Mary Ann Keen Est.
c/o Nora Brown
P.O. Box 324
Burkesville, KY 42717

Elaine Brown
6750 Columbia Road
Burkesville, KY 42717

Deborah Anderson Lewis
6872 Columbia Road
Burkesville, KY 42717

Ralph Anderson and Rose Anderson
7044 Columbia Road
Burkesville, KY 42717

Wesley Radford, Doug Riley
and Terry Riley
243 String Ridge Road
Burkesville, KY 42717

Anthony Lee Smith and Sandra R. Smith
1903 Beech Grove Road
Burkesville, KY 42717

David W. Branham and Lisa F. Branham
7167 Columbia Road
Burkesville, KY 42717

Darren L. Helms

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

STATE of KENTUCKY
DARREN L. HELMS
3386
LICENSED
PROFESSIONAL
LAND SURVEYOR

FEB. 23, 2010
Date

March 18, 2010

Charlie B. Keen and Linda S. Keen
3718 Little Renox Road
Burkesville, Kentucky 42717

Public Notice

Cumberland Cellular Partnership is a Kentucky general partnership that markets its services as Bluegrass Cellular. Bluegrass Cellular has been serving Central Kentucky with wireless communications services for over 15 years.

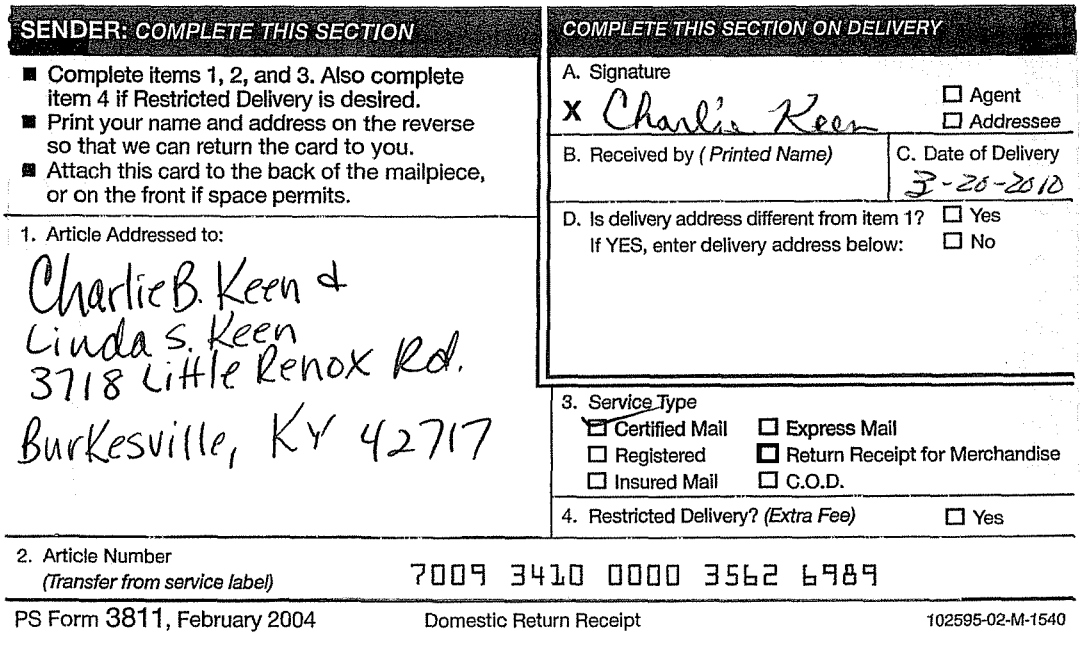
Cumberland Cellular Partnership is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new cell facility to provide cellular radio service. This facility will include a 240-foot tower and an equipment shelter to be located at 7031 Columbia Road, Burkesville, Kentucky 42717. A map showing the location is attached.

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

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

Please refer to case number 2010-00108 in your correspondence.

