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PUBLIC SERVICE  
COMMISSION

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

In the Matter of:

THE APPLICATION OF	)
TILLMAN INFRASTRUCTURE LLC	)
A DELAWARE LIMITED LIABILITY COMPANY, AND	)
NEW CINGULAR WIRELESS PCS, LLC,	)
A DELAWARE LIMITED LIABILITY COMPANY,	)
D/B/A AT&T MOBILITY	)
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC	)
CONVENIENCE AND NECESSITY TO CONSTRUCT	)
A WIRELESS COMMUNICATIONS FACILITY	)
IN THE COMMONWEALTH OF KENTUCKY	)
IN THE COUNTY OF MARSHALL	)

CASE NO.: 2017-00435

SITE NAME: HANSEN

\*\*\*\*\*

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

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

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

1. The complete name and address of the Applicants: Tillman Infrastructure LLC, a Delaware limited liability company, 152 W 57<sup>th</sup> Street, New York, NY 10019. New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility, having a local address of 601 West Chestnut Street, Louisville, Kentucky 40203.

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

3. The Certificate of Authority filed with the Kentucky Secretary of State for the Applicant, AT&T Mobility, entity was attached to a prior application and is part of the case record for PSC case number 2011-00473 and is hereby incorporated by reference. The Certificate of Authority for Applicant, Tillman Infrastructure LLC, is attached as part of **Exhibit A**.

4. The Applicant, AT&T Mobility, operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of the Applicant's FCC licenses to provide wireless services are attached to this Application or described as part of **Exhibit A**, and the facility will be constructed and operated in accordance with applicable FCC regulations.

5. The public convenience and necessity require the construction of the

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

6. To address the above-described service needs, Applicants propose to construct a WCF at 1641 Lee Burd Road, Benton, Kentucky (36°49'24.34" North latitude, 88°28'25.57" West longitude), on a parcel of land located entirely within the county referenced in the caption of this application. The property on which the WCF will be located is owned by C & K Hansen pursuant to a Deed recorded at Deed Book 433, Page 418 in the office of the Marshall County Clerk. The proposed WCF will consist of a 302-foot tall tower, with an approximately 12-foot tall lightning arrestor attached at the top, for a total height of 314-feet. Applicants' requested approval of a 325-foot tower from the FAA to provide room for a taller lightening arrestor height, if necessary. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of the Applicants' radio electronics equipment and appurtenant equipment. The Applicants' equipment cabinet or shelter will be approved for use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound will be fenced and all access gate(s) will be secured. A description of the manner in which the proposed WCF will be

constructed is attached as **Exhibit B** and **Exhibit C**.

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

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

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

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

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

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

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

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

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

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

17. The Construction Manager for the proposed facility is Patrick Sullivan and the identity and qualifications of each person directly responsible for design and construction of the proposed tower are contained in **Exhibits B & C**.

18. As noted on the Survey attached as part of **Exhibit B**, the surveyor has

determined that the site is not within any flood hazard area.

19. **Exhibit B** includes a map drawn to an appropriate scale that shows the location of the proposed tower and identifies every owner of real estate within 500 feet of the proposed tower (according to the records maintained by the County Property Valuation Administrator). Every structure and every easement within 500 feet of the proposed tower or within 200 feet of the access road including intersection with the public street system is illustrated in **Exhibit B**.

20. Applicants have notified every person who, according to the records of the County Property Valuation Administrator, owns property which is within 500 feet of the proposed tower or contiguous to the site property, by certified mail, return receipt requested, of the proposed construction. Each notified property owner has been provided with a map of the location of the proposed construction, the PSC docket number for this application, the address of the PSC, and has been informed of his or her right to request intervention. A list of the notified property owners and a copy of the form of the notice sent by certified mail to each landowner are attached as **Exhibit J** and **Exhibit K**, respectively.

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

22. Notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2) that measure at least 2 feet in height and 4 feet in width and that contain all required

language in letters of required height, have been posted, one in a visible location on the proposed site and one on the nearest public road. Such signs shall remain posted for at least two weeks after filing of the Application, and a copy of the posted text is attached as **Exhibit M**. Notice of the location of the proposed facility has also been published in a newspaper of general circulation in the county in which the WCF is proposed to be located.

23. The general area where the proposed facility is to be located is rural. There are no residential structures within 500' of the proposed tower site.

24. The process that was used by the Applicants' radio frequency engineers in selecting the site for the proposed WCF was consistent with the general process used for selecting all other existing and proposed WCF facilities within the proposed network design area. Applicants' radio frequency engineers have conducted studies and tests in order to develop a highly efficient network that is designed to handle voice and data traffic in the service area. The engineers determined an optimum area for the placement of the proposed facility in terms of elevation and location to provide the best quality service to customers in the service area. A radio frequency design search area prepared in reference to these radio frequency studies was considered by the Applicants when searching for sites for its antennas that would provide the coverage deemed necessary by the Applicants. A map of the area in which the tower is proposed to be located which is drawn to scale and clearly depicts the necessary search area within which the site should be located pursuant to radio frequency requirements is attached as **Exhibit N**.

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

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

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

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

Respectfully submitted,



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

## LIST OF EXHIBITS

- A - FCC License Documentation
- B - Site Development Plan:
  - 500' Vicinity Map
  - Legal Descriptions
  - Flood Plain Certification
  - Site Plan
  - Vertical Tower Profile
- C - Tower and Foundation Design
- D - Competing Utilities, Corporations, or Persons List
- E - FAA
- F - Kentucky Airport Zoning Commission
- G - Geotechnical Report
- H - Directions to WCF Site
- I - Copy of Real Estate Agreement
- J - Notification Listing
- K - Copy of Property Owner Notification
- L - Copy of County Judge/Executive Notice
- M - Copy of Posted Notices
- N - Copy of Radio Frequency Design Search Area

**EXHIBIT A**  
**FCC LICENSE DOCUMENTATION**



# Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF FORMATION OF "TILLMAN INFRASTRUCTURE LLC", FILED IN THIS OFFICE ON THE THIRTEENTH DAY OF JUNE, A.D. 2016, AT 11:07 O`CLOCK A.M.



  
Jeffrey W. Bullock, Secretary of State

6067508 8100  
SR# 20164424697

You may verify this certificate online at [corp.delaware.gov/authver.shtml](http://corp.delaware.gov/authver.shtml)

Authentication: 202480828  
Date: 06-13-16

CERTIFICATE OF FORMATION

of

TILLMAN INFRASTRUCTURE LLC

A LIMITED LIABILITY COMPANY

*Pursuant to Section 18-201:*

FIRST: The name of the limited liability company is:  
TILLMAN INFRASTRUCTURE LLC

SECOND: Its registered office in the State of Delaware is to be located at: 1013 Centre Road, Suite 403S, Wilmington, DE 19805, County of New Castle and its registered agent at such address is: BlumbergExcelsior Corporate Services, Inc.

THIRD: The duration of the limited liability company is perpetual.

IN WITNESS WHEREOF, the undersigned, being the individual forming the limited liability company, has executed, signed and acknowledged this Certificate of Formation this 13<sup>th</sup> day of June, 2016

/s/ Jose Mojica  
Jose Mojica  
Organizer

Statement of Organizers Action

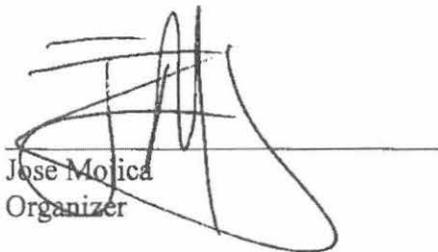
of

TILLMAN INFRASTRUCTURE LLC

The undersigned, being the initial authorized person of the within named limited liability company does hereby state that:

1. The Certificate of Formation of the Limited Liability Company (herein known as the "LLC") was filed by the State of Delaware on June 13, 2016. The Certificate of Formation is annexed hereto. The same hereby, is ordered filed with the Operating Agreement of the LLC.
2. At the time of its formation, the LLC had at least one member/manager, to wit: Sanjiv Ahuja, Anju Ahuja, Sachit Ahuja and Suruchi Ahuja
3. The initial organizer herein is neither a member nor a manager of the LLC.
4. From this date hence, the undersigned, effective this date, has fulfilled the duties as the initial organizer of LLC and herewith relinquishes all further duties to the LLC.

IN WITNESS WHEREOF, I have made and subscribed this Initial Election of Members, this 13<sup>th</sup> day of June, 2016

  
Jose Mojica  
Organizer

# Delaware

The First State

Page 1

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Authentication: 202480828  
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/s/ Jose Mojica  
Jose Mojica  
Organizer

Statement of Organizers Action

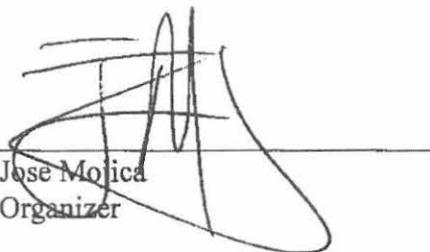
of

TILLMAN INFRASTRUCTURE LLC

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Jose Mojica  
Organizer

**REFERENCE COPY**

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



**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON  
NEW CINGULAR WIRELESS PCS, LLC  
208 S AKARD ST., RM 1016  
DALLAS, TX 75202

<b>Call Sign</b> KNKN830	<b>File Number</b>
<b>Radio Service</b> CL - Cellular	
<b>Market Number</b> CMA443	<b>Channel Block</b> A
<b>Sub-Market Designator</b> 0	

FCC Registration Number (FRN): 0003291192

<b>Market Name</b> Kentucky 1 - Fulton
---

<b>Grant Date</b> 08-30-2011	<b>Effective Date</b> 06-13-2017	<b>Expiration Date</b> 10-01-2021	<b>Five Yr Build-Out Date</b>	<b>Print Date</b>
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**Site Information:**

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	36-32-58.2 N	088-19-52.1 W	162.8	215.9	1044609

Address: SOUTH OF 521 MIDWAY ROAD (76098)

City: MURRAY County: CALLOWAY State: KY Construction Deadline:

	0	45	90	135	180	225	270	315
Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	94.300	98.100	103.900	91.600	77.400	92.600	89.800	92.800
Transmitting ERP (watts)	90.905	315.534	257.251	45.036	1.831	0.631	0.653	5.479
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	94.300	98.100	103.900	91.600	77.400	92.600	89.800	92.800
Transmitting ERP (watts)	0.189	0.181	2.710	24.477	46.412	26.231	3.140	0.165
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	94.300	98.100	103.900	91.600	77.400	92.600	89.800	92.800
Transmitting ERP (watts)	93.187	5.247	0.653	0.792	2.286	40.640	253.641	324.312

**Conditions:**

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

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
7	36-40-48.5 N	088-59-38.9 W	125.6	97.5	1043413

Address: 368 US HIGHWAY 51 NORTH (76095)

City: Clinton County: HICKMAN State: KY Construction Deadline:

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.500	101.100	87.000	99.800	107.400	111.400	116.100	103.500
Transmitting ERP (watts)	46.473	43.365	8.875	2.867	0.271	1.698	13.116	39.622
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.500	101.100	87.000	99.800	107.400	111.400	116.100	103.500
Transmitting ERP (watts)	16.262	75.054	100.598	95.375	87.529	27.061	32.457	15.298
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.500	101.100	87.000	99.800	107.400	111.400	116.100	103.500
Transmitting ERP (watts)	26.123	10.219	13.943	31.412	138.549	180.577	193.913	76.304

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
8	36-45-30.7 N	088-10-11.4 W	156.1	96.3	1043411

Address: 771 Rudolph Road (76099)

City: Hardin County: MARSHALL State: KY Construction Deadline:

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	130.300	111.500	104.000	127.200	98.400	106.100	109.000	115.300
Transmitting ERP (watts)	138.810	181.853	201.332	78.257	26.754	10.412	13.921	31.435
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	130.300	111.500	104.000	127.200	98.400	106.100	109.000	115.300
Transmitting ERP (watts)	0.495	0.767	13.331	103.933	243.934	88.607	9.081	2.358
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	130.300	111.500	104.000	127.200	98.400	106.100	109.000	115.300
Transmitting ERP (watts)	121.085	34.811	25.322	9.647	14.734	94.724	185.217	194.265

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	36-57-02.0 N	089-04-57.4 W	139.6	35.1	
Address: 966 Westvaco Road (76102)					
City: WICKLIFFE County: BALLARD State: KY Construction Deadline:					

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	66.700	39.500	47.700	59.600	40.400	76.800	74.900	77.800
Transmitting ERP (watts)	208.387	279.525	57.987	6.279	2.348	0.861	2.044	43.197
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	66.700	39.500	47.700	59.600	40.400	76.800	74.900	77.800
Transmitting ERP (watts)	13.096	122.483	310.652	139.984	16.567	3.121	0.637	1.151
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	66.700	39.500	47.700	59.600	40.400	76.800	74.900	77.800
Transmitting ERP (watts)	1.083	3.141	55.641	235.301	265.480	45.044	5.015	1.649

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
14	36-31-12.4 N	088-50-41.5 W	144.2	122.2	1030665
Address: 550 Powell Road (76108)					
City: FULTON County: HICKMAN State: KY Construction Deadline: 10-17-2014					

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.600	50.500	50.000	62.400	74.100	82.600	70.400	68.900
Transmitting ERP (watts)	54.186	259.791	165.189	15.440	1.821	0.520	0.538	2.272
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.600	50.500	50.000	62.400	74.100	82.600	70.400	68.900
Transmitting ERP (watts)	37.483	3.445	0.681	0.543	0.696	23.278	173.429	255.845

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	36-38-43.9 N	088-28-32.2 W	171.9	129.8	1210819
Address: 1211 Bazzell Cemetery Road (76104)					
City: Murray County: CALLOWAY State: KY Construction Deadline: 10-17-2014					

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	119.500	104.900	100.600	100.600	101.500	99.400	106.900	111.600
Transmitting ERP (watts)	90.670	314.927	257.500	45.061	1.817	0.634	0.658	5.547

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	36-38-43.9 N	088-28-32.2 W	171.9	129.8	1210819

Address: 1211 Bazzell Cemetery Road (76104)

City: Murray County: CALLOWAY State: KY Construction Deadline: 10-17-2014

Antenna: 4 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	119.500	104.900	100.600	100.600	101.500	99.400	106.900	111.600
Transmitting ERP (watts)	0.367	0.330	5.484	55.361	112.914	58.679	6.523	0.289
Antenna: 5 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	119.500	104.900	100.600	100.600	101.500	99.400	106.900	111.600
Transmitting ERP (watts)	92.571	5.224	0.656	0.800	2.278	41.111	254.363	324.895

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
19	36-36-41.4 N	088-47-03.9 W	155.7	98.4	1215493

Address: 13111 State Route 45 South (76105)

City: Wingo County: GRAVES State: KY Construction Deadline: 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	113.900	104.300	100.500	100.100	118.200	120.600	142.500	118.400
Transmitting ERP (watts)	75.324	249.922	174.975	24.513	3.151	0.522	1.154	5.702
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	113.900	104.300	100.500	100.100	118.200	120.600	142.500	118.400
Transmitting ERP (watts)	0.327	2.041	16.058	48.846	56.920	53.682	10.688	3.498
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	113.900	104.300	100.500	100.100	118.200	120.600	142.500	118.400
Transmitting ERP (watts)	52.956	5.694	1.994	0.772	1.841	39.724	185.306	249.412

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
21	37-01-59.6 N	088-55-53.8 W	137.2	81.7	1061534

Address: HIGHWAY 358 SOUTH (76094)

City: LA CENTER County: BALLARD State: KY Construction Deadline: 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	89.800	81.800	70.500	81.800	84.100	79.400	91.200	97.100
Transmitting ERP (watts)	112.389	322.213	224.476	23.789	1.892	0.660	0.706	9.624

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
21	37-01-59.6 N	088-55-53.8 W	137.2	81.7	1061534

Address: HIGHWAY 358 SOUTH (76094)

City: LA CENTER County: BALLARD State: KY Construction Deadline: 10-17-2014

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	89.800	81.800	70.500	81.800	84.100	79.400	91.200	97.100
Transmitting ERP (watts)	0.245	0.296	9.047	63.327	119.917	49.080	4.913	0.289
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	89.800	81.800	70.500	81.800	84.100	79.400	91.200	97.100
Transmitting ERP (watts)	61.077	6.560	2.321	0.892	2.139	46.212	218.148	287.895

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
22	37-02-00.0 N	088-22-10.0 W	105.5	106.7	1040303

Address: 641 GARY JOHNSON ROAD (76096)

City: CALVERT CITY County: MARSHALL State: KY Construction Deadline: 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	86.900	86.100	95.100	91.700	77.400	93.100	107.000	101.600
Transmitting ERP (watts)	19.290	27.291	31.707	11.704	2.348	0.517	1.589	4.904
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	86.900	86.100	95.100	91.700	77.400	93.100	107.000	101.600
Transmitting ERP (watts)	0.103	0.173	3.333	26.500	50.592	22.618	2.382	0.161
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	86.900	86.100	95.100	91.700	77.400	93.100	107.000	101.600
Transmitting ERP (watts)	51.334	5.515	1.916	0.726	1.742	37.531	178.683	239.865

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
24	36-52-41.6 N	088-12-19.4 W	132.3	94.5	1223751

Address: 3018 Barge Island Road (76116)

City: Benton County: MARSHALL State: KY Construction Deadline: 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	100.900	74.800	82.900	90.300	83.200	75.100	82.700	89.800
Transmitting ERP (watts)	64.257	218.461	153.987	21.410	2.758	0.447	1.004	4.863

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
24	36-52-41.6 N	088-12-19.4 W	132.3	94.5	1223751

Address: 3018 Barge Island Road (76116)

City: Benton County: MARSHALL State: KY Construction Deadline: 10-17-2014

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	100.900	74.800	82.900	90.300	83.200	75.100	82.700	89.800
Transmitting ERP (watts)	0.516	0.812	13.931	109.389	254.428	92.990	9.535	2.468
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	100.900	74.800	82.900	90.300	83.200	75.100	82.700	89.800
Transmitting ERP (watts)	126.395	36.677	26.446	10.150	15.357	99.601	194.625	203.444

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
26	37-06-39.7 N	088-57-32.4 W	118.3	86.6	1244919

Address: 2967 BANDANA ROAD (76122)

City: LA CENTER County: BALLARD State: KY Construction Deadline: 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	98.000	96.700	81.000	73.300	74.700	89.200	104.100	92.500
Transmitting ERP (watts)	40.898	65.024	70.503	22.298	3.898	0.957	2.616	9.032
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	98.000	96.700	81.000	73.300	74.700	89.200	104.100	92.500
Transmitting ERP (watts)	0.519	25.920	110.565	221.603	140.992	214.122	87.608	63.085
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	98.000	96.700	81.000	73.300	74.700	89.200	104.100	92.500
Transmitting ERP (watts)	37.744	5.696	3.296	2.226	3.676	28.040	60.416	72.478

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	36-48-47.4 N	089-01-13.9 W	114.0	92.7	1244912

Address: 461 COUNTY ROAD 1235 (76123)

City: ARLINGTON County: CARLISLE State: KY Construction Deadline: 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	90.300	82.200	73.600	91.100	97.500	88.700	101.500	87.500
Transmitting ERP (watts)	106.670	236.325	87.322	9.136	2.326	0.497	0.777	13.791

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	36-48-47.4 N	089-01-13.9 W	114.0	92.7	1244912

Address: 461 COUNTY ROAD 1235 (76123)

City: ARLINGTON County: CARLISLE State: KY Construction Deadline: 10-17-2014

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	90.300	82.200	73.600	91.100	97.500	88.700	101.500	87.500
Transmitting ERP (watts)	3.771	6.725	70.667	194.932	224.510	93.220	19.059	10.392
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	90.300	82.200	73.600	91.100	97.500	88.700	101.500	87.500
Transmitting ERP (watts)	17.405	2.960	0.738	2.081	7.101	31.894	50.141	56.076

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
28	36-32-49.7 N	088-09-16.0 W	128.6	77.7	1245399

Address: 10475 STATE ROAD 121 (76124)

City: NEW CONCORD County: CALLOWAY State: KY Construction Deadline: 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	65.300	82.000	68.100	72.000	52.100	54.800	45.900	46.700
Transmitting ERP (watts)	103.508	96.740	121.896	67.061	24.395	17.896	22.126	33.816
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	65.300	82.000	68.100	72.000	52.100	54.800	45.900	46.700
Transmitting ERP (watts)	0.291	1.775	14.241	42.943	50.803	47.977	9.728	3.207
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	65.300	82.000	68.100	72.000	52.100	54.800	45.900	46.700
Transmitting ERP (watts)	131.978	37.385	27.253	10.383	15.864	101.405	199.819	210.869

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
29	36-33-30.0 N	088-35-22.0 W	172.2	98.7	1041880

Address: 2539 State Rte 94E (100720)

City: Sedalia County: GRAVES State: KY Construction Deadline: 10-17-2014

Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	118.798	346.026	241.383	25.538	2.032	0.686	0.737	10.121

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
29	36-33-30.0 N	088-35-22.0 W	172.2	98.7	1041880

Address: 2539 State Rte 94E (100720)

City: Sedalia County: GRAVES State: KY Construction Deadline: 10-17-2014

Antenna: 4 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	0.101	0.148	0.723	2.670	2.039	2.501	0.544	0.100
Antenna: 5 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	39.858	3.632	0.525	0.681	3.083	30.083	155.327	190.084
Antenna: 6 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	116.175	337.516	238.141	25.039	2.002	0.669	0.719	9.904
Antenna: 7 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	0.100	0.100	0.108	1.032	1.990	0.939	0.099	0.100
Antenna: 8 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	88.800	79.000	80.100	102.800	107.300	113.300	86.100	90.300
Transmitting ERP (watts)	39.129	3.555	0.510	0.662	3.020	29.428	154.053	187.149

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
30	36-38-26.2 N	088-16-00.1 W	165.8	90.8	1030663

Address: 1431 Van Cleave Road

City: MURRAY County: CALLOWAY State: KY Construction Deadline: 03-19-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	95.400	94.000	102.000	97.700	75.000	79.400	73.500	84.000
Transmitting ERP (watts)	99.973	347.694	284.408	49.684	2.009	0.693	0.722	6.047
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	95.400	94.000	102.000	97.700	75.000	79.400	73.500	84.000
Transmitting ERP (watts)	0.658	0.593	9.481	98.900	202.269	103.412	11.469	0.466
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	95.400	94.000	102.000	97.700	75.000	79.400	73.500	84.000
Transmitting ERP (watts)	102.904	5.789	0.721	0.870	2.492	44.530	280.630	358.642

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

**Location** **Latitude** **Longitude** **Ground Elevation (meters)** **Structure Hgt to Tip (meters)** **Antenna Structure Registration No.**  
31 37-01-59.2 N 088-32-46.3 W 104.9 60.7  
**Address:** 311 PUGH ROAD (82847)  
**City:** PADUCAH **County:** MCCRACKEN **State:** KY **Construction Deadline:** 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	56.200	65.400	62.700	44.400	60.400	47.900	41.900	64.900
Transmitting ERP (watts)	138.239	395.682	273.086	31.636	2.365	0.791	0.870	14.102
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	56.200	65.400	62.700	44.400	60.400	47.900	41.900	64.900
Transmitting ERP (watts)	0.870	0.945	31.495	230.326	421.829	159.645	11.045	1.137
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	56.200	65.400	62.700	44.400	60.400	47.900	41.900	64.900
Transmitting ERP (watts)	1.780	0.299	0.112	0.233	0.252	1.208	2.817	2.371