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



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Charlie B. Keen &
Linda S. Keen
3718 Little Renox Rd.
Burkesville, KY 42717

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x Charlie Keen ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery: 3-26-2010

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

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7009 3410 0000 3562 6989

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

March 18, 2010

Roy Barker Keen and Mary Ann Keen Est.
c/o Nora Brown
P.O. Box 324
Burkesville, Kentucky 42717

Public Notice

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Frankfort, Kentucky, 40602.

Please refer to case number 2010-00108 in your correspondence.

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

1. Article Addressed to:
Roy Barker Keen & Mary Ann Keen Est., C/o Nora Brown
P.O. Box 324
Burkesville, KY 42717

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☒ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery 3-2010

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

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7009 3410 0000 3562 6972

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

March 18, 2010

Elaine Brown
6750 Columbia Road
Burkesville, Kentucky 42717

Public Notice

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
Elaine Brown
6750 Columbia Rd.
Burkesville, KY 42717

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Elaine Brown ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery 3-20-2010

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

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7009 3410 0000 3562 6965

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

March 18, 2010

Deborah Anderson Lewis
6872 Columbia Road
Burkesville, Kentucky 42717

Public Notice

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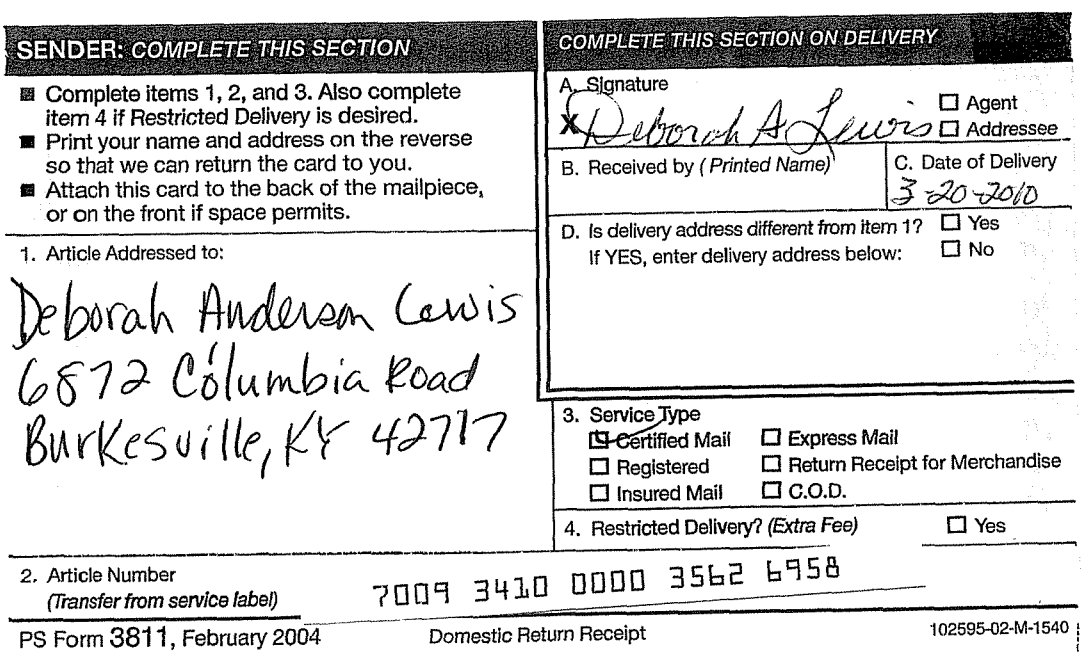

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Deborah Anderson Lewis
6872 Columbia Road
Burkesville, KY 42717

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Deborah A Lewis ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery 3-20-2010