**Location** **Latitude** **Longitude** **Ground Elevation (meters)** **Structure Hgt to Tip (meters)** **Antenna Structure Registration No.**  
32 36-59-09.8 N 088-21-18.6 W 108.2 95.4 1222232  
**Address:** 1285 US HIGHWAY 95 (93609)  
**City:** CALVERT CITY **County:** MARSHALL **State:** KY **Construction Deadline:** 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	57.000	62.900	62.000	50.300	45.400	47.200	53.800	67.500
Transmitting ERP (watts)	114.888	331.792	230.236	24.563	1.953	0.671	0.707	9.579
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	57.000	62.900	62.000	50.300	45.400	47.200	53.800	67.500
Transmitting ERP (watts)	0.719	1.299	23.038	188.836	348.890	135.248	7.214	1.404
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	57.000	62.900	62.000	50.300	45.400	47.200	53.800	67.500
Transmitting ERP (watts)	38.772	3.498	0.494	0.647	2.930	29.401	150.126	182.816

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
33	37-03-27.6 N	088-39-35.9 W	126.5	56.4	1261390

Address: 4147 Alben Barkley Drive (99179)

City: Paducah County: MCCRACKEN State: KY Construction Deadline: 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	75.600	77.100	83.500	78.100	49.200	54.800	60.700	73.700
Transmitting ERP (watts)	63.658	183.190	130.542	23.950	3.395	0.525	0.398	6.814
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	75.600	77.100	83.500	78.100	49.200	54.800	60.700	73.700
Transmitting ERP (watts)	0.323	0.908	12.412	76.128	155.305	62.287	7.839	1.323
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	75.600	77.100	83.500	78.100	49.200	54.800	60.700	73.700
Transmitting ERP (watts)	47.164	5.084	1.161	0.385	3.481	30.943	146.763	183.338

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
34	36-36-12.1 N	089-01-51.1 W	101.2	60.7	

Address: 5151 State Route 1529 (115776)

City: Clinton County: HICKMAN State: KY Construction Deadline: 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	52.300	37.600	51.800	46.600	43.300	54.500	71.100	62.300
Transmitting ERP (watts)	278.250	103.782	10.449	2.715	0.593	0.966	15.867	122.648
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	52.300	37.600	51.800	46.600	43.300	54.500	71.100	62.300
Transmitting ERP (watts)	7.844	85.062	223.646	261.822	111.972	23.150	11.903	4.338
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	52.300	37.600	51.800	46.600	43.300	54.500	71.100	62.300
Transmitting ERP (watts)	30.528	12.489	16.284	37.081	166.124	217.556	229.754	89.752

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKN830

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
35	37-00-56.6 N	088-43-49.8 W	143.3	71.6	1261050

Address: 2136 Mayfield Metropolis Road (109666)

City: Paducah County: MCCRACKEN State: KY Construction Deadline: 10-17-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	105.700	96.700	95.000	75.800	73.800	88.800	68.000	82.900
Transmitting ERP (watts)	156.876	63.244	5.131	0.692	0.325	0.405	10.985	82.231
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	105.700	96.700	95.000	75.800	73.800	88.800	68.000	82.900
Transmitting ERP (watts)	3.414	33.471	169.860	202.694	40.839	2.592	0.626	0.446
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	105.700	96.700	95.000	75.800	73.800	88.800	68.000	82.900
Transmitting ERP (watts)	1.525	0.525	0.550	7.646	91.503	257.113	180.615	19.227

**Control Points:**

Control Pt. No. 1

Address: 1650 Lyndon Farms Court

City: LOUISVILLE County: State: KY Telephone Number: (502)332-4700

**Waivers/Conditions:**

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

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

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**Federal Communications Commission**  
Wireless Telecommunications Bureau

**RADIO STATION AUTHORIZATION**

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON  
NEW CINGULAR WIRELESS PCS, LLC  
208 S AKARD ST., RM 1016  
DALLAS, TX 75202

<b>Call Sign</b> KNLH653	<b>File Number</b>
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

<b>Grant Date</b> 04-11-2017	<b>Effective Date</b> 06-14-2017	<b>Expiration Date</b> 04-28-2027	<b>Print Date</b>
<b>Market Number</b> BTA339	<b>Channel Block</b> F	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Paducah-Murray-Mayfield, KY			
<b>1st Build-out Date</b> 04-28-2002	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

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

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

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

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

**Licensee Name:** NEW CINGULAR WIRELESS PCS, LLC

**Call Sign:** KNLH653

**File Number:**

**Print Date:**

Grant conditioned upon consummation of the assignment of license to Banana Communications, LLC within 180 days of June 9, 2008, per Memorandum Opinion and Order, DA 08-1380, released June 9, 2008.

Reference Copy

**REFERENCE COPY**

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



**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: LESLIE WILSON  
NEW CINGULAR WIRELESS PCS, LLC  
208 S AKARD ST., RM 1016  
DALLAS, TX 75202

<b>Call Sign</b> WPSJ971	<b>File Number</b>
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

<b>Grant Date</b> 06-03-2011	<b>Effective Date</b> 06-14-2017	<b>Expiration Date</b> 05-29-2021	<b>Print Date</b>
<b>Market Number</b> BTA339	<b>Channel Block</b> C	<b>Sub-Market Designator</b> 1	
<b>Market Name</b> Paducah-Murray-Mayfield, KY			
<b>1st Build-out Date</b> 05-29-2006	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

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

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

**Conditions:**

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

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**EXHIBIT B**

**SITE DEVELOPMENT PLAN:**

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

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.



**FA NUMBER: 14220570**

1641 LEE BURD RD  
BENTON, KY 42025  
MARSHALL COUNTY

**SITE INFORMATION**

**SITE ADDRESS:** 1641 LEE BURD RD  
BENTON, KY 42025

**LATITUDE (NAD 83):** 36° 49' 24.34" N (36.823430°)  
**LONGITUDE (NAD 83):** 88° 28' 25.57" W (-88.473771°)

**GROUND ELEVATION:** 481 5" (AMSL)

**JURISDICTION:** MARSHALL COUNTY

**JURISDICTION CONTACT:** LARRY SPEARS OR CASEY COUNCE  
(270) 527-4744

**ZONING:** N/A

**PARCEL/MAP NUMBER:** XXXXX/07-00-00-017.01

**PARCEL OWNER:** C & K HANSEN  
1641 LEE BURD RD  
BENTON, KY 42025

**TOWER OWNER:** TILLMAN INFRASTRUCTURE  
152 W. 57TH STREET  
NEW YORK, NEW YORK 10019

**STRUCTURE TYPE:** GUYED TOWER

**STRUCTURE HEIGHT:** 302'-0" (AGL)

**POWER SUPPLIER:** WEST KENTUCKY RURAL ELECTRICAL CO-OP  
1218 WEST BROADWAY  
MAYFIELD, KY 42066  
PHONE NUMBER: (270) 247-1321  
REF #: TBD

**FIBER SUPPLIER:** ATT  
CONTACT NAME: TBD  
PHONE NUMBER:  
REF #:

**PROJECT TEAM**

**APPLICANT:** TILLMAN INFRASTRUCTURE  
152 W. 57TH STREET  
NEW YORK, NEW YORK 10019

**PROJECT MANAGEMENT FIRM:** CREOSPAN  
1515 E. WOODFIELD RD., SUITE 350  
SCHAUMBURG, IL 60173  
(630) 440-6791

**ARCHITECT & ENGINEERING:** JOHN M. BANKS  
604 FOX GLEN  
BARRINGTON, IL 60010  
CONTACT: JOHN M. BANKS  
PHONE: (847) 277-0070  
EMAIL: JBANKS@WESTCHESTERSERVICES.COM

**CONSULTING ENGINEER:** JEREMY D. SHARIT  
2801 GOODWIN ROAD  
MORRIS, AL 35116

**VICINITY MAP**



**DIRECTIONS**

- DIRECTIONS FROM: COUNTY SEAT 1101 MAIN ST. BENTON, KY 42025
1. HEAD NORTH ON POPLAR ST TOWARD E 11TH ST.
  2. TURN LEFT ONTO HAROLD KING DR. CONTINUE ONTO W 8TH ST. CONTINUE ONTO KY-408 W/OAK LEVEL RD.
  3. TURN LEFT ONTO KY-2603
  4. TURN RIGHT ONTO VANN PITT RD
  5. TURN LEFT ONTO STATE HWY 2597
  6. SITE LOCATED ON THE LEFT HAND SIDE OF ROAD

**CODE COMPLIANCE**

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES

- 2013 KENTUCKY BUILDING CODE
- 2014 NFPA 70, NATIONAL ELECTRICAL CODE
- 2000 NFPA 101, LIFE SAFETY CODE
- 2012 IFC
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION
- ANSI/TIA-222-G
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEERING 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- TELECORDIA GR-1275
- ANSIT 311

**DRAWING INDEX**

- T - 1 COVER SHEET
- G - 1 GENERAL NOTES
- S - 1 SURVEY
- S - 2 SURVEY
- A - 1 ADJOINERS PLAN
- A-1A SITE PLAN
- A - 2 COMPOUND PLAN
- A - 3 TOWER ELEVATION AND ANTENNA LAYOUT
- A - 4 EQUIPMENT LAYOUT & CONSTRUCTION DETAILS
- A - 5 EQUIPMENT SPECIFICATIONS
- A - 6 RRH, ANTENNA AND EQUIPMENT SPECIFICATIONS
- A - 7 DETAILS
- A - 8 DETAILS
- A - 9 FENCE DETAILS
- A-10 SIGN DETAILS
- C - 1 GRADING AND EROSION CONTROL PLAN
- E - 1 ELECTRICAL NOTES LEGEND AND ABBREVIATIONS
- E - 2 ELECTRICAL SITE PLAN
- E - 3 ELECTRICAL COMPOUND PLAN
- E - 4 GROUNDING PLAN AND NOTES
- E - 5 GROUNDING PLAN AND NOTES
- E - 6 ELECTRICAL ONE-LINE AND PANEL SCHEDULE
- E - 7 GROUNDING DETAILS
- E - 8 GROUNDING DETAILS
- E - 9 GROUNDING DETAILS
- E-10 GROUNDING DETAILS

**DRAWING SCALE**

THESE DRAWINGS ARE SCALED TO FULL SIZE AT 22"X34" AND HALF SIZE AT 11"X17". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

**SCOPE OF WORK**

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

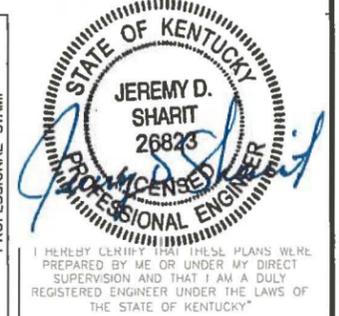
- INSTALL NEW 75'-0"X75'-0" CHAIN LINK FENCED COMPOUND
- INSTALL NEW GRAVEL ACCESS ROAD
- INSTALL NEW 302'-0" GUYED TOWER
- INSTALL NEW UTILITY H-FRAME
- INSTALL NEW ELECTRICAL SERVICE
- INSTALL NEW FIBER SERVICE
- INSTALL NEW 4-GANG METER BANK ON NEW UTILITY H-FRAME
- INSTALL NEW CABINETS AND GENERATOR ON NEW METAL PLATFORM WITH HELICAL PIERS



14220570  
1641 LEE BURD RD  
BENTON, KY 42025  
MARSHALL COUNTY

**REVISIONS**

REV	DATE	DESCRIPTION	BY
2	11/09/17	PERMIT/CONSTRUCTION MC	
1	10/25/17	PERMIT/CONSTRUCTION MC	
0	10/20/17	PERMIT/CONSTRUCTION DS	



I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY.

**COVER SHEET**

**T-1**

APPLICANT  
APPLICANT  
ENGINEER  
SITE INFORMATION  
DESIGN RECORD  
PROFESSIONAL STAMP  
SHEET TITLE  
SHEET NUMBER

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

### GENERAL NOTES

WORK SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS. ALL NECESSARY LICENSES, CERTIFICATES, ETC., REQUIRED BY AUTHORITY HAVING JURISDICTION SHALL BE PROCURED AND PAID FOR BY THE CONTRACTOR.

MORRISON HERSHFIELD CORPORATION HAS NOT CONDUCTED, NOR DOES IT INTEND TO CONDUCT ANY INVESTIGATION AS TO THE PRESENCE OF HAZARDOUS MATERIAL, INCLUDING, BUT NOT LIMITED TO, ASBESTOS WITHIN THE CONFINES OF THIS PROJECT. MORRISON HERSHFIELD CORPORATION DOES NOT ACCEPT RESPONSIBILITY FOR THE INDEMNIFICATION, THE REMOVAL, OR ANY EFFECTS FROM THE PRESENCE OF THESE MATERIALS. IF EVIDENCE OF HAZARDOUS MATERIALS IS FOUND, WORK IS TO BE SUSPENDED AND THE OWNER NOTIFIED. THE CONTRACTOR IS NOT TO PROCEED WITH FURTHER WORK UNTIL INSTRUCTED BY THE OWNER IN WRITING.

ALL MATERIAL FURNISHED UNDER THIS CONTRACT SHALL BE NEW, UNLESS OTHERWISE NOTED. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP. THE CONTRACTOR SHALL REPAIR OR REPLACE AT HIS EXPENSE ALL WORK THAT MAY DEVELOP DEFECTS IN MATERIALS OR WORKMANSHIP WITHIN SAID PERIOD OF TIME OR FOR ONE YEAR AFTER THE FINAL ACCEPTANCE OF THE ENTIRE PROJECT, WHICHEVER IS GREATER.

THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND UTILITIES AT THE JOB SITE BEFORE WORK IS STARTED. NO CLAIMS FOR EXTRA COMPENSATION FOR WORK WHICH COULD HAVE BEEN FORESEEN BY AN INSPECTION, WHETHER SHOWN ON THE CONTRACT DOCUMENTS OR NOT, WILL BE ACCEPTED OR PAID.

THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND CONDITIONS AT THE JOB SITE WHICH COULD AFFECT THE WORK UNDER THIS CONTRACT. ALL MANUFACTURERS RECOMMENDED SPECIFICATIONS, EXCEPT THOSE SPECIFICATIONS HEREIN, WHERE MOST STRINGENT SHALL BE COMPLIED WITH.

THE CONTRACTOR SHALL VERIFY AND COORDINATE SIZE AND LOCATION OF ALL OPENINGS FOR STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL, OR ARCHITECTURAL WORK.

THE CONTRACTOR SHALL VERIFY THAT NO CONFLICTS EXIST BETWEEN THE LOCATIONS OF ANY AND ALL MECHANICAL, ELECTRICAL, PLUMBING, OR STRUCTURAL ELEMENTS, AND THAT ALL REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE ARE MET. NOTIFY THE CONSULTANT OF ANY CONFLICTS. THE CONSULTANT HAS THE RIGHT TO MAKE MINOR MODIFICATIONS IN THE DESIGN OF THE CONTRACT WITHOUT THE CONTRACTOR GETTING ADDITIONAL COMPENSATION.

DO NOT SCALE THE DRAWINGS. DIMENSIONS ARE EITHER TO THE FACE OF FINISHED ELEMENTS OR TO THE CENTER LINE OF ELEMENTS, UNLESS NOTED OTHERWISE. CRITICAL DIMENSIONS SHALL BE VERIFIED WITH THE CONSULTANT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEAN UP OF ALL TRADES AND REMOVE ALL DEBRIS FROM THE CONSTRUCTION SITE. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE BUILDING, SITE, AND ANY OTHER SURROUNDING AREAS TO A BETTER THAN NEW CONDITION.

THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, ETC. ACCORDING TO APPLICABLE CODES, STANDARDS, AND GOOD CONSTRUCTION PRACTICES.

THE CONTRACTOR SHALL MEET ALL OSHA REQUIREMENTS FOR ALL INSTALLATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO THE EXISTING CONSTRUCTION AND REPAIR ALL DAMAGES TO BETTER THAN NEW CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DAMAGE TO THE BUILDING SITE OR ANY ADJACENT STRUCTURES AROUND THE PROJECT. THE CONSULTANT SHALL BE SOLE AND FINAL JUDGE AS TO THE QUALITY OF THE REPAIRED CONSTRUCTION. ANY ADDITIONAL MODIFICATIONS WHICH MUST BE MADE SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.

WHERE ONE DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, EVEN THOUGH NOT SPECIFICALLY MARKED ON THE DRAWINGS OR REFERRED TO IN THE SPECIFICATIONS, UNLESS NOTED OTHERWISE.

WHERE NEW PAVING, CONCRETE SIDEWALKS OR PATHS MEET EXISTING CONSTRUCTION, THE CONTRACTOR SHALL MATCH THE EXISTING PITCH, GRADE, AND ELEVATION SO THE ENTIRE STRUCTURE SHALL HAVE A SMOOTH TRANSITION.

THE CONTRACTOR SHALL MODIFY THE EXISTING FLOORS, WALL, CEILING, OR OTHER CONSTRUCTION AS REQUIRED TO GAIN ACCESS TO AREAS FOR ALL MECHANICAL, PLUMBING, ELECTRICAL, OR STRUCTURAL MODIFICATIONS. WHERE THE EXISTING CONSTRUCTION DOORS, PARTITIONS, CEILING, ETC., ARE TO BE REMOVED, MODIFIED, OR REARRANGED OR WHERE THE EXPOSED OR HIDDEN MECHANICAL, ELECTRICAL, SYSTEMS ARE ADDED OR MODIFIED, THE GENERAL CONTRACTOR SHALL REPAIR, PATCH AND MATCH ALL EXISTING CONSTRUCTION AND FINISHES OF ALL FLOORS WALLS AND CEILINGS. WHERE CONCRETE MASONRY CONSTRUCTION IS MODIFIED, THE CONTRACTOR SHALL TOOTH IN ALL NEW CONSTRUCTION TO MATCH THE EXISTING BOND. WHERE CONCRETE CONSTRUCTION IS MODIFIED, THE CONTRACTOR SHALL VERIFY THE EXACT DETAILS TO BE USED FOR CONSTRUCTION. ALL WORK SHALL BE COVERED UNDER THE GENERAL CONTRACT.

16. VERIFY ALL EXISTING DIMENSIONS PRIOR TO PERFORMING WORK.
17. VERIFY LOCATION OF ALL BURIED UTILITIES PRIOR TO ANY EXCAVATION.
18. IN RAWLAND CONDITIONS, TOWER FOUNDATION STRUCTURAL STEEL TO BE GROUNDED PRIOR TO CONCRETE POUR. TOWER FOUNDATION STRUCTURAL STEEL TO BE CONNECTED TO PERMANENT GROUND ROD PRIOR TO TOWER ERECTION. TOWER GROUND MUST BE MAINTAINED AT ALL TIMES. COORDINATE REQUIREMENTS WITH AT&T
19. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR APPLYING FOR COMMERCIAL POWER IMMEDIATELY UPON AWARD OF CONTRACT. THE GENERAL CONTRACTOR IS REQUIRED TO KEEP ALL DOCUMENTATION RECEIVED FROM THE POWER COMPANY, ACKNOWLEDGING APPLICATION FOR POWER, WRITTEN AND VERBAL DISCUSSIONS WITH THE POWER COMPANY, ETC.
20. THE GENERAL CONTRACTOR SHALL OBTAIN WRITTEN CONFIRMATION OF THE EXPECTED DATE OF COMPLETION OF THE POWER CONNECTION FROM THE POWER COMPANY.
21. IF THE POWER COMPANY IS UNABLE TO PROVIDE THE POWER CONNECTION BY OWNER'S REQUIRED DATE, THE GENERAL CONTRACTOR SHALL PROVIDE AND MAINTAIN A TEMPORARY GENERATOR UNTIL THE POWER COMPANY CONNECTION IS COMPLETED. COSTS ASSOCIATED WITH THE TEMPORARY GENERATOR TO BE APPROVED BY THE OWNER.
22. IF THE GENERAL CONTRACTOR FAILS TO TAKE NECESSARY MEASURES AS DESCRIBED IN NOTES 19, 20 AND 21 ABOVE, THE GENERAL CONTRACTOR SHALL PROVIDE A TEMPORARY GENERATOR AT NO COST TO THE OWNER.
23. PLANS PART OF THIS SET ARE COMPLEMENTARY. INFORMATION IS NOT LIMITED TO ONE PLAN. DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF THE ARCHITECT, WHETHER THE PROJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSION TO THIS PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO THE ARCHITECT. THESE PLANS WERE PREPARED TO BE SUBMITTED TO GOVERNMENTAL BUILDING AUTHORITIES FOR REVIEW FOR COMPLIANCE WITH APPLICABLE CODES AND IT IS THE SOLE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO BUILD ACCORDING TO APPLICABLE BUILDING CODES.
24. IF CONTRACTOR OR SUB-CONTRACTOR FIND IT NECESSARY TO DEVIATE FROM ORIGINAL APPROVED PLANS, THEN IT IS THE CONTRACTOR'S AND THE SUB-CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE ARCHITECT AND TOWER OWNER WITH 4 COPIES OF THE PROPOSED CHANGES FOR THEIR APPROVAL BEFORE PROCEEDING WITH THE WORK. IN ADDITION THE CONTRACTOR AND SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY APPROVALS FROM THE BUILDING AUTHORITIES FOR THE PROPOSED CHANGES BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR AND SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY INSPECTIONS AND APPROVALS FROM BUILDING AUTHORITIES DURING THE EXECUTION OF THE WORK.
25. IN EVERY EVENT, THESE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS SHALL BE INTERPRETED TO BE A MINIMUM ACCEPTABLE MEANS OF CONSTRUCTION BUT THIS SHALL NOT RELIEVE THE CONTRACTOR, SUB-CONTRACTOR, AND/OR SUPPLIER/MANUFACTURER FROM PROVIDING A COMPLETE AND CORRECT JOB WHEN ADDITIONAL ITEMS ARE REQUIRED TO THE MINIMUM SPECIFICATION. IF ANY ITEMS NEED TO EXCEED THESE MINIMUM SPECIFICATIONS TO PROVIDE A COMPLETE, ADEQUATE AND SAFE WORKING CONDITION, THEN IT SHALL BE THE DEEMED AND UNDERSTOOD TO BE INCLUDED IN THE DRAWINGS. FOR EXAMPLE, IF AN ITEM AND/OR PIECE OF EQUIPMENT REQUIRES A LARGER WIRE SIZE (I.E. ELECTRICAL WIRE), STRONGER OR LARGER PIPING, INCREASED QUANTITY (I.E. STRUCTURAL ELEMENTS), REDUCED SPACING, AND/OR INCREASED LENGTH (I.E. BOLT LENGTHS, BAR LENGTHS) THEN IT SHALL BE DEEMED AND UNDERSTOOD TO BE INCLUDED IN THE BID/PROPOSAL. THESE DOCUMENTS ARE MEANT AS A GUIDE AND ALL ITEMS REASONABLY INFERRED SHALL BE DEEMED TO BE INCLUDED.
26. THESE CONTRACT DOCUMENTS AND SPECIFICATIONS SHALL NOT BE CONSTRUED TO CREATE A CONTRACTUAL RELATIONSHIP OF ANY KIND BETWEEN THE ARCHITECT AND THE CONTRACTOR.

### ABBREVIATIONS

A/C	AIR CONDITIONER	JT.	JOINT
ACP	ACOUSTICAL CEILING PANEL	LA.	LAYER
A.F.F.	ABOVE FINISHED FLOOR	LAM.	LAMINATED
ALT.	ALTERNATE	L.F.	LINEAL FOOT
A.M.S.L.	ABOVE MEAN SEA LEVEL	L.F.	MANUFACTURER
ALUM.	ALUMINUM	MATER.	MATERIAL
ANC.	ANCHOR	MAX.	MAXIMUM
L	ANGLE	MECH.	MECHANICAL
ARCH.	ARCHITECTURAL	MH	MANHOLE
● BD.	AT BOARD	MM.	MILLIMETER
BFF	BELOW FINISH FLOOR	MIN.	MINIMUM
BLDG.	BUILDING	MISC.	MISCELLANEOUS
BLK.	BLOCK	M.O.	MASONRY OPENING
BM.	BEAM	MPH	MILES PER HOUR
BOT.	BOTTOM	M.S.L.	MEAN SEA LEVEL
BUR	BUILT-UP ROOF	MTL.	METAL
CER.	CERAMIC	N.I.C.	NOT IN CONTRACT
C.J.	CONTROL JOINT	NOM.	NOMINAL
CL.	CENTER LINE	N.T.S.	NOT TO SCALE
CLG.	CEILING	O.C.	ON CENTER
CLR.	CLEAR	O.D.	OUTSIDE DIAMETER
CMU	CONCRETE MASONRY UNIT	OH.	OVERHEAD
CPT.	CARPET	OPNG.	OPENING
COL.	COLUMN	OPP.	OPPOSITE
CONC.	CONCRETE	OZ.	OUNCE
CONST.	CONSTRUCTION	PL	PLATE
CONT.	CONTINUOUS	PLYWD.	PLYWOOD
C.T.	CERAMIC TILE	PR.	PAIR
CTR.	CENTER	P.S.I.	POUNDS PER SQUARE INCH
C/W	COMPLETE WITH	P.S.F.	POUNDS PER SQUARE FOOT
D.F.	DRINKING FOUNTAIN	P.T.	PRESSURE TREATED
DIA./Ø	DIAMETER	RAD.	RADIUS
DN.	DOWN	R.C.	RADIAL CENTER
D.S.	DOWNSPOUT	R.D.	ROOF DRAIN
DTL.	DETAIL	RECEP.	RECEPTACLE
EA.	EACH	REINF.	REINFORCED/REINFORCING
EIFS	EXTERIOR INSULATION FINISH SYSTEM	REQ'D.	REQUIRED
E.J.	EXPANSION JOINT	RM.	ROOM
ELEC.	ELECTRIC/ELECTRICAL	RTU	ROOF TOP UNIT
EL	ELEVATION	R/W	RIGHT OF WAY
E.P.	ELECTRICAL PANEL	SCHED.	SCHEDULE
EQ.	EQUAL	SECT.	SECTION
E.W.	EACH WAY	S.F.	SQUARE FOOT
EXP.	EXPANSION	SIM.	SIMILAR
EXT.	EXTERIOR	S.P.	SPLICE POINT
F.D.	FLOOR DRAIN	SQ.FT.	SQUARE FOOT
F.E.C.	FIRE EXTINGUISHER SHELTER	S.S.	STAINLESS STEEL
F.H.C.	FIRE HOSE EQUIPMENT	STD.	STANDARD
FIN.	FINISH	STL.	STEEL
FIN.FLR.	FINISH FLOOR	STOR.	STORAGE
FLR.	FLOOR	STRUC.	STRUCTURAL
FTG.	FOOTING	SUSP.	SUSPENDED
GA.	GAUGE	TEMP.	TEMPORARY
GALV.	GALVANIZED	THK.	THICK
GEN.	GENERAL	THICKN.	THICKNESS
GYP.	GYPSPUM	T.O.	TOP OF
GB.	GYPSPUM BOARD	T.O.S.	TOP OF STEEL
H.C.	HANDICAPPED	TYP.	TYPICAL
HK.	HOOK	U.N.O.	UNLESS NOTED OTHERWISE
H.M.	HOLLOW METAL	VCT	VINYL COMPOSITION TILE
HOR.	HORIZONTAL	VIF	VERIFY IN FIELD
HR.	HOUR	VERT.	VERTICAL
HT.	HEIGHT	W/	WITH
INSUL.	INSULATION	WD.	WOOD
INT.	INTERIOR	WWM	WELDED WIRE MESH

**TILLMAN**  
**INFRASTRUCTURE**  
 152 W. 57TH STREET  
 NEW YORK, NEW YORK 10019  
 TEL: 212-706-1877

**creospan**  
 1515 E WOODFIELD RD. SUITE 860  
 SCHAUMBURG, IL 60173

**WESTCHESTER**  
 SERVICES LLC  
 604 FOX GLEN  
 BARRINGTON, IL 60010  
 TELEPHONE: 847.277.0070  
 FAX: 847.277.0080  
 ae@westchesterservices.com

14220570  
 1641 LEE BURD RD  
 BENTON, KY 42025  
 MARSHALL COUNTY

### REVISIONS

REV	DATE	DESCRIPTION	BY
2	11/09/17	PERMIT/CONSTRUCTION	MC
1	10/25/17	PERMIT/CONSTRUCTION	MC
0	10/20/17	PERMIT/CONSTRUCTION	DS

STATE OF KENTUCKY  
**JEREMY D. SHARIT**  
 26823  
 PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY.

### GENERAL NOTES

**G-1**

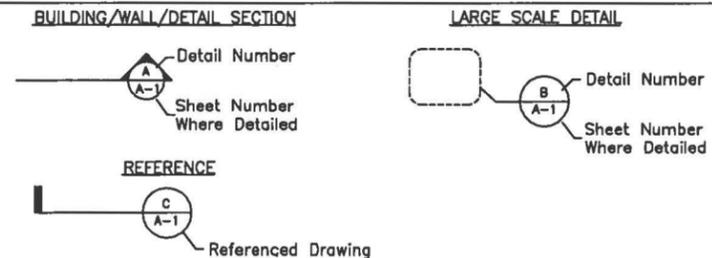
### IMPORTANT NOTICE

THE EXISTING CONDITIONS REPRESENTED HEREIN ARE BASED ON VISUAL OBSERVATIONS AND INFORMATION PROVIDED BY OTHERS. MORRISON HERSHFIELD CORPORATION CANNOT GUARANTEE THE CORRECTNESS NOR COMPLETENESS OF THE EXISTING CONDITIONS SHOWN AND ASSUMES NO RESPONSIBILITY THEREOF. CONTRACTOR AND HIS SUB-CONTRACTORS SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AS REQUIRED FOR PROPER EXECUTION OF PROJECT. REPORT ANY CONFLICTS OR DISCREPANCIES TO THE CONSULTANT PRIOR TO CONSTRUCTION.

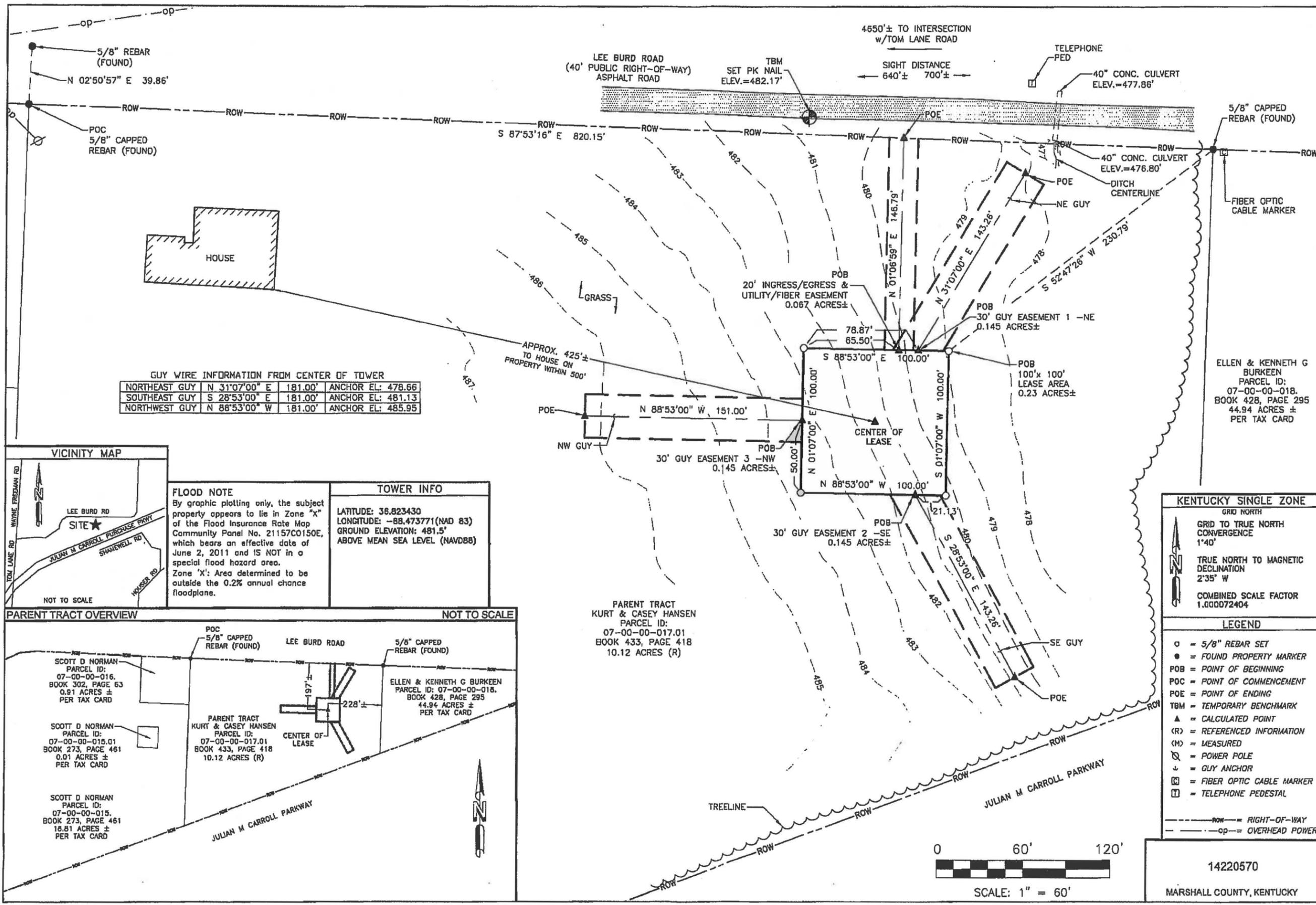
### PROJECT INFORMATION

1. THIS IS AN UNMANNED AND RESTRICTED ACCESS EQUIPMENT AND WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNALS FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
2. AT&T CERTIFIES THAT THIS TELEPHONE EQUIPMENT FACILITY WILL BE SERVICED ONLY BY AT&T EMPLOYEE SERVICE PERSONNEL FOR REPAIR PURPOSES ONLY. THIS FACILITY IS UNOCCUPIABLE & NOT DESIGNED FOR HUMAN OCCUPANCY THUS IT IS NOT OPEN TO THE PUBLIC.
3. THIS FACILITY WILL CONSUME NO UNRECOVERABLE ENERGY.
4. NO POTABLE WATER SUPPLY IS TO BE PROVIDED AT THIS LOCATION.
5. NO WASTE WATER WILL BE GENERATED AT THIS LOCATION.
6. NO SOLID WASTE WILL BE GENERATED AT THIS LOCATION.
7. AT&T MAINTENANCE CREW (TYPICALLY TWO PEOPLE) WILL MAKE AN AVERAGE OF ONE TRIP PER MONTH AT ONE HOUR PER VISIT.

### LEGEND



APPLICANT  
 APPLICANT  
 ENGINEER  
 SITE INFORMATION  
 DESIGN RECORD  
 PROFESSIONAL STAMP  
 SHEET TITLE  
 SHEET NUMBER



GUY WIRE INFORMATION FROM CENTER OF TOWER

NORTHEAST GUY	N 31°07'00" E	181.00'	ANCHOR EL: 478.66
SOUTHEAST GUY	S 28°53'00" E	181.00'	ANCHOR EL: 481.13
NORTHWEST GUY	N 88°53'00" W	181.00'	ANCHOR EL: 485.95

**FLOOD NOTE**  
 By graphic plotting only, the subject property appears to lie in Zone "X" of the Flood Insurance Rate Map Community Panel No. 21157C0150E, which bears an effective date of June 2, 2011 and IS NOT in a special flood hazard area. Zone 'X': Area determined to be outside the 0.2% annual chance floodplane.

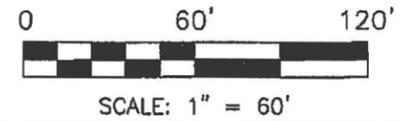
**TOWER INFO**  
 LATITUDE: 36.823430  
 LONGITUDE: -88.473771 (NAD 83)  
 GROUND ELEVATION: 481.5'  
 ABOVE MEAN SEA LEVEL (NAVD88)

PARENT TRACT  
 KURT & CASEY HANSEN  
 PARCEL ID:  
 07-00-00-017.01  
 BOOK 433, PAGE 418  
 10.12 ACRES (R)

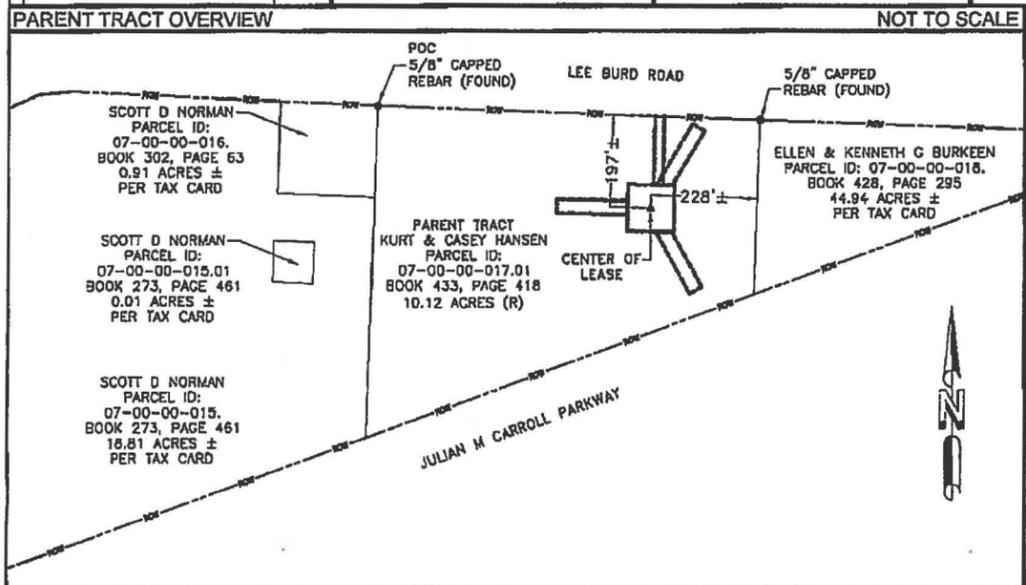
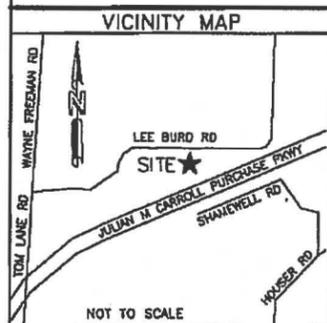
ELLEN & KENNETH G  
 BURKEEN  
 PARCEL ID:  
 07-00-00-018.  
 BOOK 428, PAGE 295  
 44.94 ACRES ±  
 PER TAX CARD

**KENTUCKY SINGLE ZONE**  
 GRID NORTH  
 GRID TO TRUE NORTH  
 CONVERGENCE  
 1'40"  
 TRUE NORTH TO MAGNETIC  
 DECLINATION  
 2'35" W  
 COMBINED SCALE FACTOR  
 1.000072404

- LEGEND**
- = 5/8" REBAR SET
  - = FOUND PROPERTY MARKER
  - POB = POINT OF BEGINNING
  - POC = POINT OF COMMENCEMENT
  - POE = POINT OF ENDING
  - TBM = TEMPORARY BENCHMARK
  - ▲ = CALCULATED POINT
  - (R) = REFERENCED INFORMATION
  - (M) = MEASURED
  - ⊙ = POWER POLE
  - ⊥ = GUY ANCHOR
  - ⊠ = FIBER OPTIC CABLE MARKER
  - ⊞ = TELEPHONE PEDESTAL
- ROW --- = RIGHT-OF-WAY  
 - - - - - OP - - - - - = OVERHEAD POWER



14220570  
 MARSHALL COUNTY, KENTUCKY



BY	DATE	REVISION	NO.	PROJECT NO.
LMC	8/24/17	ADDED TITLE COMMITMENT	1	17-2339
LMC	10/17/17	Revised Ingress/Egress Width to 20'	2	

DRAWN BY: MGC  
 CHECKED BY: AKK  
 FIELD CREW: MM/JS  
 APPROVED BY: DDM  
 DATE: 07/25/17  
 SCALE: 1" = 60'

SHEET 1 OF 2

RAWLAND TOWER SURVEY  
 FOR: WESTCHESTER SERVICES, LLC  
 604 FOX GLEN  
 BARRINGTON, ILLINOIS 60010  
 PHONE: 847-277-0070  
 EMAIL: AEW@WESTCHESTERSERVICES.COM

SMW Engineering Group, Inc.  
 156 Business Center Drive  
 Birmingham, Alabama 35244  
 Ph: 205-252-8985  
 www.smweng.com

**ENGINEERING GROUP, INC.**

**PARENT TRACT (BOOK 433, PAGE 418)**

Being 10.12 acre parcel of land situated in the southwestern portion of Marshall County, Kentucky, approximately one mile East from the Graves County Line, lying on the south side of Lee Burd Road, North of the Jackson Purchase Parkway and said parcel of land being more particularly described as follows:

Unless stated otherwise, any monument referred to herein as a "pipe and cap" is a set 1/4" diameter schedule 40 steel pipe, 18" in length with an orange plastic cap stamped "J.E.S. L.S. #2236." All bearings stated herein are referred to the magnetic north meridian observed February 13, 2004.

Beginning at the northeast corner of the herein described tract, said point being 1/4" iron pipe set in the south right-of-way line of Lee Burd Road, 30 feet from its centerline and approximately 150 feet West of a 90° turn in said roadway, said iron pipe also being the northwest corner of the Billy Burnett property (Deed Book 205, page 370); thence, South 2° 53' 49" East, 373.81 feet along the fence line and west side of the Burnett property to a 1/4" iron pipe set in the north right-of-way line of the Jackson Purchase Parkway, 115 feet North from its centerline; thence, South 64° 54' 57" West, 879.66 feet along said north right-of-way line to a 1/4" iron pipe set at a common corner with the Robert Norman/Scott Norman property (Deed Book 273, Page 461); thence, North 3° 03' 25" West 707.32 feet generally along an existing fence to a 1/4" iron pipe set by a fence post and in the south right-of-way line of Lee Burd Road; thence, North 87° 11' 18" East, 816.50 feet along said right-of-way line, back to the point of beginning.

The above described tract contains 10.12 acres according to a survey by James E Stevenson, Professional Licensed Land Surveyor 2236 with J.E. Stevenson and Associates on February 13, 2004.

**LEASE AREA (AS SURVEYED)**

A portion of the Hansen Tract described in Book 433, Page 418 as recorded in the Office of the Clerk of the County Court for Marshall County, Kentucky, and being more particularly described as follows:

Commence at a 5/8" capped rebar found on the southerly Right-of-Way line of Lee Burd Road and marking the Northwest corner of said Hansen Tract; thence S 87°53'16" E along the southerly Right-of-Way line of said Lee Burd Road for a distance of 820.15 feet to a found 5/8" capped rebar; thence S 52°47'26" W for a distance of 230.79 feet to a 5/8" rebar set and the POINT OF BEGINNING; thence S 01°07'00" W a distance of 100.00 feet to a 5/8" rebar set; thence N 88°53'00" W a distance of 100.00 feet to a 5/8" rebar set; thence N 01°07'00" E a distance of 100.00 feet to a 5/8" rebar set; thence S 88°53'00" E a distance of 100.00 feet to the POINT OF BEGINNING. Said described parcel contains 0.23 acres, more or less.

**INGRESS/EGRESS & UTILITY/FIBER EASEMENT (AS SURVEYED)**

A portion of the Hansen Tract described in Book 433, Page 418 as recorded in the Office of the Clerk of the County Court for Marshall County, Kentucky, and being more particularly described as follows:

Commence at a 5/8" capped rebar found on the southerly Right-of-Way line of Lee Burd Road and marking the Northwest corner of said Hansen Tract; thence S 87°53'16" E along the southerly Right-of-Way line of said Lee Burd Road for a distance of 820.15 feet to a found 5/8" capped rebar; thence S 52°47'26" W for a distance of 230.79 feet to a 5/8" rebar set; thence S 01°07'00" W a distance of 100.00 feet to a 5/8" rebar set; thence N 88°53'00" W a distance of 100.00 feet to a 5/8" rebar set; thence N 01°07'00" E a distance of 100.00 feet to a 5/8" rebar set; thence S 88°53'00" E a distance of 65.50 feet to the POINT OF BEGINNING of said 20 foot Ingress/Egress & Utility/Fiber Easement lying 10 feet each side of the following described centerline; thence run N 01°06'59" E for a distance of 146.79 feet to a point on the southerly Right-of-Way line of Lee Burd Road and the Point of Ending. Said described easement contains (2935.8 sq. ft.) 0.067 acres, more or less.

**GUY EASEMENT 1 - NE (AS SURVEYED)**

A portion of the Hansen Tract described in Book 433, Page 418 as recorded in the Office of the Clerk of the County Court for Marshall County, Kentucky, and being more particularly described as follows:

Commence at a 5/8" capped rebar found on the southerly Right-of-Way line of Lee Burd Road and marking the Northwest corner of said Hansen Tract; thence S 87°53'16" E along the southerly Right-of-Way line of said Lee Burd Road for a distance of 820.15 feet to a found 5/8" capped rebar; thence S 52°47'26" W for a distance of 230.79 feet to a 5/8" rebar set; thence S 01°07'00" W a distance of 100.00 feet to a 5/8" rebar set; thence N 88°53'00" W a distance of 100.00 feet to a 5/8" rebar set; thence N 01°07'00" E a distance of 100.00 feet to a 5/8" rebar set; thence S 88°53'00" E a distance of 78.87 feet to the POINT OF BEGINNING of an 30 foot Guy Easement lying 15 feet each side of the following described centerline; thence run N 31°07'00" E for a distance of 143.26 feet to a Point of Ending. Said described easement contains (4297.9 sq. ft.) 0.098 acres, more or less.

**GUY EASEMENT 2 - SE (AS SURVEYED)**

A portion of the Hansen Tract described in Book 433, Page 418 as recorded in the Office of the Clerk of the County Court for Marshall County, Kentucky, and being more particularly described as follows:

Commence at a 5/8" capped rebar found on the southerly Right-of-Way line of Lee Burd Road and marking the Northwest corner of said Hansen Tract; thence S 87°53'16" E along the southerly Right-of-Way line of said Lee Burd Road for a distance of 820.15 feet to a found 5/8" capped rebar; thence S 52°47'26" W for a distance of 230.79 feet to a 5/8" rebar set; thence S 01°07'00" W a distance of 100.00 feet to a 5/8" rebar set; thence N 88°53'00" W a distance of 21.13 feet to the POINT OF BEGINNING of an 30 foot Guy Easement lying 15 feet each side of the following described centerline; thence run S 28°53'00" E for a distance of 143.26 feet to a Point of Ending. Said described easement contains (4297.9 sq. ft.) 0.098 acres, more or less.