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

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7009 3410 0000 3562 6958

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

March 18, 2010

Ralph Anderson and Rose Anderson
7044 Columbia Road
Burkesville, Kentucky 42717

Public Notice

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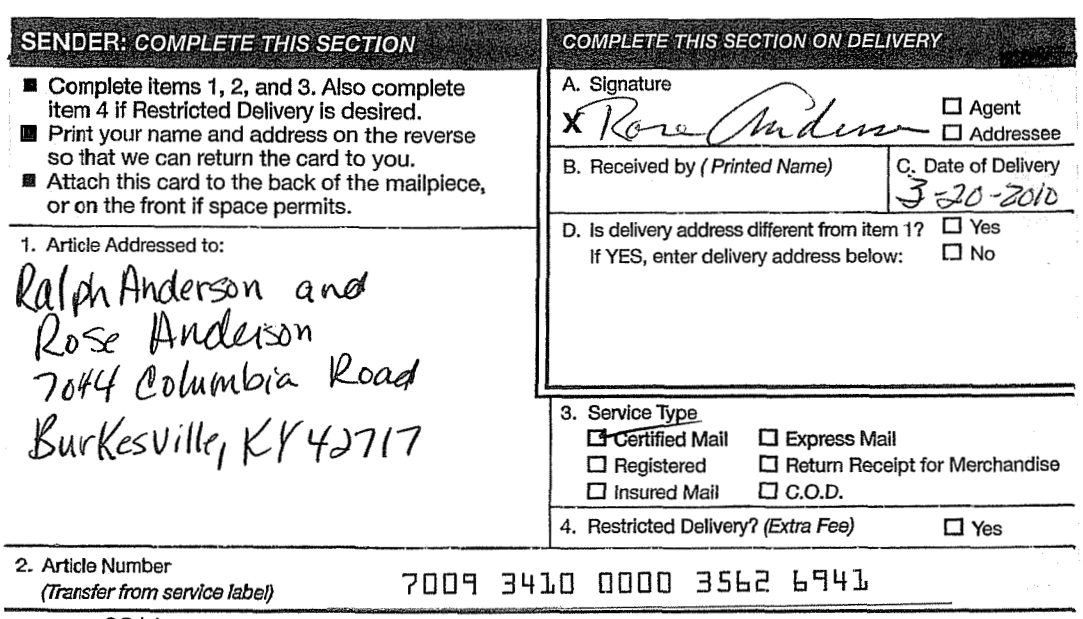

SENDER: COMPLETE THIS SECTION

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
Ralph Anderson and
Rose Anderson
7044 Columbia Road
Burkesville, KY 42717

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Rose Anderson ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery 3-20-2010

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

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7009 3410 0000 3562 6941

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

March 18, 2010

Wesley Radford, Doug Riley and Terry Riley
243 String Ridge Road
Burkesville, Kentucky 42717

Public Notice

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Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky, 40602.

Please refer to case number 2010-00108 in your correspondence.

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
Wesley Radford, Doug Riley
& Terry Riley
243 String Ridge Rd.
Burkesville, KY 42717

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

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

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7009 3410 0000 3562 6934

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

March 18, 2010

Anthony Lee Smith and Sandra R. Smith
1903 Beech Grove Road
Burkesville, Kentucky 42717

Public Notice

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P.O. Box 615
Frankfort, Kentucky, 40602.

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

1. Article Addressed to:
Anthony Lee Smith &
Sandra R. Smith
1903 Beech Grove Rd.
Burkesville, KY 42717

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Anthony Smith ☐ Agent ☒ Addressee

B. Received by (Printed Name)

C. Date of Delivery
3-23-10

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

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7009 3410 0000 3562 6927

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

March 18, 2010

David W. Branham and Lisa F. Branham
7167 Columbia Road
Burkesville, Kentucky 42717