**GUY EASEMENT 3 - NW (AS SURVEYED)**

A portion of the Hansen Tract described in Book 433, Page 418 as recorded in the Office of the Clerk of the County Court for Marshall County, Kentucky, and being more particularly described as follows:

Commence at a 5/8" capped rebar found on the southerly Right-of-Way line of Lee Burd Road and marking the Northwest corner of said Hansen Tract; thence S 87°53'16" E along the southerly Right-of-Way line of said Lee Burd Road for a distance of 820.15 feet to a found 5/8" capped rebar; thence S 52°47'26" W for a distance of 230.79 feet to a 5/8" rebar set; thence S 01°07'00" W a distance of 100.00 feet to a 5/8" rebar set; thence N 88°53'00" W a distance of 100.00 feet to a 5/8" rebar set; thence N 01°07'00" E a distance of 50.00 feet to the POINT OF BEGINNING of an 30 foot Guy Easement lying 15 feet each side of the following described centerline; thence run N 88°53'00" W for a distance of 151.00 feet to a Point of Ending. Said described easement contains (4530.0 sq. ft.) 0.104 acres, more or less.

**PLOTTABLE EXCEPTIONS**  
Fidelity National Title Insurance Company  
Commitment for Title Insurance Commitment No. RAKY-26002  
Date May 10, 2017  
Schedule B, Section II

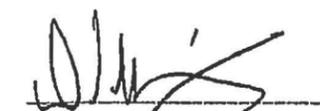
Exception No.	Instrument	Comment
1-10		Standard exceptions. Contain no survey matters.

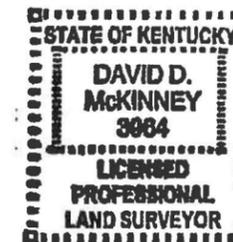
**SURVEYOR'S NOTES**

- This is an Raw Land Tower Survey, made on the ground under the supervision of a Kentucky Registered Land Surveyor. Date of field survey is July 13, 2017..
- The following surveying instruments were used at time of field visit: Nikon NPL-352, Total Station, Reflectorless and Hiper + Legacy E RTK, GD 1HZ.
- Bearings are based on Kentucky Single Zone State Plane Coordinates NAD 83 by GPS observation.
- No underground utilities, underground encroachments or building foundations were measured or located as a part of this survey, unless otherwise shown. Trees and shrubs not located, unless otherwise shown.
- Benchmark used is a GPS Continuously Operating Reference Station, PID DM4118. Onsite benchmark is as shown hereon. Elevations shown are in feet and refer to NAVD 88.
- This survey was conducted for the purpose of an Raw Land Tower Survey only, and is not intended to delineate the regulatory jurisdiction of any federal, state, regional or local agency, board, commission or other similar entity.
- Attention is directed to the fact that this survey may have been reduced or enlarged in size due to reproduction. This should be taken into consideration when obtaining scaled data.
- This Survey was conducted with the benefit of an Abstract Title Search.
- This survey meets or exceeds the Minimum Standards of Practice as required by the State of Kentucky for a Class A survey as defined by 201 KAR 18:150.
- Field data upon which this map or plot is based has a closure precision of not less than one-foot in 15,000 feet (1":15,000') and an angular error that does not exceed 10 seconds times the square root of the number of angles turned. Field traverse was not adjusted.
- This survey is not valid without the original signature and the original seal of a state licensed surveyor and mapper.
- This survey does not constitute a boundary survey of the Parent Tract. Any parent tract property lines shown hereon are from supplied information and may not be field verified.
- The Lease Area, and Access and Utility Easement shown hereon was provided by Westchester dated July 5, 2017 in direct correlation with existing monuments and physical evidence found through inspection and may not depict actual rights of occupancy.
- There was no Zoning Information supplied.

**SURVEYOR'S CERTIFICATION**

I certify that all parts of this survey and drawing have been completed in accordance with the current requirements of the Standards of Practice for Surveying in the State of Kentucky to the best of my knowledge, information, and belief.

  
David D. McKinney  
Kentucky License No. 3964



14220570  
MARSHALL COUNTY, KENTUCKY

NO.	REVISION	DATE	BY
1	ADDED TITLE COMMITMENT	8/24/17	MC
2	Revised Ingress/Egress Width to 20'	10/17/17	MC

PROJECT NO.  
17-2339

DRAWN BY: MCC  
CHECKED BY: AAK  
FIELD CREW: NM/JS  
APPROVED BY: DON  
DATE: 07/25/17  
SCALE: N/A

SHEET 2 OF 2

FOR: **WESTCHESTER SERVICES, LLC**  
604 FOX GLEN  
BARRINGTON, ILLINOIS 60010  
PHONE: 847-277-0070  
EMAIL: A@WESTCHESTERSERVICES.COM

**RAWLAND TOWER SURVEY**

**SMW Engineering Group, Inc.**  
158 Business Center Drive  
Birmingham, Alabama 35244  
Ph: 205-252-8985  
www.smweng.com

**ENGINEERING GROUP, INC.**

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

- (A1)** PARCEL ID: 07-00-00-017.01  
HANSEN KURT AND CASEY  
1641 LEE BURD RD  
BENTON, KY 42025
- (B1)** PARCEL ID: 07-00-00-018.  
BURKEEN ELLEN AND KENNETH G  
3208 TOM LANE RD  
BENTON, KY 42025
- (C1)** PARCEL ID: 07-00-00-017.  
BELLAMY RANDY AND TAMMY  
667 SHAMEWELL LN  
BENTON, KY 42025
- (D1)** PARCEL ID: 07-00-00-017.02  
AT AND T TAX DEPT  
PO BOX 7207  
BEDMINSTER, NJ 07921
- (E1)** PARCEL ID: 07-00-00-016.  
NORMAN SCOTT DAVID  
1923 LEE BURD RD  
BENTON, KY 42025
- (F1)** PARCEL ID: 07-00-00-015.  
NORMAN SCOTT DAVID  
1923 LEE BURD RD  
BENTON, KY 42025
- (G1)** PARCEL ID: 07-00-00-015.01  
NORMAN SCOTT DAVID  
1923 LEE BURD RD  
BENTON, KY 42025
- (H1)** PARCEL ID: 07-00-00-006.  
SOUTHERN CONSERVATION CORP.  
122 CHRIS LN  
MCMINNVILLE, TN 37110
- (I1)** PARCEL ID: 07-00-00-011.  
IVEY HURSHAL LEE JR  
1642 LEE BURD RD  
BENTON, KY 42025
- (J1)** PARCEL ID: 07-00-00-010.  
MCKENTY BRANDY SCOTT  
1486 LEE BURD RD  
BENTON, KY 42025
- (K1)** PARCEL ID: 07-00-00-009.  
SMITH RONALD  
834 VANZORA RD  
BENTON, KY 42025



R = RESIDENCE  
M = MOBILE HOME  
G = GARAGE  
S = STORAGE  
F = FARM

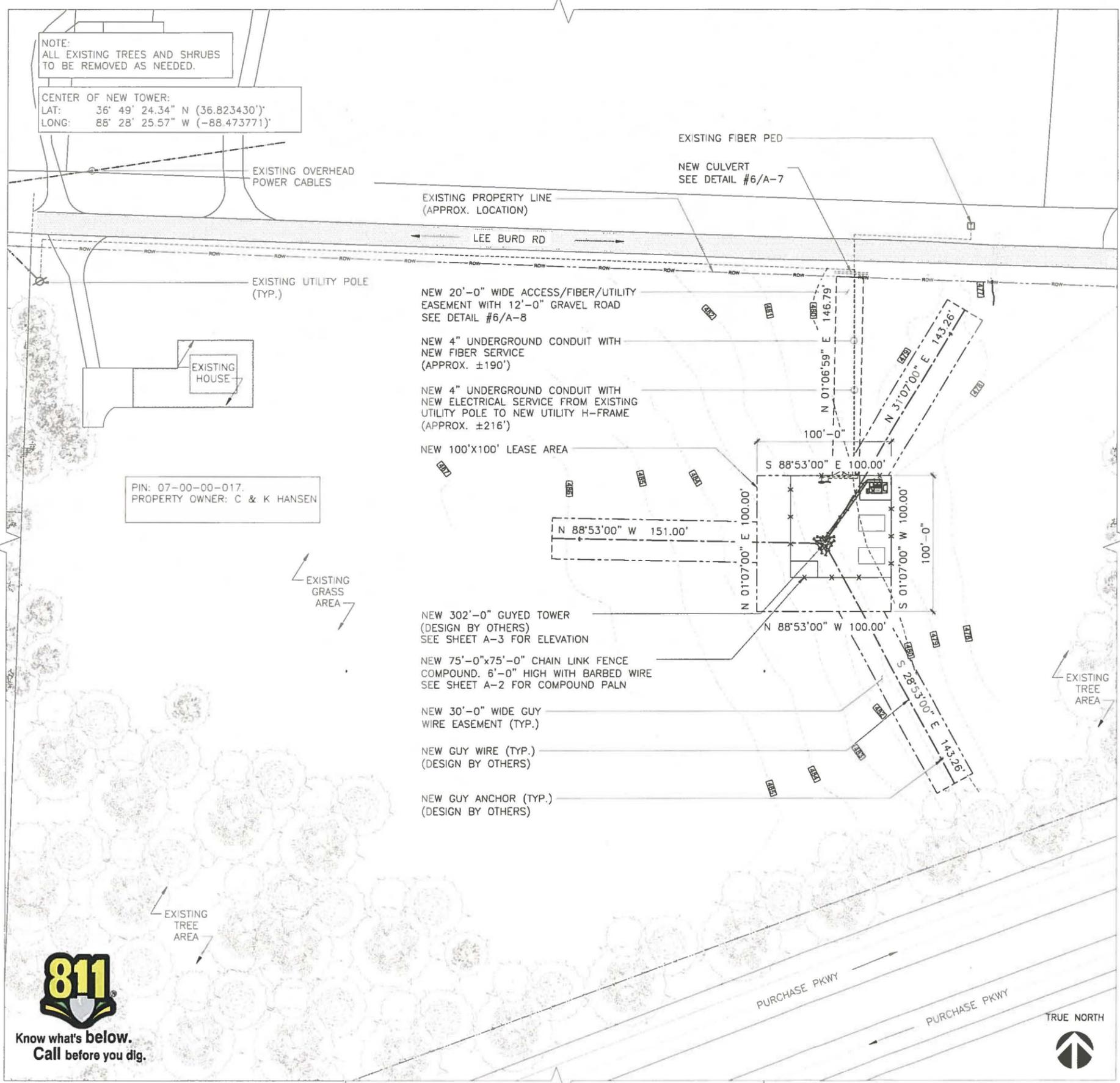


APPLICANT	 152 W. 57TH STREET NEW YORK, NEW YORK 10019 TEL: 212-706-1677																				
APPLICANT	 1515 E WOODFIELD RD. SUITE 860 SCHAUMBURG, IL 60173																				
ENGINEER	 604 FOX GLEN BARRINGTON, IL 60010 TELEPHONE: 847.277.0070 FAX : 847.277.0080 ae@westchesterservices.com																				
SITE INFORMATION	14220570 1641 LEE BURD RD BENTON, KY 42025 MARSHALL COUNTY																				
DESIGN RECORD	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>11/09/17</td> <td>PERMIT/CONSTRUCTION</td> <td>MC</td> </tr> <tr> <td>1</td> <td>10/25/17</td> <td>PERMIT/CONSTRUCTION</td> <td>MC</td> </tr> <tr> <td>0</td> <td>10/20/17</td> <td>PERMIT/CONSTRUCTION</td> <td>DS</td> </tr> </tbody> </table>	REVISIONS				REV	DATE	DESCRIPTION	BY	2	11/09/17	PERMIT/CONSTRUCTION	MC	1	10/25/17	PERMIT/CONSTRUCTION	MC	0	10/20/17	PERMIT/CONSTRUCTION	DS
REVISIONS																					
REV	DATE	DESCRIPTION	BY																		
2	11/09/17	PERMIT/CONSTRUCTION	MC																		
1	10/25/17	PERMIT/CONSTRUCTION	MC																		
0	10/20/17	PERMIT/CONSTRUCTION	DS																		
PROFESSIONAL STAMP	 PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY																				
SHEET TITLE	<h2 style="margin: 0;">ADJOINERS PLAN</h2>																				
SHEET NUMBER	<h1 style="margin: 0;">A-1</h1>																				

## ADJOINERS PLAN

200' 0 100' 200' SCALE: 1" = 200'-0" (24x36)  
(OR) 1/2" = 200'-0" (11x17) **1**

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.



NOTE:  
ALL EXISTING TREES AND SHRUBS  
TO BE REMOVED AS NEEDED.

CENTER OF NEW TOWER:  
LAT: 36° 49' 24.34" N (36.823430)'  
LONG: 86° 28' 25.57" W (-88.473771)'

PIN: 07-00-00-017.  
PROPERTY OWNER: C & K HANSEN

**GENERAL NOTES**

- EXISTING FEATURES SHOWN ARE BASED ON FIELD SURVEY BY SMW ENGINEERING GROUP, INC. PERFORMED 07/25/17 AND IS LIMITED TO FEATURES OF INTEREST.
- THIS PLAN IS NOT A BOUNDARY SURVEY. PROPERTY BOUNDARY INFORMATION SHOWN IS FOR REFERENCE ONLY. SMW ENGINEERING GROUP, INC. DID NOT VERIFY BOUNDARY AS PART OF THIS SURVEY. DEED BEARING AND DISTANCE IN PARENTHESIS.
- VERTICAL DATUM IS NAVD88 BASED ON GPS OBSERVATIONS REFERENCED TO THE NGS CORS NETWORK.
- HORIZONTAL DATUM IS NAD 83, STATE PLANE COORDINATES OF AL AND ESTABLISHED GPS OBSERVATIONS REFERENCED TO THE NGS CORS NETWORK.
- NO WETLANDS INVESTIGATION WAS PERFORMED AS PART OF THIS SURVEY.
- NO INVESTIGATION OF THE PRESENCE OF HAZARDOUS MATERIALS WAS PERFORMED AS A PART OF THIS SURVEY.
- UTILITIES SHOWN PER FIELD LOCATIONS FROM ABOVE GROUND INSPECTION OF THE SITE AND UTILITY MARK-OUTS IN THE FIELD. UTILITIES THAT EXIST MAY NOT BE SHOWN.
- THIS PLAN WAS PREPARED WITH THE BENEFIT OF A TITLE REPORT PREPARED BY RIVERSIDE ABSTRACT, LLC DATED 05/10/17 FILE NO. RAKY-26002, TITLE COMMENTS ARE SHOWN BELOW.

**TITLE REPORT COMMENTS OF EASEMENTS/RESTRICTIONS:**

- XXX

**LEGEND**

	PROPERTY LINE - SUBJECT PARCEL
	EXISTING SETBACK LINE
	PROPOSED LEASE AREA
	PROPOSED EASEMENT
	PROPOSED FENCE LINE
	EXISTING ROAD
	EXISTING OVERHEAD UTILITIES
	EXISTING BUILDING

**ZONING INFORMATION**

JURISDICTION: XXX			
ZONING: XXX			
DIMENSION	REQUIRED	EXISTING	PROPOSED
MIN. LOT AREA	XXX	XXX	XXX
MIN. LOT WIDTH	XXX	XXX	XXX
MAX. LOT COVERAGE	XXX	XXX	XXX
FRONT YARD SETBACK	XXX	XXX	XXX
REAR YARD SETBACK	XXX	XXX	XXX
SIDE YARD SETBACK	XXX	XXX	XXX
MIN. TOWER SETBACK	XXX	XXX	XXX
MAX. BUILDING HEIGHT	XXX	XXX	XXX
(ALL MEASUREMENTS ARE IN FEET & UNLESS OTHERWISE NOTED)			

**TILLMAN INFRASTRUCTURE**  
152 W. 57TH STREET  
NEW YORK, NEW YORK 10019  
TEL: 212-706-1677

**creospan**  
1515 E WOODFIELD RD. SUITE 860  
SCHAUMBURG, IL 60173

**WESTCHESTER SERVICES LLC**  
604 FOX GLEN  
BARRINGTON, IL 60010  
TELEPHONE: 847.277.0070  
FAX: 847.277.0080  
ae@westchesterservices.com

14220570  
1641 LEE BURD RD  
BENTON, KY 42025  
MARSHALL COUNTY

**REVISIONS**

REV	DATE	DESCRIPTION	BY
2	11/09/17	PERMIT/CONSTRUCTION MC	
1	10/25/17	PERMIT/CONSTRUCTION MC	
0	10/20/17	PERMIT/CONSTRUCTION DS	

**STATE OF KENTUCKY**  
JEREMY D. SHARIT  
26823  
REGISTERED PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY.

**SITE PLAN**

**A-1A**

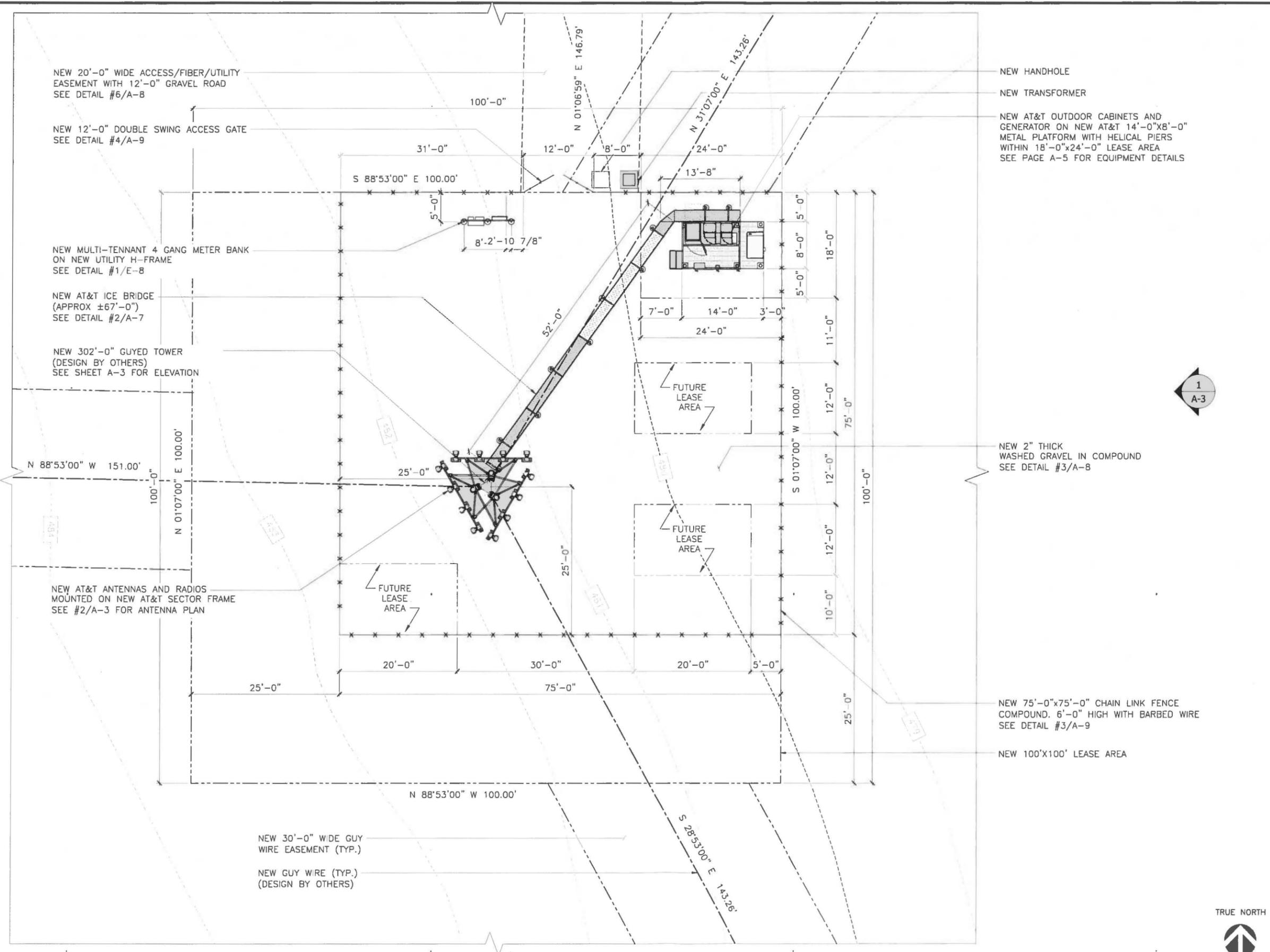


**SITE PLAN**

40' 0 20' 40' SCALE: 1" = 40'-0" (24x36)  
(OR) 1/2" = 40'-0" (11x17)

**1**

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.



NEW HANDHOLE  
 NEW TRANSFORMER  
 NEW AT&T OUTDOOR CABINETS AND GENERATOR ON NEW AT&T 14'-0"x8'-0" METAL PLATFORM WITH HELICAL PIERS WITHIN 18'-0"x24'-0" LEASE AREA SEE PAGE A-5 FOR EQUIPMENT DETAILS

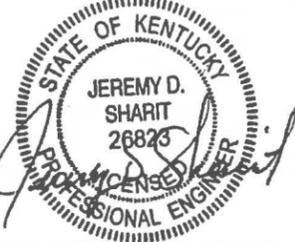


NEW 2" THICK WASHED GRAVEL IN COMPOUND SEE DETAIL #3/A-8

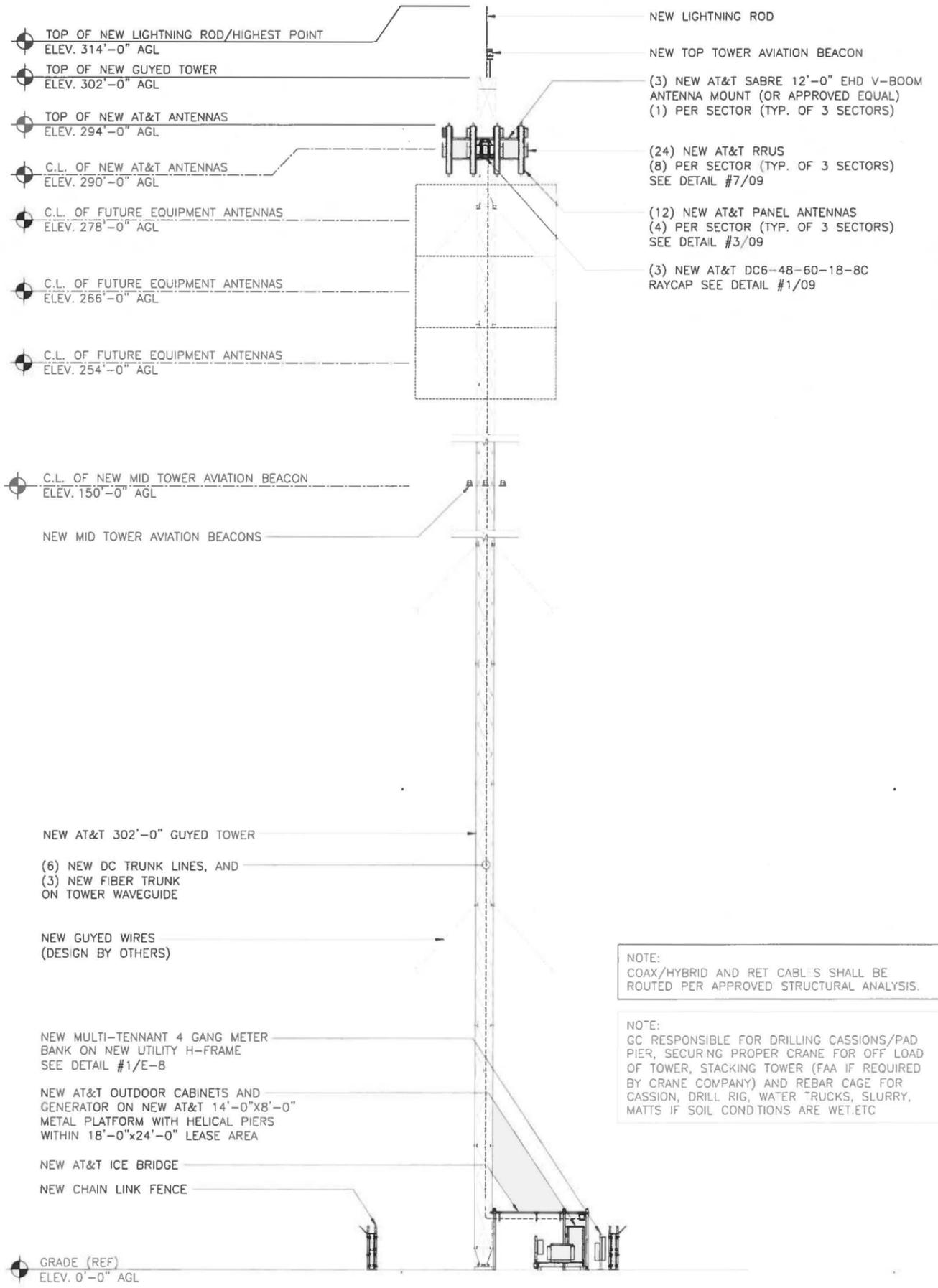
NEW 75'-0"x75'-0" CHAIN LINK FENCE COMPOUND. 6'-0" HIGH WITH BARBED WIRE SEE DETAIL #3/A-9

NEW 100'X100' LEASE AREA

NEW 30'-0" WIDE GUY WIRE EASEMENT (TYP.)  
 NEW GUY WIRE (TYP.) (DESIGN BY OTHERS)

APPLICANT	 TILLMAN INFRASTRUCTURE <small>152 W. 57TH STREET                  NEW YORK, NEW YORK 10019                  TEL: 212-709-1677</small>																				
APPLICANT	 creospan <small>1515 E WOODFIELD RD. SUITE 860                  SCHAUMBURG, IL 60173</small>																				
ENGINEER	 WESTCHESTER SERVICES LLC <small>604 FOX GLEN                  BARRINGTON, IL 60010                  TELEPHONE: 847.277.0070                  FAX: 847.277.0080                  ae@westchesterservices.com</small>																				
SITE INFORMATION	14220570 1641 LEE BURD RD BENTON, KY 42025 MARSHALL COUNTY																				
DESIGN RECORD	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">REVISIONS</th> </tr> <tr> <th style="width: 5%;">REV</th> <th style="width: 15%;">DATE</th> <th style="width: 60%;">DESCRIPTION</th> <th style="width: 20%;">BY</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>11/09/17</td> <td>PERMIT/CONSTRUCTION</td> <td>MC</td> </tr> <tr> <td>1</td> <td>10/25/17</td> <td>PERMIT/CONSTRUCTION</td> <td>MC</td> </tr> <tr> <td>0</td> <td>10/20/17</td> <td>PERMIT/CONSTRUCTION</td> <td>DS</td> </tr> </tbody> </table>	REVISIONS				REV	DATE	DESCRIPTION	BY	2	11/09/17	PERMIT/CONSTRUCTION	MC	1	10/25/17	PERMIT/CONSTRUCTION	MC	0	10/20/17	PERMIT/CONSTRUCTION	DS
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PROFESSIONAL STAMP	 <small>PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY</small>																				
SHEET TITLE	<h2 style="margin: 0;">COMPOUND PLAN</h2>																				
SHEET NUMBER	<h1 style="margin: 0;">A-2</h1>																				

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- NEW LIGHTNING ROD
- NEW TOP TOWER AVIATION BEACON
- (3) NEW AT&T SABRE 12'-0" EHD V-BOOM ANTENNA MOUNT (OR APPROVED EQUAL) (1) PER SECTOR (TYP. OF 3 SECTORS)
- (24) NEW AT&T RRUS (8) PER SECTOR (TYP. OF 3 SECTORS) SEE DETAIL #7/09
- (12) NEW AT&T PANEL ANTENNAS (4) PER SECTOR (TYP. OF 3 SECTORS) SEE DETAIL #3/09
- (3) NEW AT&T DC6-48-60-18-8C RAYCAP SEE DETAIL #1/09

NOTE:  
COAX/HYBRID AND RET CABL'S SHALL BE ROUTED PER APPROVED STRUCTURAL ANALYSIS.

NOTE:  
GC RESPONSIBLE FOR DRILLING CASSIONS/PAD PIER, SECURING PROPER CRANE FOR OFF LOAD OF TOWER, STACKING TOWER (FAA IF REQUIRED BY CRANE COMPANY) AND REBAR CAGE FOR CASSION, DRILL RIG, WATER TRUCKS, SLURRY, MATTS IF SOIL CONDITIONS ARE WET.ETC

**TOWER ELEVATION**

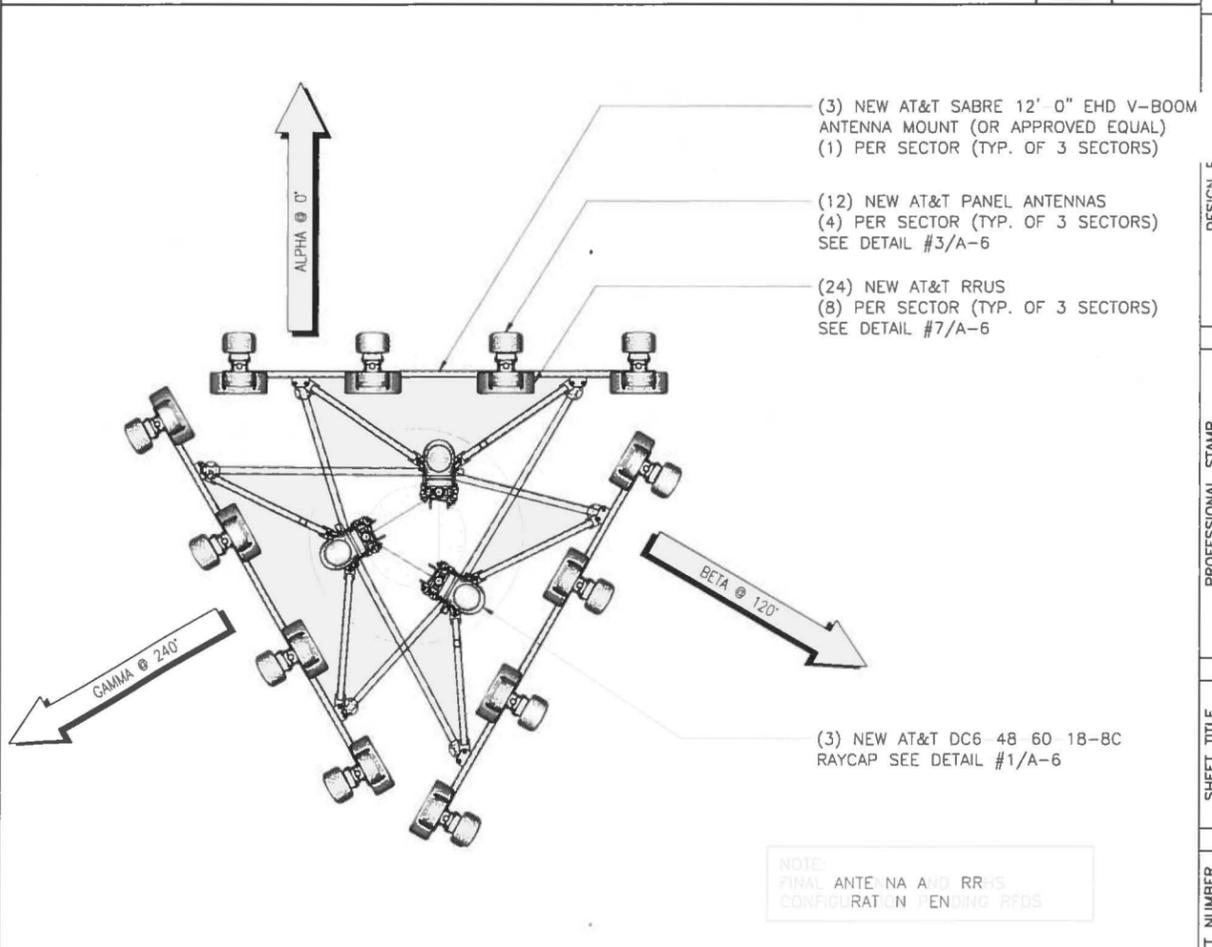
0 3' 6' 12' SCALE: 3/32" = 1'-0" (24x36)  
(OR) 3/64" = 1'-0" (11x17)

**3**

ANTENNA AND RRH SCHEDULE							
SECTOR	ANTENNA MODEL	TECHNOLOGY	AZIMUTH	ANTENNA HEIGHT	RRH MODEL	PROP. CABLES	FIBER CABLE LENGHT
ALPHA	ANDREW SBNHH-1D65C	LTE 700 UMTS 850 LTE 1900	0°	310±	(1) RRUS-11 (1) RRUS-12 (1) RRUS-32 B66	(2)(N) DC TRUNK LINES (1) (N) FIBER LINE	300±
	ANDREW SBNHH-1D65C	LTE AWS	0°	310±	(1) RRUS-32 B66	DC TRUNK SHARED W/A1 FIBER SHARED W/A1	300±
	ANDREW SBNHH-1D65C	LTE 700 (D/E) LTE WCS	0°	310±	(1) RRH2x40W-07L-DE (1) RRH4x25-WCS-4R	DC TRUNK SHARED W/A1 FIBER SHARED W/A1	300±
	ANDREW SBNHH-1D65C	LTE WCS	0°	310±	(1) RRUS-32	DC TRUNK SHARED W/A1 FIBER SHARED W/A1	300±
BETA	ANDREW SBNHH-1D65C	LTE 700 UMTS 850 LTE 1900	120°	310±	(1) RRUS-11 (1) RRUS-12 (1) RRUS-32 B2	(2)(N) DC TRUNK LINES (1) (N) FIBER LINE	300±
	ANDREW SBNHH-1D65C	LTE AWS	120°	310±	(1) RRUS-32 B66	DC TRUNK SHARED W/B1 FIBER SHARED W/B1	300±
	ANDREW SBNHH-1D65C	LTE 700 (D/E) LTE WCS	120°	310±	(1) RRH2x40W-07L-DE (1) RRH4x25-WCS-4R	DC TRUNK SHARED W/B1 FIBER SHARED W/B1	300±
	ANDREW SBNHH-1D65C	LTE WCS	120°	310±	(1) RRUS-32	DC TRUNK SHARED W/B1 FIBER SHARED W/B1	300±
GAMMA	ANDREW SBNHH-1D65C	LTE 700 UMTS 850 LTE 1900	240°	310±	(1) RRUS-11 (1) RRUS-12 (1) RRUS-32 B2	(2)(N) DC TRUNK LINES (1) (N) FIBER LINE	300±
	ANDREW SBNHH-1D65C	LTE AWS	240°	310±	(1) RRUS-32 B66	DC TRUNK SHARED W/C1 FIBER SHARED W/C1	300±
	ANDREW SBNHH-1D65C	LTE 700 (D/E) LTE WCS	240°	310±	(1) RRH2x40W-07L-DE (1) RRH4x25-WCS-4R	DC TRUNK SHARED W/C1 FIBER SHARED W/C1	300±
	ANDREW SBNHH-1D65C	LTE WCS	240°	310±	(1) RRUS-32	DC TRUNK SHARED W/C1 FIBER SHARED W/C1	300±

**ANTENNA AND COAX CABLE REQUIREMENTS**

SCALE: N.T.S. **2**



**ANTENNA LAYOUT**

0 1' 2' 3' SCALE: 3/8" = 1'-0" (24x36)  
(OR) 3/16" = 1'-0" (11x17)

**1**

**TILLMAN INFRASTRUCTURE**  
152 W. 5TH STREET  
NEW YORK, NEW YORK 10018  
(212) 213-7000-1077

**creospan**  
1515 E WOODFIELD RD SUITE 200  
SCHAUMBURG, IL 60173

**WESTCHESTER SERVICES LLC**  
604 FOX GLEN  
BARRINGTON, IL 60010  
TELEPHONE: 847.277.0070  
FAX : 847.277.0080  
ae@westchesterservices.com

14220570  
1641 LEE BURD RD  
BENTON, KY 42025  
MARSHALL COUNTY

**REVISIONS**

REV	DATE	DESCRIPTION	BY
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0	10/20/17	PERMIT/CONSTRUCTION DS	

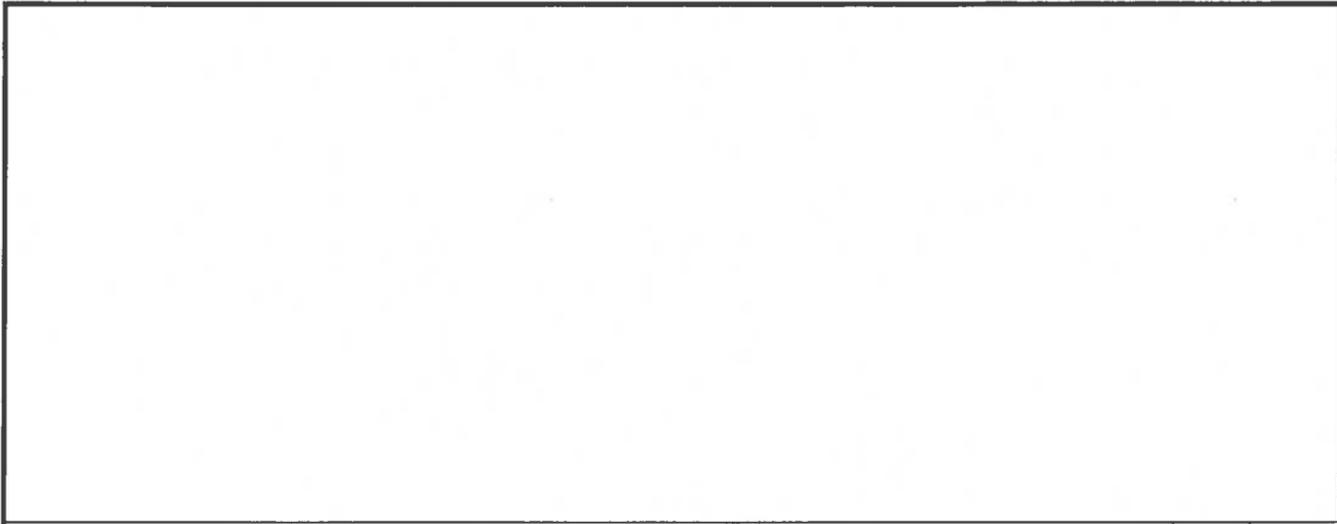
STATE OF KENTUCKY  
JEREMY D. SHARIT  
26823  
PROFESSIONAL ENGINEER

**TOWER ELEVATION AND ANTENNA LAYOUT**

**A-3**



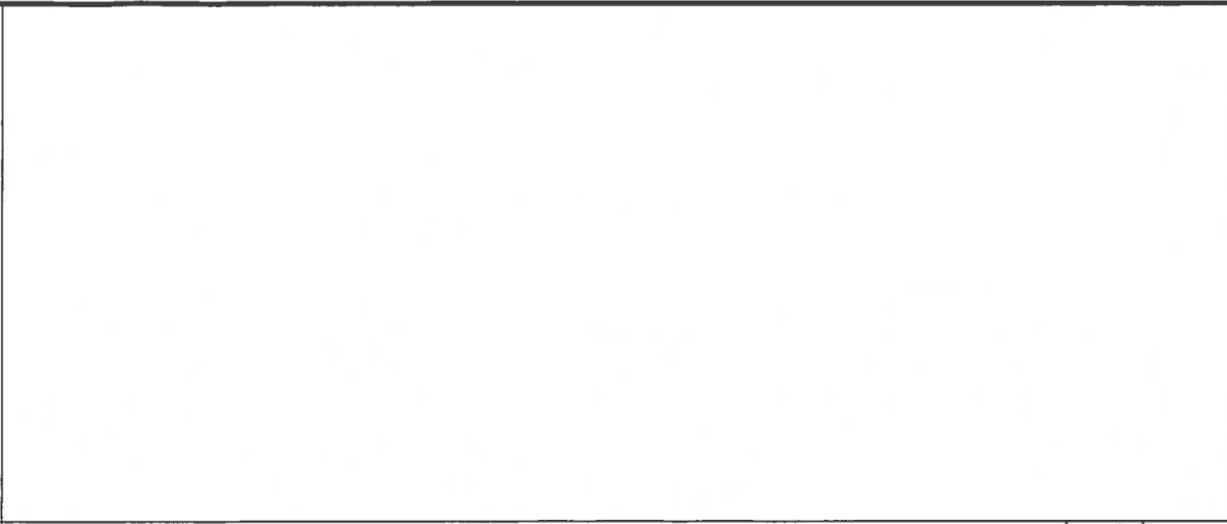
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NOT USED

SCALE  
N.T.S.

6



NOT USED

SCALE  
N.T.S.

5

**TILLMAN**  
INFRASTRUCTURE

152 W. 57TH STREET  
NEW YORK, NEW YORK 10019  
TEL: 212-706-1677

**creospan**

1515 E WOODFIELD RD SUITE 860  
SCHAUMBURG, IL 60173

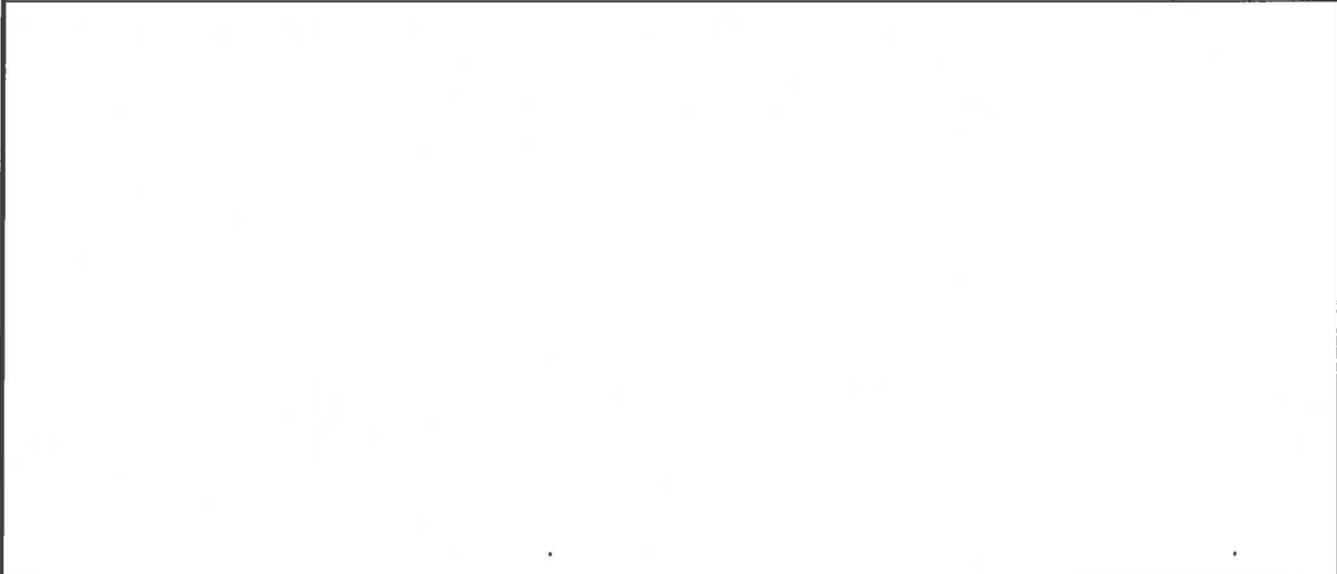
**WESTCHESTER**  
SERVICES LLC

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BARRINGTON, IL 60010  
TELEPHONE: 847.277.0070  
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ae@westchesterservices.com

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0	10/20/17	PERMIT/CONSTRUCTION DS	