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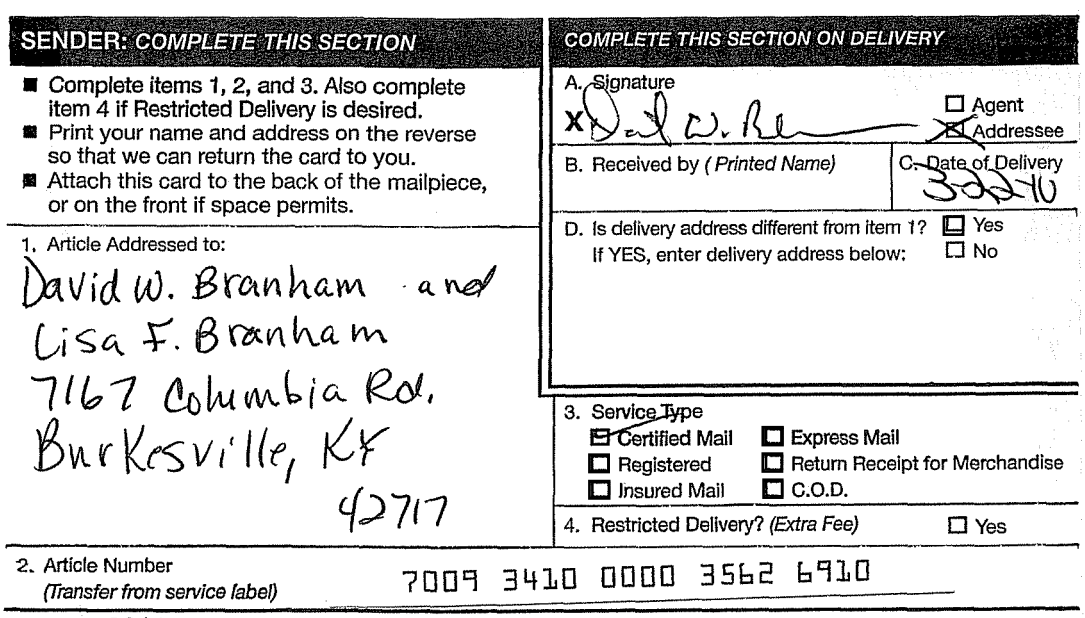

SENDER: COMPLETE THIS SECTION

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
David W. Branham and
Lisa F. Branham
7167 Columbia Rd.
Burkesville, KY
42717

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☒ Addressee

B. Received by (Printed Name) | C. Date of Delivery 3-22-10

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

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7009 3410 0000 3562 6910

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

March 18, 2010

Mickey L. Matthias
103 Gordon Street
Wills Point, Texas 75169

Public Notice

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P.O. Box 615
Frankfort, Kentucky, 40602.

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DINSMORE & SHOHL LLP
ATTORNEYS AT LAW
1400 PNC PLAZA
500 W. JEFFERSON STREET
LOUISVILLE, KY 40202

7009 3410 0000 3562 7429

02 1A
0004608059 MAR
MAILED FROM ZIP COD

NOT DELIVERABLE AS ADDRESSED, UNABLE TO FORWARD

NOT DELIVERABLE AS ADDRESSED, UNABLE TO FORWARD

Mickey L. Matthias
103 Gordon Street
[redacted]

UTF

Name
1st Notice
2nd Notice
Return

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mickey Matthias
103 Gordon Street
Wills Point, Texas
75169

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by (*Printed Name*) | C. Date of Delivery

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

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (*Extra Fee*) ☐ Yes

2. Article Number (*Transfer from service label*) 7009 3410 0000 3562 7429

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

Dinsmore&Shohl LLP
ATTORNEYS

Kerry W. Ingle
502-540-2354
kerry.ingle@dinslaw.com

March 18, 2010

Via Certified Mail
Honorable Tim Hicks
Cumberland County Judge Executive
600 Courthouse Square
P.O. Box 826
Burkesville, Kentucky 42717

Re: Application of Cumberland Cellular Partnership d/b/a Bluegrass Cellular for a Certificate of Public Convenience and Necessity to construct a cellular tower to be located at 7031 Columbia Road, Burkesville, Kentucky 42717, before the Public Service Commission of the Commonwealth of Kentucky, Case No. 2010-00108

Dear Judge Hicks:

Cumberland Cellular Partnership is applying to the Public Service Commission of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to propose construction and operation for a new facility to provide cellular radio telecommunications service in rural service area (RSA) #5 in Cumberland County. The facility will include a 240 ft. tower and an equipment shelter to be located at 7031 Columbia Road, Burkesville, Kentucky 42717. A map showing the location of the proposed new facility is enclosed.