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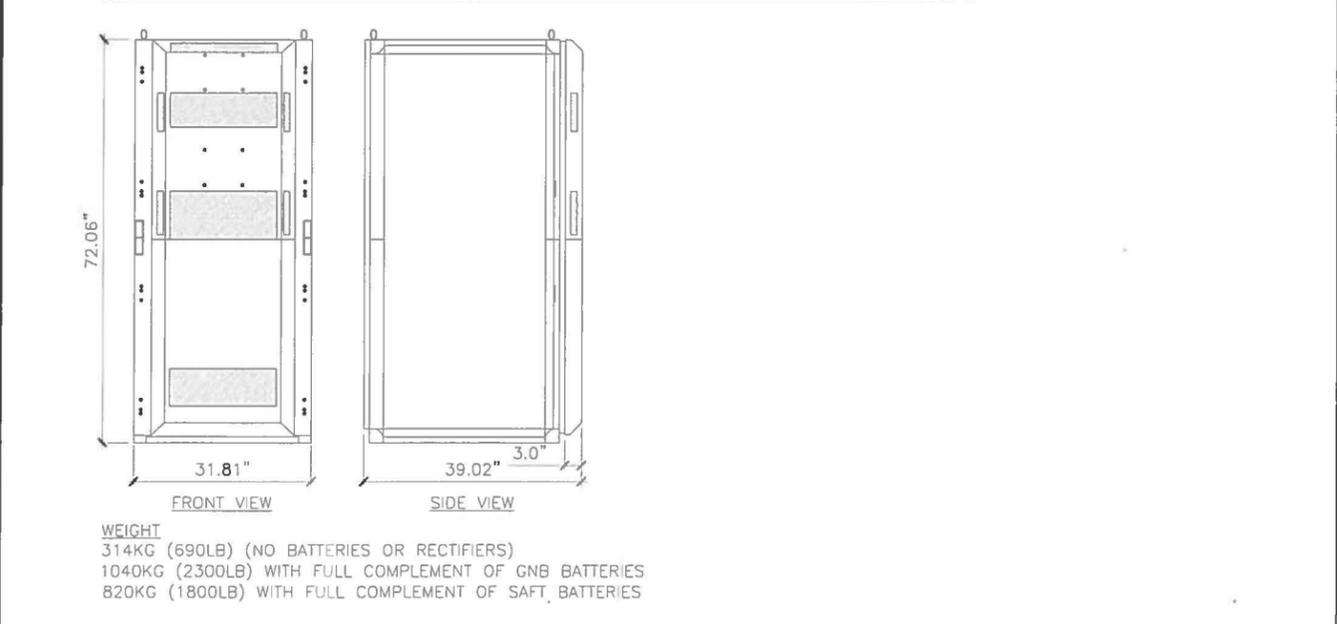
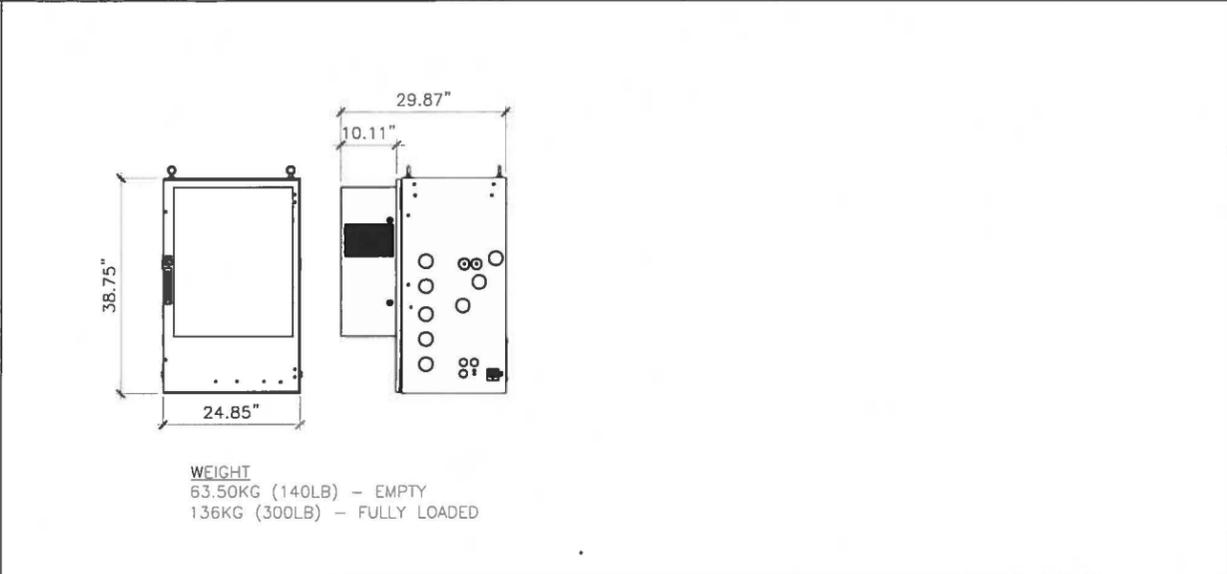
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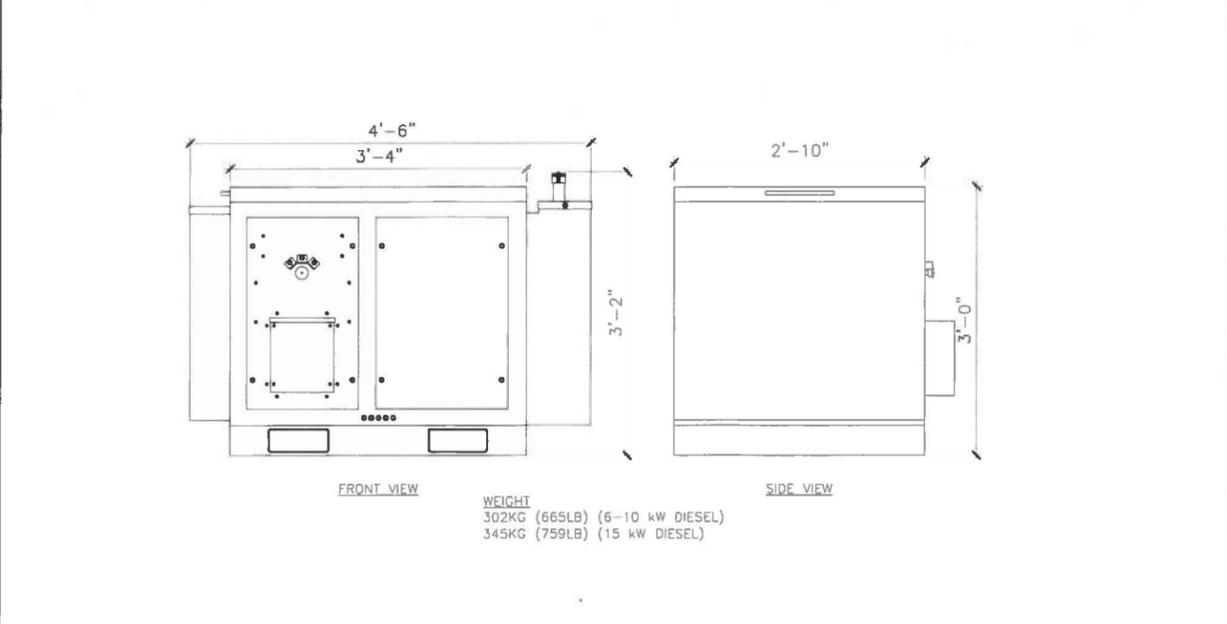
PURCELL FLX21 CABINET

SCALE  
N.T.S.

3



EMERSON NETSURE 512 DC POWER SYSTEM



POLAR POWER 8220-100 DC GENERATOR

SCALE  
N.T.S.

1

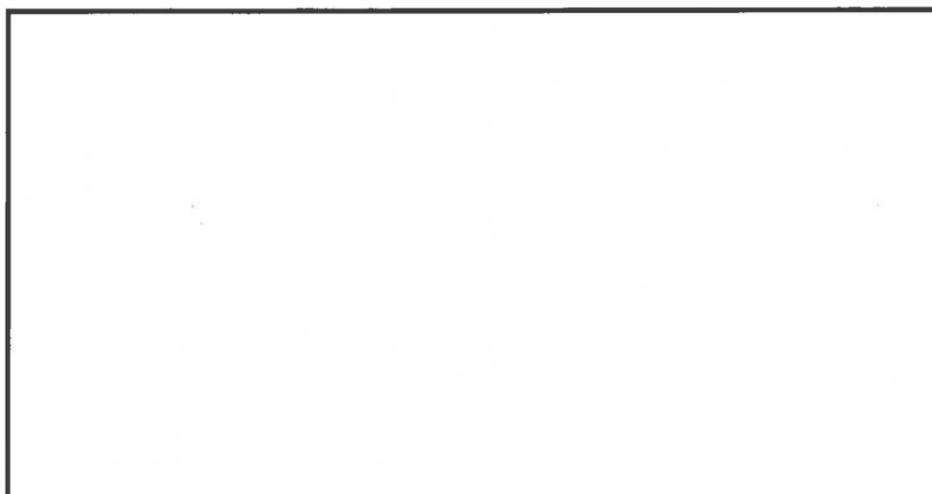
STATE OF KENTUCKY  
JEREMY D. SHARIT  
26823  
PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY

EQUIPMENT SPECIFICATIONS

A-5

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**NOT USED** **9**

SIZE AND WEIGHT TABLE

RRH	WIDTH	DEPTH	HEIGHT W/O CABLE MANAGEMENT COVER	WEIGHT W/O BRACKET
RRUS-12	18.5"	7.5"	20.4"	50 LBS
RRUS-E2	18.5"	7.5"	20.4"	60 LBS

NOTE:  
DIMENSIONS DO NOT INCLUDE MOUNTING BRACKET AND SOLAR SHIELD.

**REMOTE RADIO HEAD DETAIL** **8**

SIZE AND WEIGHT TABLE

RRH	WIDTH	DEPTH	HEIGHT W/O CABLE MANAGEMENT COVER	WEIGHT W/O BRACKET
RRUS-A2	12.1"	7"	27.2"	22 LBS
RRUS-32	12.1"	7"	27.2"	53 LBS
RRUS-32 (B66A)	12.1"	7"	27.2"	53 LBS

NOTE:  
DIMENSIONS DO NOT INCLUDE MOUNTING BRACKET AND SOLAR SHIELD.

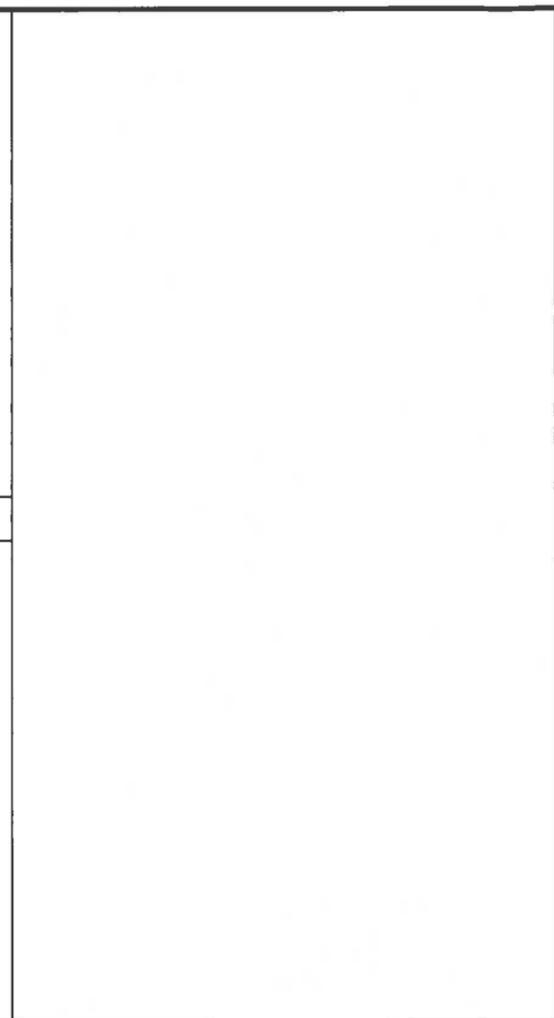
**REMOTE RADIO HEAD DETAIL** **7**

SIZE AND WEIGHT TABLE

RRH	WIDTH	DEPTH	HEIGHT W/O CABLE MANAGEMENT COVER	WEIGHT W/O BRACKET
RRUS-11	17"	7.2"	19.7"	50.6 LBS
RRUS-11 (REDESIGN)	17"	7.2"	19.7"	55 LBS

NOTE:  
DIMENSIONS DO NOT INCLUDE MOUNTING BRACKET AND SOLAR SHIELD.

**REMOTE RADIO HEAD DETAIL** **6**



**NOT USED** **5**

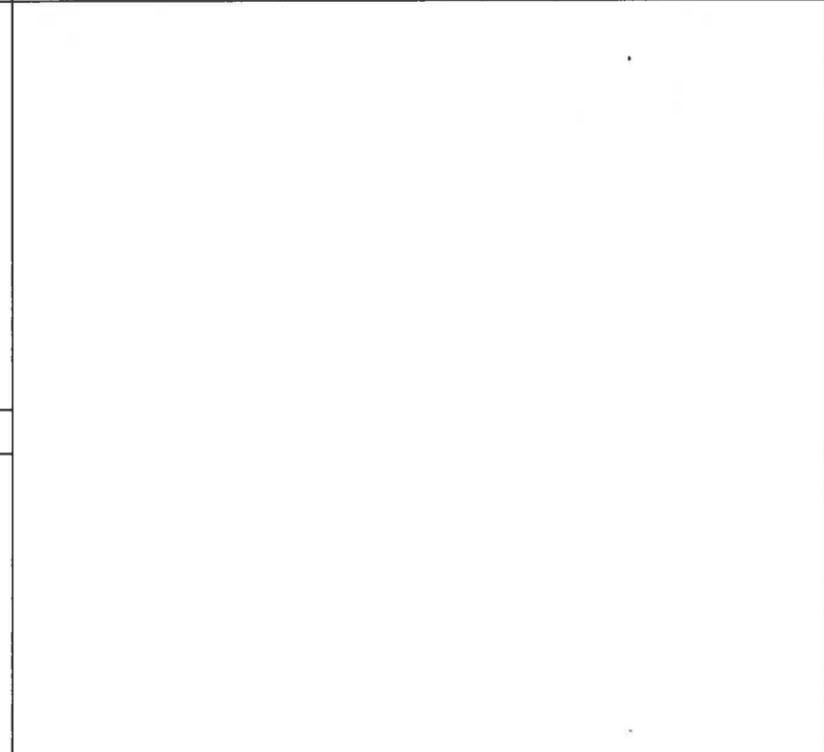


**NOT USED** **4**

COMMSCOPE ANTENNAS SBNHH-1D65C

DIMENSIONS, HXWXD: 96"x11.9"x7.1"  
 SURVIVAL WIND SPEED: >150 MPH  
 WEIGHT, WITHOUT MOUNTING: 49.6 LBS. (22.5 kg)  
 RET SYSTEM WEIGHT: 5.0 LBS.  
 CONNECTOR: (6) 7/16 DIN FEMALE  
 CONNECTOR POSITION: BOTTOM  
 MOUNTING POLE: 2-4.5 INCHES

**ANTENNA DETAIL** **3**



**NOT USED** **2**

**RAYCAP DC6-48-60-18-8C (SQUID)** **1**

**TILLMAN INFRASTRUCTURE**  
 152 W. 57TH STREET  
 NEW YORK, NEW YORK 10019  
 TEL: 212-706-1677

**creospan**  
 1515 E WOODFIELD RD. SUITE 860  
 SCHAUMBURG, IL 60173

**WESTCHESTER SERVICES LLC**  
 604 FOX GLEN  
 BARRINGTON, IL 60010  
 TELEPHONE: 847.277.0070  
 FAX: 847.277.0080  
 ae@westchesterservices.com

14220570  
 1641 LEE BURD RD  
 BENTON, KY 42025  
 MARSHALL COUNTY

REVISIONS

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STATE OF KENTUCKY  
**JEREMY D. SHART**  
 26823  
 REGISTERED PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY.

**RRH, ANTENNA & EQUIPMENT SPECIFICATIONS**

**A-6**

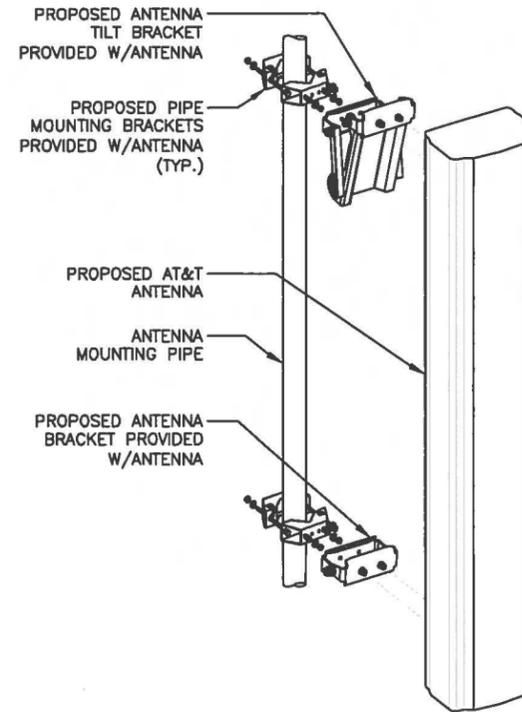
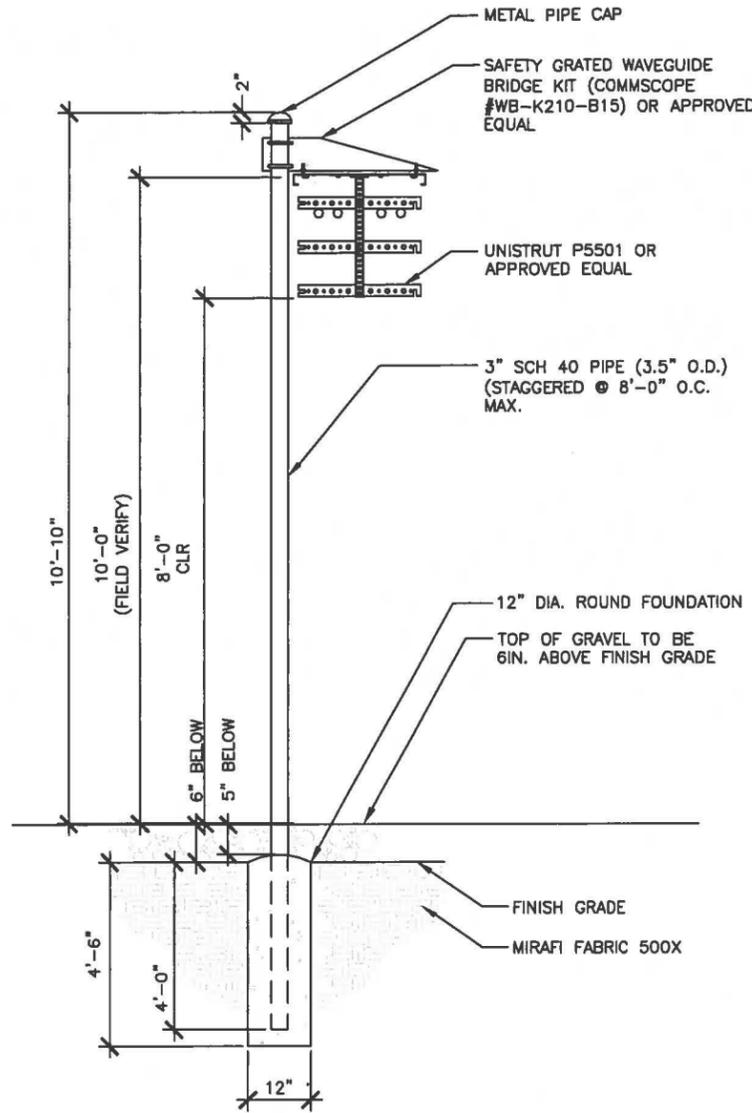
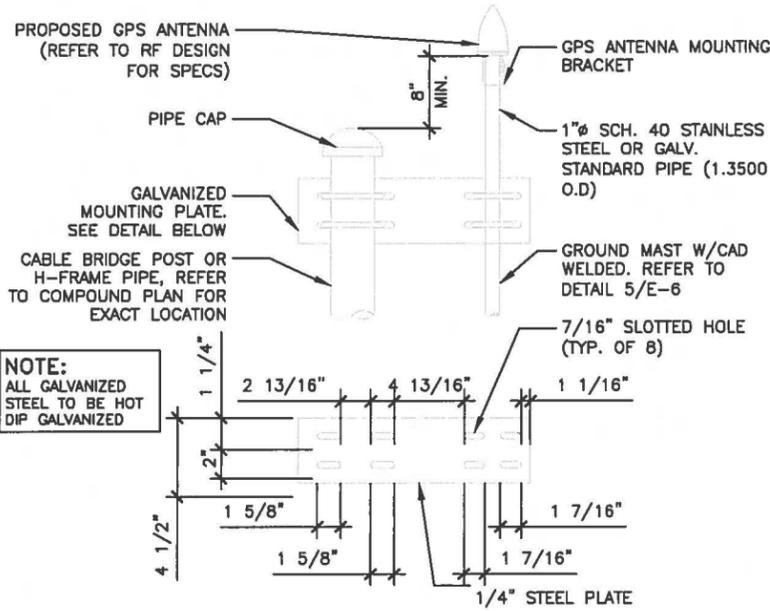
APPLICANT  
ENGINEER  
SITE INFORMATION  
DESIGN RECORD  
PROFESSIONAL STAMP  
SHEET TITLE  
SHEET NUMBER

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**GPS MINIMUM SKY VIEW REQUIREMENTS**

**NOTES:**

1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
2. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1" NOMINAL DIAMETER PIPE (1.315 OVERALL DIAMETER), SCHEDULE 40, GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 18 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.
3. IT IS CRITICAL THAT THE GPS ANTENNA IS MOUNTED SUCH THAT IT IS WITHIN 2 DEGREES OF LEVEL.
4. DO NOT SWEEP TEST GPS ANTENNA.
5. DO SWEEP TEST THE GPS COAX.



**GPS ANTENNA**

**1 WAVEGUIDE DETAIL**

**2 ANTENNA MOUNTING DETAIL**

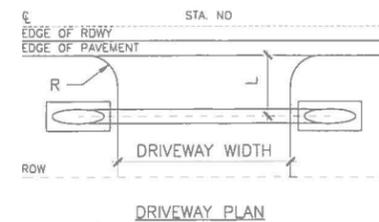
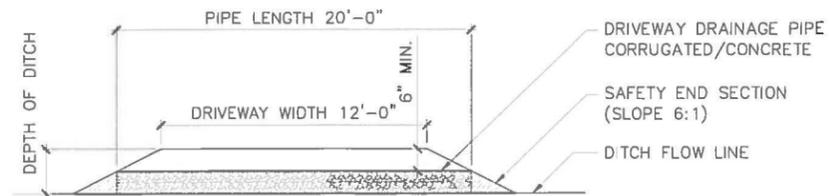
**3**

**NOT USED**

**4 NOT USED**

**5 CULVERT DETAIL**

**6**



**REVISIONS**

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2	11/09/17	PERMIT/CONSTRUCTION	MC
1	10/25/17	PERMIT/CONSTRUCTION	MC
0	10/20/17	PERMIT/CONSTRUCTION	DS

STATE OF KENTUCKY

JEREMY D. SHARIT  
26823

REGISTERED PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY.

**DETAILS**

**A-7**

**TILLMAN INFRASTRUCTURE**

152 W. 57TH STREET  
NEW YORK, NEW YORK 10019  
TEL: 212-706-1677

**creospan**

1515 E WOODFIELD RD. SUITE 860  
SCHAUMBURG, IL 60173

**WESTCHESTER SERVICES LLC**

604 FOX GLEN  
BARRINGTON, IL 60010  
TELEPHONE: 847.277.0070  
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ae@westchesterservices.com

14220570  
1641 LEE BURD RD  
BENTON, KY 42025  
MARSHALL COUNTY

APPLICANT

APPLICANT

ENGINEER

SITE INFORMATION

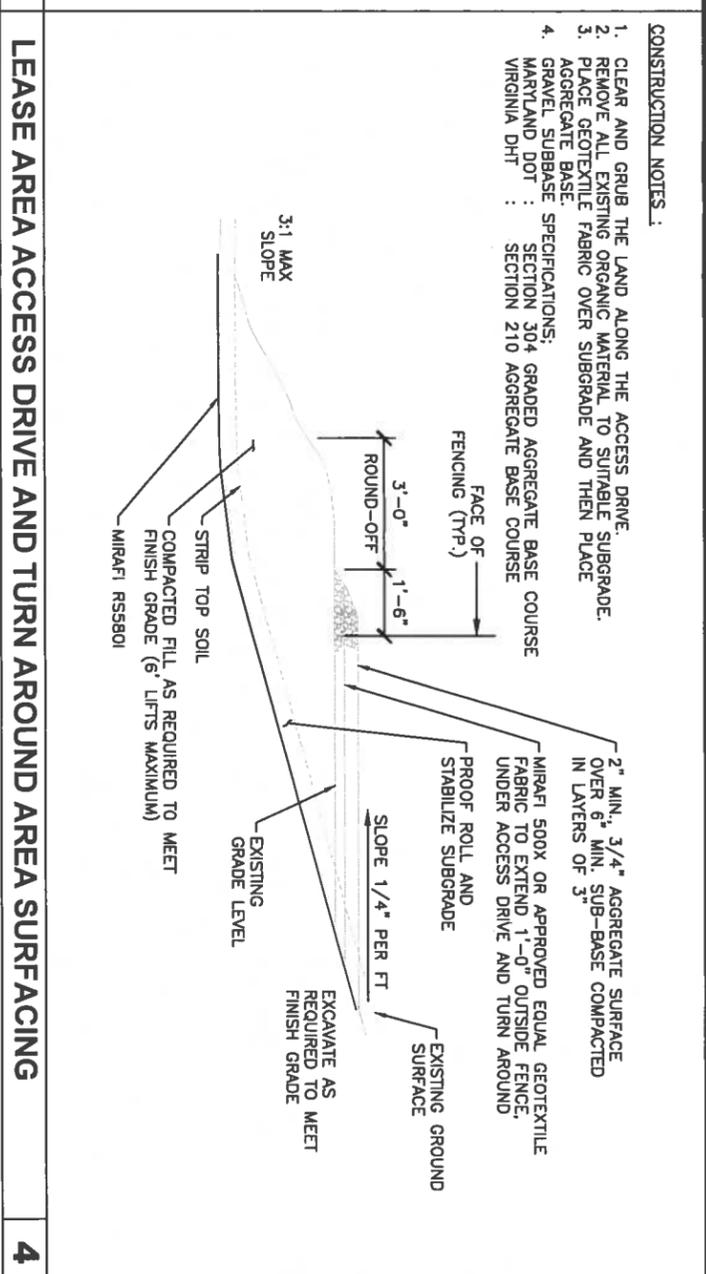
DESIGN RECORD

PROFESSIONAL STAMP

SHEET TITLE

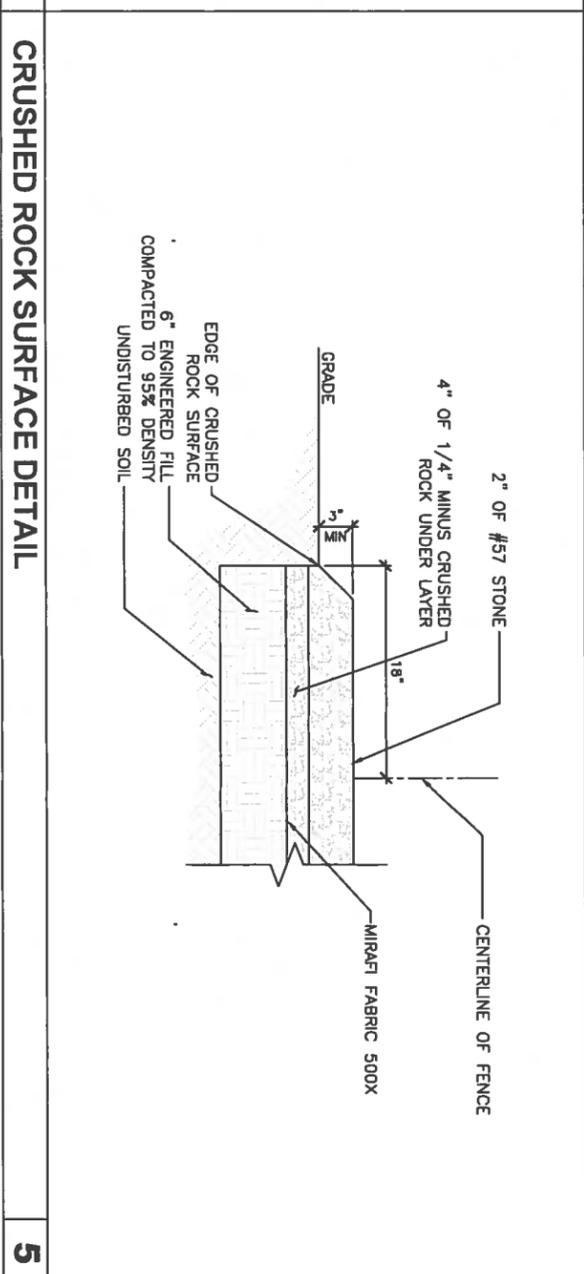
SHEET NUMBER

<b>NOT USED</b>	<b>1</b>
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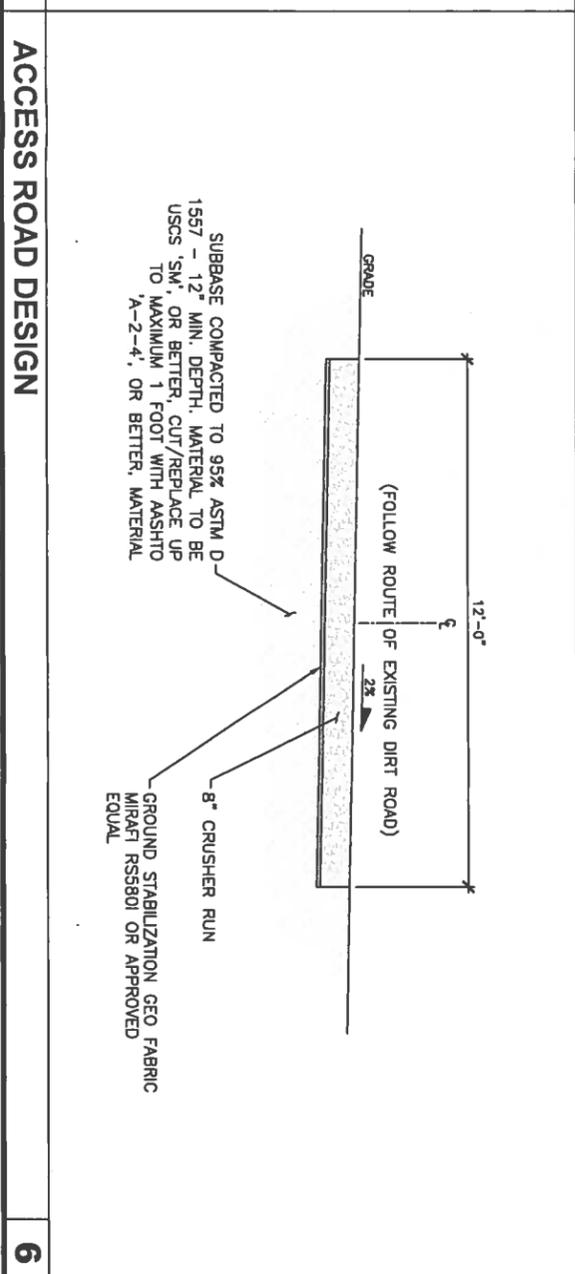
<b>CONSTRUCTION NOTES:</b>	<ol style="list-style-type: none"> <li>CLEAR AND GRUB THE LAND ALONG THE ACCESS DRIVE.</li> <li>REMOVE ALL EXISTING ORGANIC MATERIAL TO SUITABLE SUBGRADE.</li> <li>PLACE GEOTEXTILE FABRIC OVER SUBGRADE AND THEN PLACE AGGREGATE BASE.</li> <li>GRAVEL SUBBASE SPECIFICATIONS: MARYLAND DOT : SECTION 304 GRADED AGGREGATE BASE COURSE VIRGINIA DHT : SECTION 210 AGGREGATE BASE COURSE</li> </ol>
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<b>NOT USED</b>	<b>2</b>
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<b>CONSTRUCTION NOTES:</b>	<ol style="list-style-type: none"> <li>2" MIN., 3/4" AGGREGATE SURFACE OVER 6" MIN. SUB-BASE COMPACTED IN LAYERS OF 3"</li> <li>MIRAFI 500X OR APPROVED EQUAL GEOTEXTILE FABRIC TO EXTEND 1'-0" OUTSIDE FENCE, UNDER ACCESS DRIVE AND TURN AROUND.</li> <li>PROOF ROLL AND STABILIZE SUBGRADE</li> <li>SLOPE 1/4" PER FT</li> <li>EXISTING GROUND SURFACE</li> <li>EXCAVATE AS REQUIRED TO MEET FINISH GRADE</li> <li>EXISTING GRADE LEVEL</li> <li>COMPACTED FILL AS REQUIRED TO MEET FINISH GRADE (6' LIFTS MAXIMUM)</li> <li>MIRAFI RS580I</li> <li>STRIP TOP SOIL</li> <li>3:1 MAX SLOPE</li> </ol>
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<b>NOT USED</b>	<b>3</b>
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<b>CONSTRUCTION NOTES:</b>	<ol style="list-style-type: none"> <li>2" THICK WASHED GRAVEL (#57 STONE)</li> <li>4" OF COMPACTED CRUSHED CONCRETE OR LIMESTONE UNDERLAYER</li> <li>FINISH GRADE</li> <li>MIRAFI FABRIC 500X</li> </ol>
----------------------------	--

**TILLMAN**  
**INFRASTRUCTURE**  
 152 W. 57TH STREET  
 NEW YORK, NEW YORK 10019  
 TEL: 212-708-1977

**creospan**  
 1515 E WOODFIELD RD. SUITE 860  
 SCHAUUBURG, IL 60173

**WESTCHESTER SERVICES LLC**  
 604 FOX GLEN  
 BARRINGTON, IL 60010  
 TELEPHONE: 847.277.0070  
 FAX: 847.277.0080  
 84@westchesterse.com

**SITE INFORMATION**  
 14220570  
 1641 LEE BURD RD  
 BENTON, KY 42025  
 MARSHALL COUNTY

REV	DATE	DESCRIPTION	BY
2	11/09/17	PERMIT/CONSTRUCTION	MC
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**PROFESSIONAL STAMP**  
 STATE OF KENTUCKY  
 JEREMY D. SMART  
 26825  
 PROFESSIONAL ENGINEER  
 1. I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY.

**SHEET NUMBER**  
**A-8**

**SHEET TITLE**  
**DETAILS**

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**FENCE NOTES:**

(INSTALL FENCING PER SECTION TOWN 12-113 OF THE DAVIE CODE)

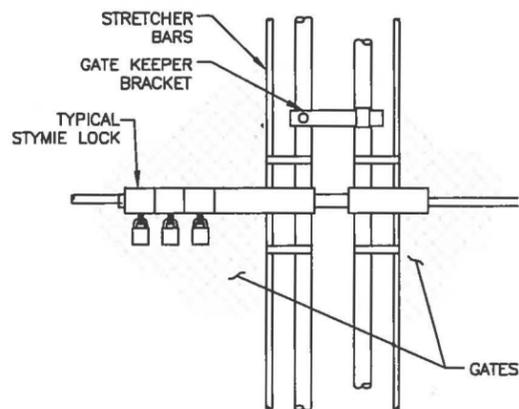
1. GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 2 7/8" SCHEDULE 40 FOR GATE WIDTHS UP THROUGH 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST: 2-3/8" SCHEDULE 40 PIPE PER ASTM-F1083.
3. GATE FRAME: 1 1/2" SCHEDULE 40 PIPE PER ASTM-F1083. & ASTM F900.
4. TOP RAIL & BRACE RAIL: 1 3/8" SCHEDULE 40 PIPE PER ASTM-F1083.
5. FABRIC: 2" MESH No. 9 GAGE GALVANIZED WIRE SECURELY FASTENED TO TENSION WIRE, LINEPOST, BARS CONFORMING TO ASTM-A392, & AASHTO M 181.
6. TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 12" INTERVALS VERT & 20" HORZ. INSTALL HOG RINGS ON TENSION WIRE AT 20" INTERVALS.
7. TENSION WIRE: 7 GA. GALVANIZED STEEL.
8. BARBED WIRE: 3 STRANDS OF DOUBLE STRANDED 12-1/2 GAUGE TWISTED WIRE, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS CONFORMING TO AASHTO M 280.
9. STYMIE LOCK: SEE DETAIL 1/A-9
10. LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL GOVERN INSTALLATION.
11. (HEIGHT OF FABRIC) SHALL BE AS SHOWN ON THE COMPOUND PLANS. 72" MIN. - 96" MAX..

**STANDARD COMBINATION LOCK SPEC**  
 ALL LOCKS SHOULD BE MARINE GRADE BRASS LOCK WITH STAINLESS STEEL SHACKLE, SOLID BRASS BODY PROVIDES STRENGTH AND CORROSION RESISTANCE.

**STAINLESS STEEL SHACKLES** RESIST HACKSAWS, BOLT CUTTERS, AND CORROSIVE WEATHER CONDITIONS  
 ALL LOCKS SHOULD BE A PROGRAMMABLE COMBINATION LOCK THAT IS STRONG, DURABLE AND HIGHLY WEATHER RESISTANT

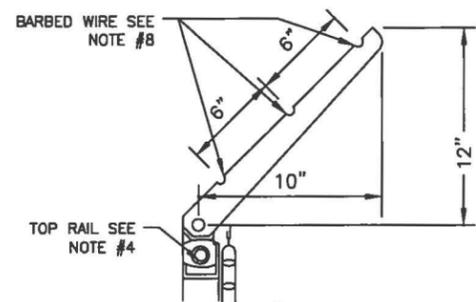
THE FOLLOWING LOCKS ARE APPROVED TO BE USED ON SITES OR APPROVED EQUAL:

- PART NUMBERS:**  
 ABUS 180/HB 50-63 WITH 2-1/4" MARINE GRADE WITH 4 DIALS.  
 ABUS 180 COMBINATION 1" MARINE GRADE WITH 4 DIALS.



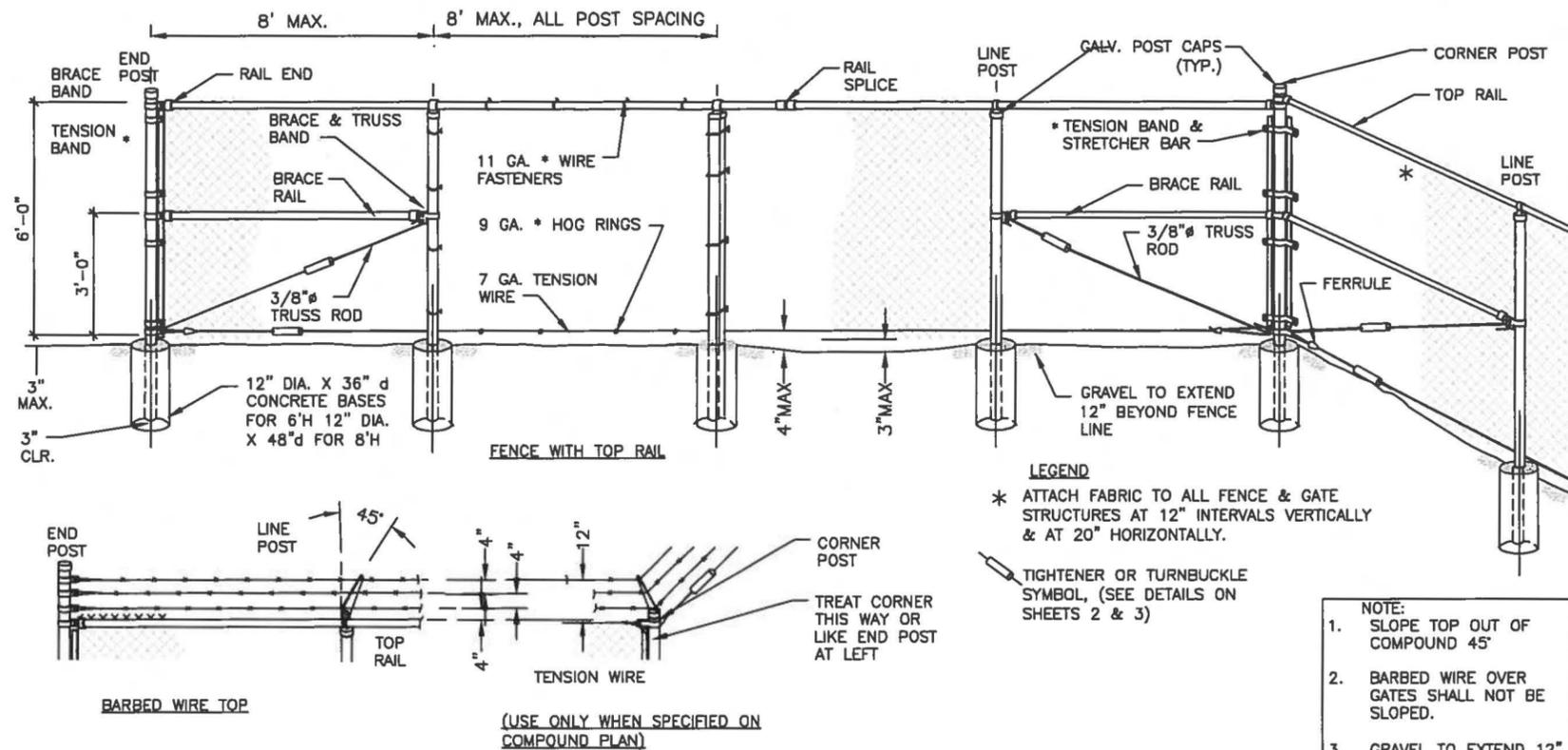
**STYMIE LOCK DETAIL**

**1**



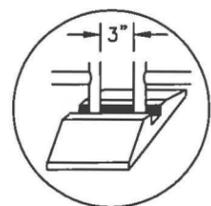
**BARBED WIRE DETAIL**

**2**



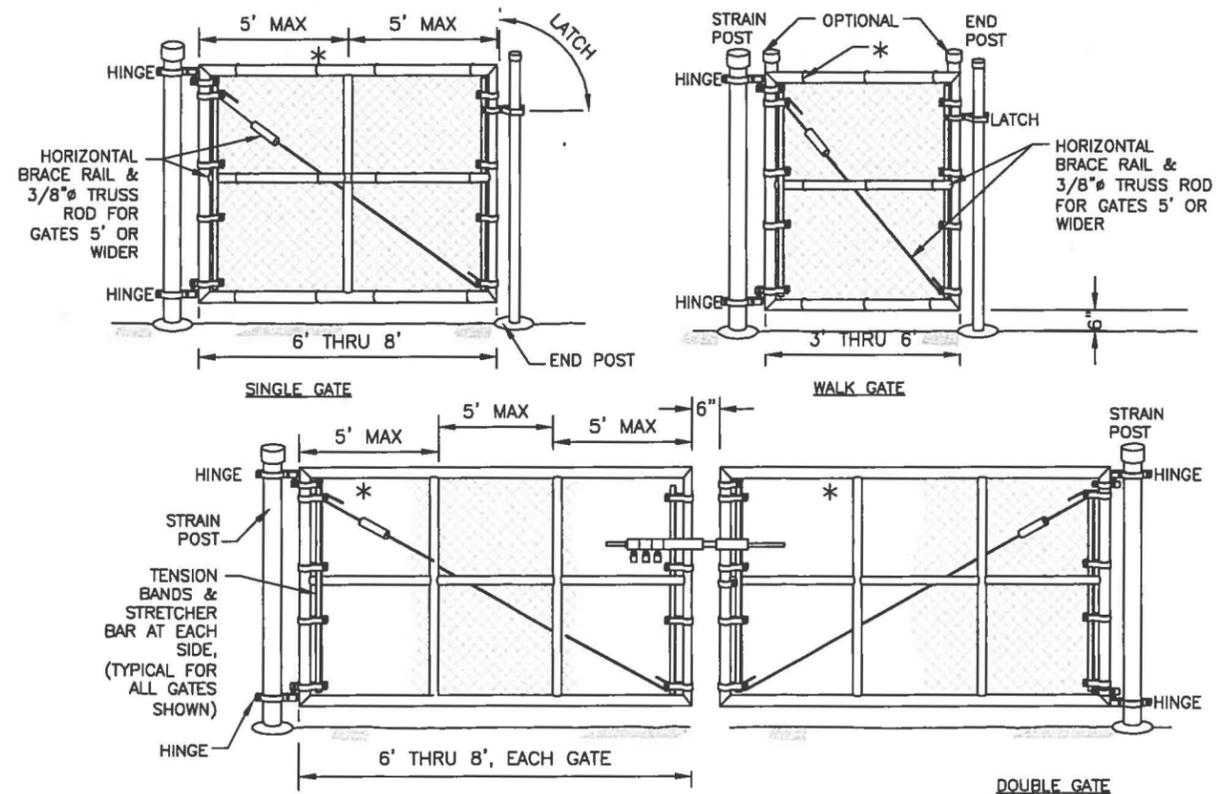
**FENCE DETAIL**

**3**



DROP ROD IS OPTIONAL IF GATE FRAMES EXTEND DOWN TO CENTER REST. USE LATCH SHOWN FOR WALK OR SINGLE GATE.

DETAIL # 1 TYPICAL CENTER REST



DESIGN RECORD

REV	DATE	DESCRIPTION	BY
2	11/09/17	PERMIT/CONSTRUCTION MC	
1	10/25/17	PERMIT/CONSTRUCTION MC	
0	10/20/17	PERMIT/CONSTRUCTION DS	

PROFESSIONAL STAMP



I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY.

SHEET TITLE

**FENCE DETAILS**

SHEET NUMBER

**A-9**

APPLICANT



APPLICANT



ENGINEER



SITE INFORMATION

14220570  
 1641 LEE BURD RD  
 BENTON, KY 42025  
 MARSHALL COUNTY

**REVISIONS**

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

**NOTICE**

BLUE BACKGROUND W/  
WHITE LETTERING

WHITE BACKGROUND W/  
BLACK LETTERING

WHITE BACKGROUND W/  
BLACK LETTERING

**NOTICE**

RADIO FREQUENCY ENVIRONMENT AREA  
AUTHORIZED PERSONNEL ONLY BEYOND THIS POINT

Personnel proceeding beyond this point must obey all posted signs, stipulations and Federal Regulations for working in radio frequency environments.

In accordance with Federal Regulations on radio frequency emissions.