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

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to case number 2010-00108 in your correspondence.

Very truly yours,

DINSMORE & SHOHL LLP

Kerry W. Ingle
Paralegal

enclosure

kwi
771413_1
21965-49

SENDER: COMPLETE THIS SECTION

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Honorable Tim Hicks
Cumberland County Judge Executive
600 Courthouse Square
P.O. Box 826
Burkesville, KY 42717

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Eugene Ames ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

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

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7009 3410 0000 3562 6903

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540


PUBLIC NOTICE
Cumberland Cellular Partnership
proposes to
construct a cellular
communications
TOWER
on this site. If you have any
questions please contact:
Please refer to P.S.C.
Case #2010-00108
in your correspondence.


PUBLIC NOTICE
Cumberland Cellular Partnership
proposes to
construct a cellular
communications
TOWER
near this site. If you have any
questions please contact:
Please refer to P.S.C.
Case #2010-00108
in your correspondence.


PUBLIC NOTICE
TOWER

Cumberland County News

P.O. Box 307 • Burkesville, KY 42717-0307 • (270) 864-3891

AFFIDAVIT OF PUBLICATION

State of Kentucky -- County of Cumberland -- City of Burkesville

I, Cyndi Pritchett, herby certify that I am editor of the *Cumberland County News*, that said newspaper has the largest bona fide circulation which is published in the City of Burkesville, Kentucky, County of Cumberland, and that said newspaper is the newspaper published in said county.

I certify that the attached clipping was published in said newspaper on the 24th & 31st day of March, 2010.

Description of Ad: Public Notice

Page Number: 3-24-10 pg 15
3-31-10 pg B5

Cyndi Pritchett
Representative

Sworn and subscribed before me this 1st day of April, 2010.

My commission expires: 7-26-2010

Frances F. Perry
Notary Public

(Seal of Notary)

CLASSI

SERVICES OFFERED

FOR RENT

For Rent: 2 bedroom house, recently remodeled, located in town. $300/ month. Must have references. Call 270-433-4300.

3/24-3/31chg

Two wooded tracts of hunting land for lease: 340 acres on Coe Ridge and 102 acres off Poplar Grove Road in the southwestern part of beautiful Cumberland County. Abundant supply of deer, turkey and other wildlife in natural habitat. Call 270-864-5689

2010 at 9 a.m., Cumberland Circuit Courtroom, Burkesville, Kentucky. Any exceptions to said settlement must be filed prior to that date.

Nancy L. Brewington, Clerk
District Court of
Cumberland County
3/17-3/24chg

PUBLIC NOTICE

Public Notice

Notice is hereby given that Cumberland Cellular Partnership, 2902 Ring Road, Elizabethtown, Kentucky, 42701, has filed an application with the Natural Resources and Environmental Protection Cabinet to construct a low-water crossing bridge across Big Renox Creek. The property is located approximately 6.9 miles north of Burkesville, Kentucky, off Kentucky Highway 61. Any comments or objections concerning this application shall be directed to: Kentucky Division of Water, Water Resources Branch, 14 Reilly Road, Frankfort Office Park, Frankfort, Kentucky 40601. Phone: (502) 564-3410.

3/24-3/31chg

Public Notice

Cumberland Cellular Partnership is applying to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular radio telecommunications service in rural service area #5 of the Commonwealth of Kentucky (Smith Bridge Cell Site). The facility is a 240 foot tower and an equipment shelter to be located at 7031 Columbia Road, Burkesville, Kentucky 42717. Your comments and requests for intervention should be addressed to: Executive Director's Office, Public Service Commission, PO Box 615, 211 Sower Boulevard, Frankfort, Kentucky 40602. Please refer to Case No. 2010-00108 in your correspondence.

3/24-3/31chg

SEAMLESS GUTTERS

CLASS

SERVICES OFFERED

Services Offered
Piano tuning and repair, 30 years experience. Call 270-651-5336 or 270-428-4606.

3/31pd

Services Offered
For all your POLITICAL signs, call Curry's Screen Printing and Signs at 270-384-6581.

3/31pd

FOR RENT

For Rent: 2 bedroom house, recently remodeled, located in town. $300/

Highway 61. Any comments or objections concerning this application shall be directed to: Kentucky Division of Water, Water Resources Branch, 14 Reilly Road, Frankfort Office Park, Frankfort, Kentucky 40601. Phone: (502) 564-3410.

3/24-3/31chg

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3/24-3/31chg

WINDOWS

Custom built vinyl windows. We install, free estimates. New/replacement. Ask about doors. Satisfaction guaranteed. Call 270-433-7755.

3/18tfnchg

WANTED

Wanted: Epperson Air Conditioning. Heating,Plumbing, Electric wishes to partner with similar opperation businesses and assets. Call 606-679-7476. Located at 112 W. University Drive, Somerset, KY 42503.

10/15tfnchg

BIDS WANTED

and toys, adult clothing of all si household items. Located at home of Sherri Groce at 120 Ca Road off Scotts Ferry Road. Si posted.

3/3

Yard Sale: Huge 2 family yard s Saturday, April 3, at 5154 Mud Ca Road across from the Mud Ca Cemetery, 5.1 miles on Hwy. 1 Boys, girls, women and men's cl ing and shoes, toys, household it and furniture. All priced cheap.

3/3

Yard Sale: 2 family moving sale urday, April 3, 7 a.m. until ? one out of town on Hwy 90 west, 2 Glasgow Road at the home of Cla Anderson. Household items, fu ture and much more.

3/3

Church Yard Sale: Saturday, A 3 beginning at 8 a.m. at the L Church. Cancel in case of rain.

3/3

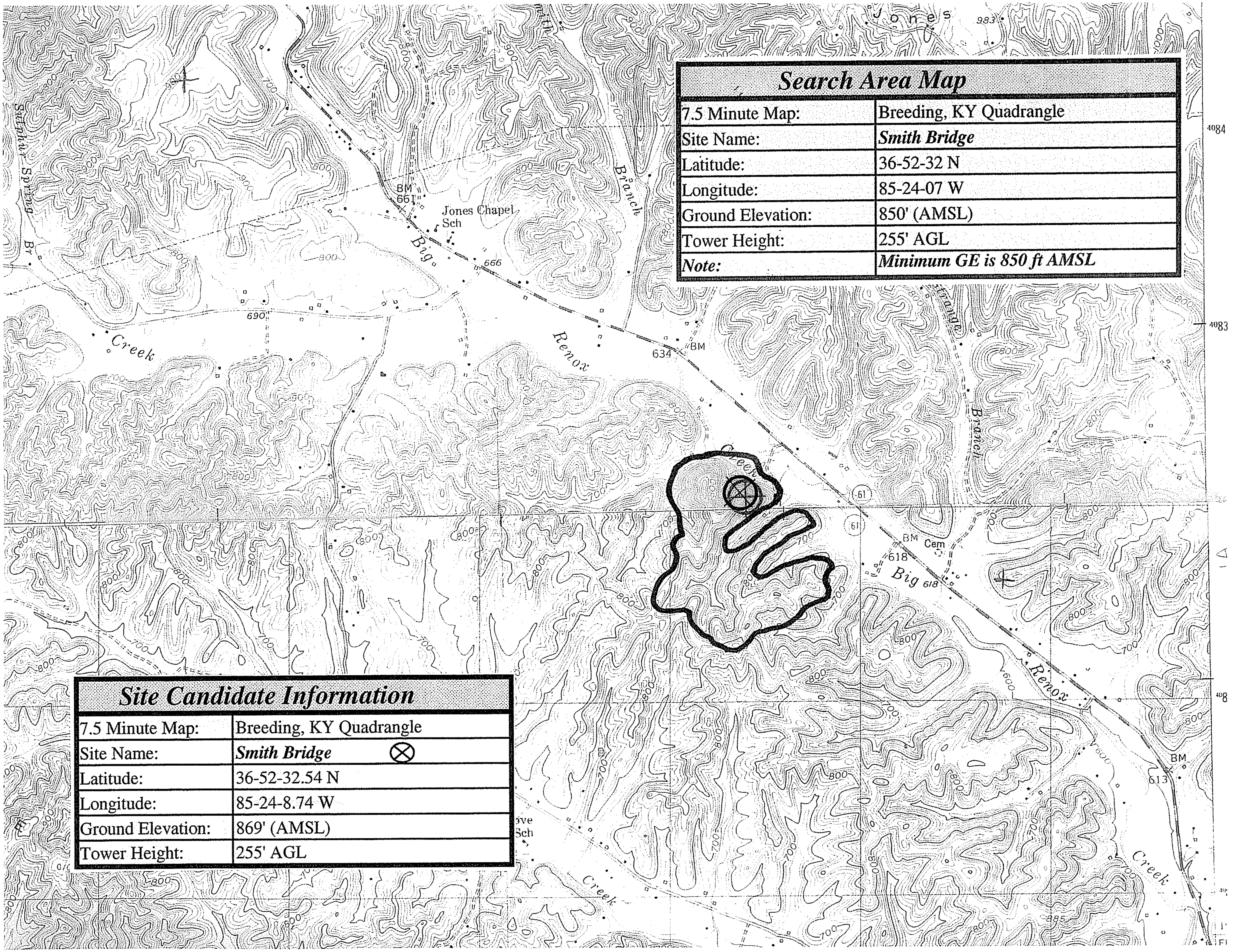
FOR LEASE

HUNTERS PARADISE LEASE: 286 acres of cleared and woods. Deer, turkeys and wildlife spotted frequently. F accessible on KY 61, 3 miles no Burkesville. Call 270-864-56 tween 9 a.m. and 5 p.m.

3/

Two wooded tracts of hur land for lease: 340 acres or Ridge and 102 acres off Poplar Road in the southwestern p beautiful Cumberland Co Abundant supply of deer, turke other wildlife in natural habita 270-864-5689 between 9 a.m 4:30 p.m. Monday through Fri

3/

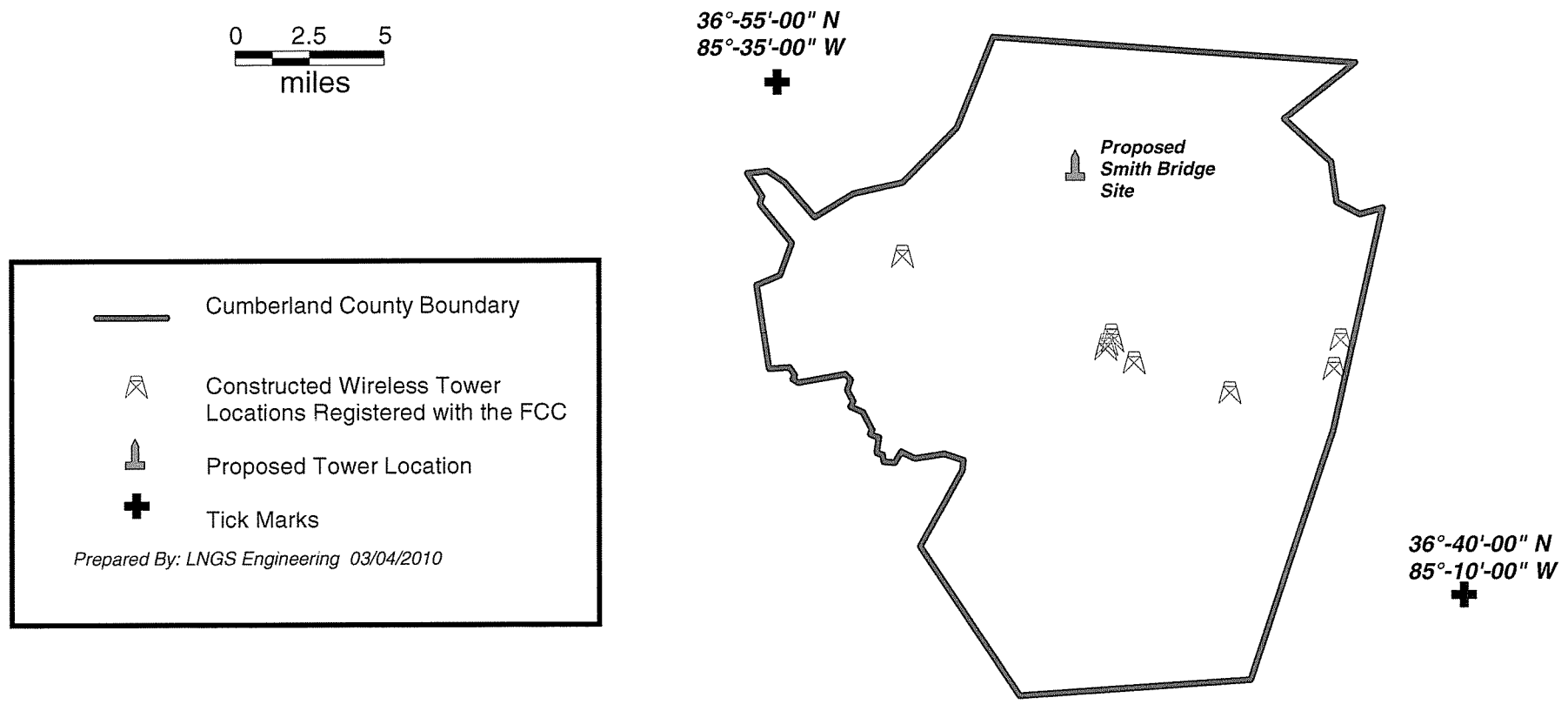


Search Area Map

7.5 Minute Map:	Breeding, KY Quadrangle
Site Name:	***Smith Bridge***
Latitude:	36-52-32 N
Longitude:	85-24-07 W
Ground Elevation:	850' (AMSL)
Tower Height:	255' AGL
Note:	***Minimum GE is 850 ft AMSL***

Site Candidate Information

7.5 Minute Map:	Breeding, KY Quadrangle
Site Name:	***Smith Bridge*** ⊗
Latitude:	36-52-32.54 N
Longitude:	85-24-8.74 W
Ground Elevation:	869' (AMSL)
Tower Height:	255' AGL


0 2.5 5
miles
36°-55'-00" N
85°-35'-00" W
Proposed
Smith Bridge
Site
36°-40'-00" N
85°-10'-00" W
Cumberland County Boundary
Constructed Wireless Tower
Locations Registered with the FCC
Proposed Tower Location
Tick Marks
Prepared By: LNGS Engineering 03/04/2010

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

FCC Tower Reg. No.	North Latitude	West Longitude	City, State	Tower Owner
1040490	36-47-11	85-23-2	Burkesville, KY	BLUEGRASS CELLULAR, INC.
1042229	36-47-19	85-23-0	Burkesville, KY	Global Tower, LLC
1044802	36-47-26	85-14-28	Burkesville, KY	KY EMERGENCY WARNING SYSTEM KEWS
1046918	36-47-26	85-22-47	Burkesville, KY	WKYR INC
1046919	36-46-47	85-22-0	Burkesville, KY	WKYR INC
1214215	36-47-35.2	85-22-49.8	Burkesville, KY	Mediacom Southeast LLC
1257755	36-45-53.9	85-18-31.2	Burkesville, KY	Cumberland Cellular Partnership
1258928	36-46-35.6	85-14-42.7	Burkesville, KY	Shared Sites Acquisition LLC
1263396	36-49-54	85-30-26.8	Marrowbone, KY	SBA Towers II LLC