12"x18" DIGITAL PRINT  
MOUNTED ON .040  
THICK ALUMINUM  
OPERATIONS PROVIDED

**CAUTION**

YELLOW BACKGROUND W/  
BLACK LETTERING

WHITE BACKGROUND W/  
BLACK LETTERING AND  
YELLOW SYMBOL

**Beyond this point:  
Radio frequency fields at this site  
exceed the FCC rules for human  
exposure.**

**Failure to obey all posted signs and site  
guidelines for working in radio frequency  
environments could result in serious injury.**

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

12"x18" DIGITAL PRINT  
MOUNTED ON .040  
THICK ALUMINUM  
(OPERATIONS PROVIDED)

**WARNING**

RED BACKGROUND W/  
BLACK LETTERING

WHITE BACKGROUND W/  
BLACK LETTERING AND  
RED SYMBOL

**Beyond this point:  
Radio frequency fields at this site  
exceed the FCC rules for human  
exposure.**

**Failure to obey all posted signs and site  
guidelines for working in radio frequency  
environments could result in serious injury.**

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

12"x18" DIGITAL PRINT  
MOUNTED ON .040  
THICK ALUMINUM  
(OPERATIONS PROVIDED)

**NOTICE - RF SIGN (BLUE)** **1**

**CAUTION - RF SIGN** **2**

**WARNING -RF SIGN** **3**

**NO TRESSPASSING**

**AUTHORIZED  
PERSONNEL  
ONLY**

12"x18" .040  
ALUMINUM

**NO - TRESSPASSING SIGN** **4**

WHITE BACKGROUND

BLACK TEXT

RED TEXT

SITE NAME: TIFT FCC TOWER REGISTRATION # 10099875  
SITE NUMBER: 10099875

SITE ADDRESS:  
SOUTH SIDE OF HWY 82  
TY TY, GA 31795

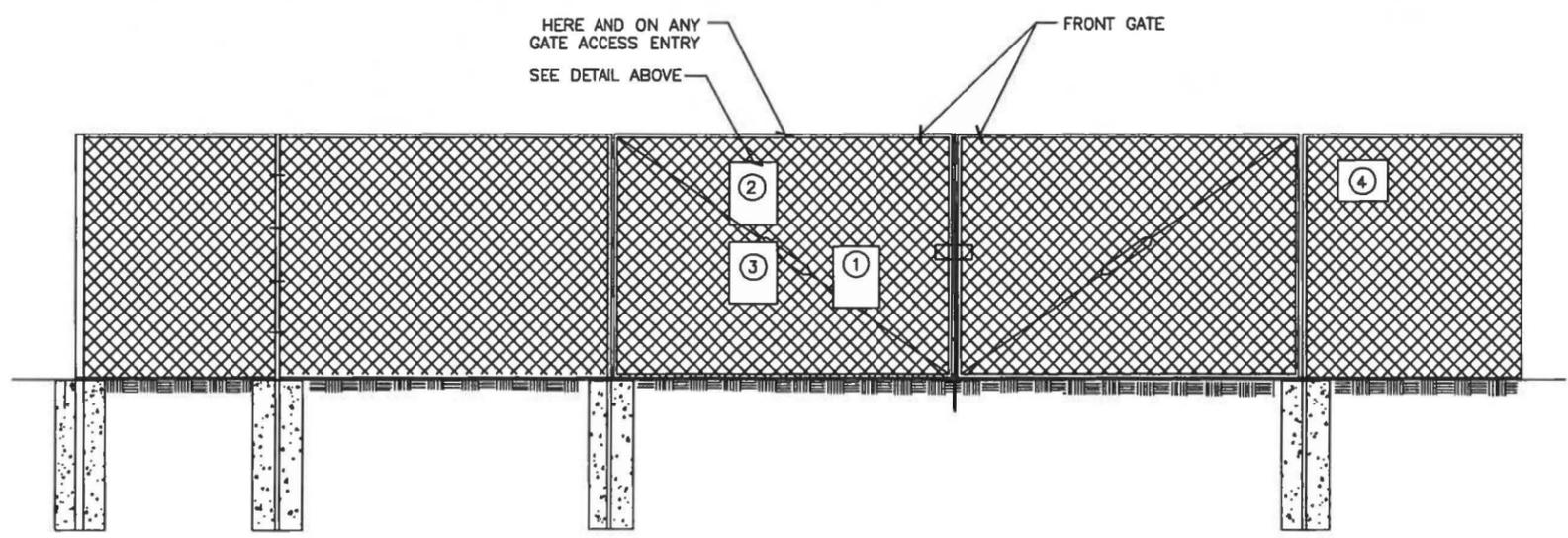
IN CASE OF EMERGENCY, DIAL 911

**NO TRESSPASSING**

FOR LEASING INFORMATION: FOR OPERATIONS & ACCESS: 800-821-5825

24"x30"  
WHITE BACKGROUND, RED/BLACK LETTERING  
MOUNTING LOCATION: SHELTER OR TENANT IMPROVEMENT ROOM  
DOOR. IF OUTDOOR CABINET SITE PLACE ON END CABINET  
CLOSEST TO SITE ACCESS POINT. PLACE ON GENERATOR.  
QUANTITY: 1 OR 2

- SIGNAGE NOTES:
- SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL & PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
  - SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE & FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE HOG RINGS (FENCE) OR BRACKETS, WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METALS AS THE STRUCTURE TO AVOID GALVANIC CORROSION.
  - ADDITIONAL E911 ADDRESS AND FCC REGISTRATION SIGNS SHALL BE MOUNTED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF.
  - CARRIER SITE # \$ EMERGENCY CONTACT SIGNS SHALL BE MOUNTED ON THE EQUIPMENT CABINET WITH PERMANENT SET ADHESIVE. TWO SIDED TAPE SHALL BE UTILIZED AT EACH CORNER OF THE BACKSIDE TO AVOID PLACEMENT UNTIL THE ADHESIVE SETS.



**PROPERTY OF TILLMAN INFRASTRUCTURE** **5**

**BRT GROUP, LLC SIGN ID** **6**

TILLMAN  
INFRASTRUCTURE

creospan

**WESTCHESTER SERVICES LLC**  
604 FOX GLEN  
BARRINGTON, IL 60010  
TELEPHONE: 847.277.0070  
FAX: 847.277.0080  
ae@westchesterservices.com

14220570  
1641 LEE BURD RD  
BENTON, KY 42025  
MARSHALL COUNTY

REVISIONS

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0	10/20/17	PERMIT/CONSTRUCTION DS	

STATE OF KENTUCKY  
JEREMY D. SHARIT  
26823  
PROFESSIONAL ENGINEER

SIGNAGE DETAILS

**A-10**

APPLICANT  
ENGINEER  
SITE INFORMATION  
DESIGN RECORD  
PROFESSIONAL STAMP  
SHEET TITLE  
SHEET NUMBER

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**TILLMAN**  
**INFRASTRUCTURE**  
 152 W. 57TH STREET  
 NEW YORK, NEW YORK 10019  
 TEL: 212-706-1677

**creospan**  
 1515 E WOODFIELD RD. SUITE 860  
 SCHAUMBURG, IL 60173

**WESTCHESTER**  
**SERVICES LLC**  
 604 FOX GLEN  
 BARRINGTON, IL 60010  
 TELEPHONE: 847.277.0070  
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 1641 LEE BURD RD  
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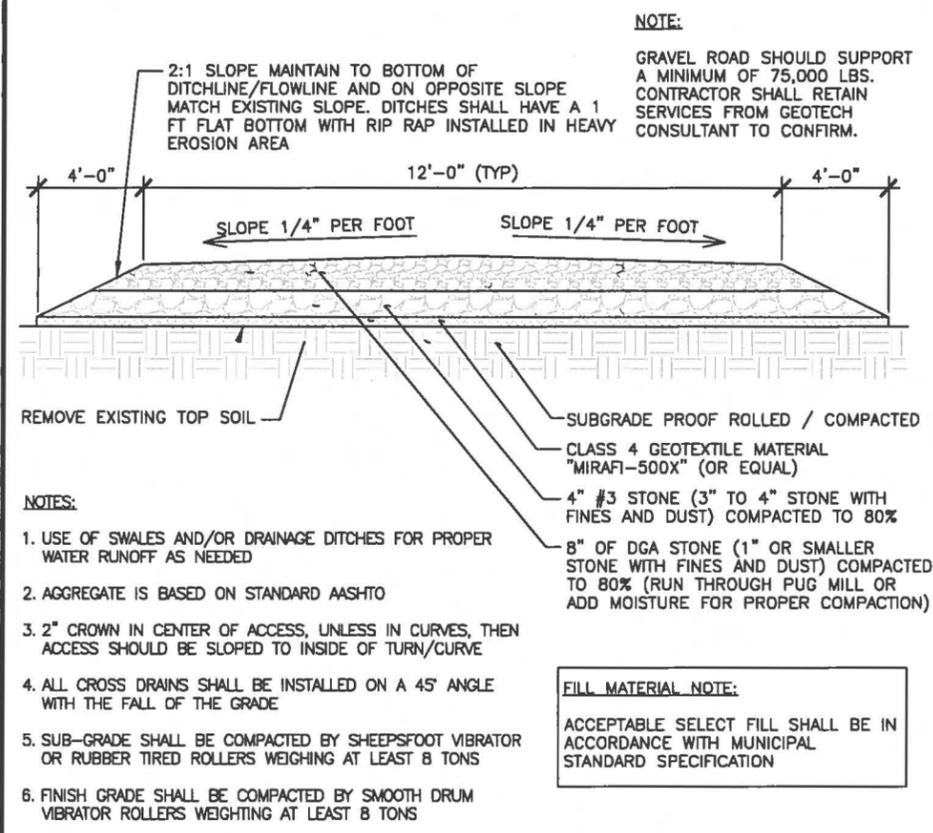
**REVISIONS**

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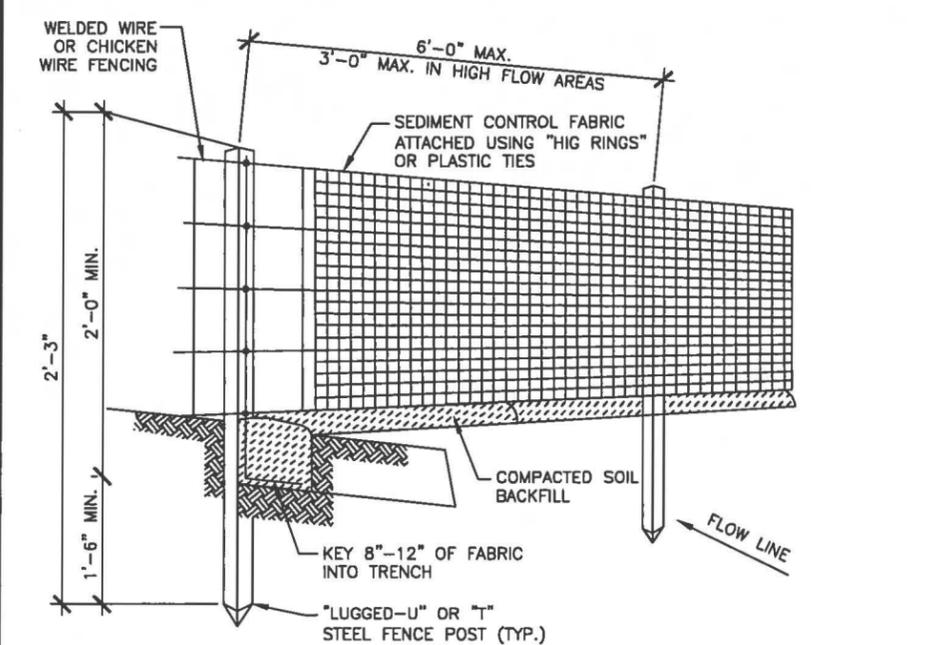
**STATE OF KENTUCKY**  
**JEREMY D. SHARIT**  
 26823  
 PROFESSIONAL ENGINEER  
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**GRADING & EROSION CONTROL PLAN**

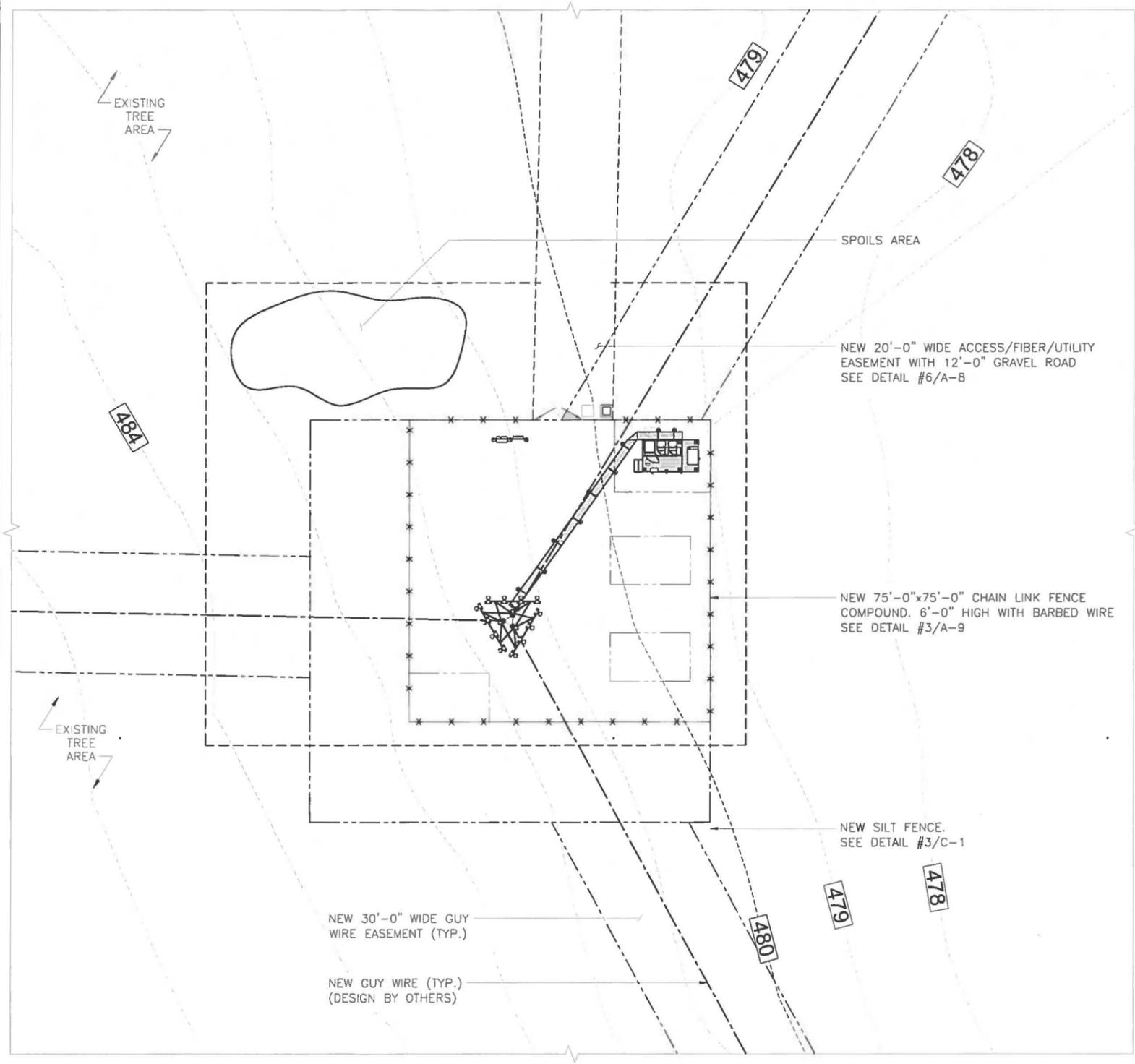
**C-1**



**DRIVEWAY SECTION 2**



**SILT FENCE DETAIL 3**



**GRADING PLAN**

## ELECTRICAL REFERENCE NOTES

### 1. GENERAL

1. EXAMINE THE SITE CONDITIONS VERY CAREFULLY AND THE SCOPE OF PROPOSED WORK TOGETHER WITH THE WORK OF ALL OTHER TRADES AND INCLUDE IN THE BID PRICE ALL COSTS FOR WORK SUCH AS EQUIPMENT AND WIRING MADE NECESSARY TO ACCOMMODATE THE ELECTRICAL SYSTEMS SHOWN AND SYSTEMS OF OTHER TRADES.
2. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
3. PERFORM DETAILED VERIFICATION OF WORK PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND COMMENCING CONSTRUCTION. ISSUE A WRITTEN NOTICE TO THE CONSULTANT OF ANY DISCREPANCIES.
4. OBTAIN ALL PERMITS, PAY ASSOCIATED FEES AND SCHEDULE INSPECTION(S).
5. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, INSURANCE, AND SERVICES TO COMPLETE THIS PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND PRESENT IT AS FULLY OPERATIONAL TO THE SATISFACTION OF THE OWNER.
6. CARRY OUT WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND O.S.H.A.
7. PRIOR TO BEGINNING WORK COORDINATE ALL POWER AND TELCO WORK WITH THE LOCAL UTILITY COMPANY AS IT MAY APPLY TO THIS SITE. ALL WORK TO COMPLY WITH THE RULES AND REGULATIONS OF THE UTILITIES INVOLVED.
8. FABRICATION AND INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEM SHALL BE DONE IN A FIRST CLASS WORKMANSHIP PER NECA STANDARD 1-2000 BY QUALIFIED PERSONNEL EXPERIENCED IN SUCH WORK AND SHALL SCHEDULE THE WORK IN AN ORDERLY MANNER SO AS NOT TO IMPEDE PROGRESS OF THE PROJECT.
9. DURING PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF THE ELECTRICAL SYSTEMS, LOCATING EACH CIRCUIT PRECISELY AND DIMENSIONING EQUIPMENT, CONDUIT AND CABLE LOCATIONS. UPON COMPLETION OF THE INSTALLATION, TRANSFER ALL RECORD DATA TO BLACK LINE PRINTS OF THE ORIGINAL DRAWINGS AND SUBMIT THESE DRAWINGS AS RECORD DRAWINGS TO THE CONSULTANT.
10. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL, OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
11. GENERAL CONTRACTOR IS RESPONSIBLE FOR REQUESTING CONNECTION OF COMMERCIAL POWER FROM THE POWER COMPANY. ELECTRICAL CONTRACTOR SHALL COORDINATE THIS WORK WITH THE GENERAL CONTRACTOR.
12. COORDINATE EXACT TELEPHONE REQUIREMENTS AND SERVICE ROUTING WITH LOCAL TELEPHONE COMPANY. APPLY FOR TELEPHONE SERVICE IMMEDIATELY UPON AWARD OF CONTRACT.

### 2. BASIC MATERIALS AND METHODS

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST EDITION OF THE NEC ACCEPTED BY THE LOCAL JURISDICTION AND TO THE APPLICABLE LOCAL CODES AND REGULATIONS.
2. ALL MATERIALS AND EQUIPMENT SHALL BE NEW. MATERIALS AND EQUIPMENT SHALL BE THE STANDARD PRODUCTS OF MANUFACTURER'S CURRENT DESIGN. ANY FIRST-CLASS PRODUCT MADE BY A REPUTABLE MANUFACTURER MAY BE USED PROVIDING IT CONFORMS TO THE CONTRACT REQUIREMENTS AND MEETS THE APPROVAL OF THE CONSULTANT AND THE OWNER.
3. ARRANGE CONDUIT, WIRING, EQUIPMENT, AND OTHER WORK GENERALLY AS SHOWN, PROVIDING PROPER CLEARANCES AND ACCESS. CAREFULLY EXAMINE ALL CONTRACT DRAWINGS AND FIT THE WORK IN EACH LOCATION WITHOUT SUBSTANTIAL ALTERATION. WHERE DEPARTURES ARE PROPOSED BECAUSE OF FIELD CONDITIONS OR OTHER CAUSES, PREPARE AND SUBMIT DETAILED DRAWINGS FOR ACCEPTANCE.
4. THE CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ALL OFFSETS, BENDS, FITTINGS AND ACCESSORIES ARE NOT NECESSARILY SHOWN. PROVIDE ALL SUCH ITEMS AS MAY BE REQUIRED TO FIT THE WORK TO THE CONDITIONS.
5. MAINTAIN ALL CLEARANCES AS REQUIRED BY NEC.
6. SEAL AROUND CONDUITS AND AROUND CONDUCTORS WITHIN CONDUITS ENTERING THE PREFABRICATED SHELTER/CABINETS WHERE PENETRATION OCCURS WITH A SILICONE SEALANT TO PREVENT MOISTURE PENETRATION INTO BUILDING/SHELTER.
7. SILICONE SEAL AROUND ALL BOLTS AND SCREWS USED TO SECURE EQUIPMENT TO EXTERIOR OF BUILDING.
8. MAKE NECESSARY CONNECTIONS FOR BATTERY IN EMERGENCY LIGHT FIXTURE. CONNECT EXTERIOR LIGHT FIXTURE (PROVIDED BY SHELTER MANUFACTURER) TO EXTERNAL JUNCTION BOX.

### 3. CONDUCTORS AND CONNECTORS

1. UNLESS NOTED OTHERWISE, ALL CONDUCTORS SHALL BE COPPER, MINIMUM SIZE #12 AWG, WITH THERMOPLASTIC INSULATION CONFORMING TO NEMA WC5 OR CROSS-LINKED POLYETHYLENE INSULATION CONFORMING TO NEMA WC7. (TYPES THHN OR THWN). INSULATION SHALL BE RATED FOR 90°C CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC.
2. ALL CONDUCTORS USED FOR GROUNDING SHALL BE COPPER.
3. UNLESS NOTED OTHERWISE ALL LUGS SHALL BE TIN PLATED COPPER, TWO-HOLE, LONG BARREL, COMPRESSION TYPE.
4. CONDUCTOR LENGTHS SHALL BE CONTINUOUS FROM TERMINATION TO TERMINATION WITHOUT SPLICES. SPLICES ARE NOT ACCEPTABLE. IF SPLICES ARE UNAVOIDABLE PRIOR APPROVAL FROM THE ENGINEER MUST BE OBTAINED.

### 4. RACEWAYS AND BOXES

1. ALL CONDUIT SHALL BE UL LABELED.
2. ALL EMPTY CONDUITS INSTALLED FOR FUTURE USE SHALL HAVE A PULL CORD.
3. SHEET METAL BOXES SHALL CONFORM TO NEMA OS1; CAST-METAL BOXES SHALL CONFORM TO NEMA 81 AND SHALL BE SIZED IN ACCORDANCE WITH NEC UNLESS NOTED OTHERWISE.

### 5. GROUNDING

1. ALL LIGHTNING PROTECTION AND SAFETY GROUNDING OF THE ELECTRICAL EQUIPMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT NFPA STANDARDS AND AT&T STANDARDS.
2. GROUND LUGS ARE SPECIFIED UNDER SECTION 3 "CONDUCTORS AND CONNECTORS".
3. ALL GROUND LUG AND COMPRESSION CONNECTIONS FACING GROUND PLATE SHALL BE COATED WITH ANTI-OXIDANT AGENT, SUCH AS NO-OX, NOALOX, PENETROX OR KOPRSHIELD.
4. GROUND ALL EXPOSED METALLIC OBJECTS ON BUILDING EXTERIOR INCLUDING BUILDING TIE DOWN BRACKETS.
5. PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
6. DO NOT INSTALL GROUND RING OUTSIDE OF PROPERTY LINE.
7. REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUND CONNECTIONS, REPAINT TO MATCH AFTER CONNECTION IS MADE TO MAINTAIN CORROSION RESISTANCE.
8. ALL EXTERIOR GROUNDING CONDUCTORS INCLUDING EXTERIOR GROUND RING SHALL BE #2 AWG SOLID BARE TINNED COPPER UNLESS NOTED OTHERWISE. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. THE RADIUS OF ANY BEND SHALL NOT BE LESS THAN 8" AND THE ANGLE OF ANY BEND SHALL NOT EXCEED 90°. GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARD TOWARD THE BURIED GROUND RING.
9. BOND ALL EXTERIOR CONDUITS, PIPES AND CYLINDRICAL METALLIC OBJECTS WITH A PENN-UNION GT SERIES CLAMP, BLACKBURN GUV SERIES CLAMP OR A BURNDY GAR 3900BU SERIES CLAMP ONLY, NO SUBSTITUTES ACCEPTED.
10. ALL GROUND CONNECTIONS SHALL BE APPROVED FOR THE METALS BEING CONNECTED.
11. ALL EXTERNAL GROUND CONNECTIONS SHALL BE EXOTHERMICALLY WELDED. ALL EXOTHERMIC WELDS TO EXTERIOR GROUND RING SHALL BE THE PARALLEL TYPE, EXCEPT FOR THE GROUND RODS WHICH ARE TEE EXOTHERMIC WELDS. REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY EXOTHERMIC WELDING. USE SPRAY GALVANIZER SUCH AS HOLUB LECTROSOL #15-501.
12. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE BURIED GROUND RING IS INSTALLED SO THE REPRESENTATIVE CAN INSPECT THE GROUND RING BEFORE IT IS BACKFILLED WITH SOIL.
13. FOR METAL FENCE POST GROUNDING, USE EXOTHERMIC WELD CONNECTION TO POST.
14. WHERE MECHANICAL CONNECTORS (TWO-HOLE OR CLAMP) ARE USED, APPLY A LIBERAL PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO OXIDE A" BY DEARBORN CHEMICAL COMPANY ON ALL CONNECTORS. THE COATING SHALL BE APPLIED UNDER THE FACE OF THE LUG AND IN THE BORROW.

## LEGEND

SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	SURFACE MOUNTED PANEL BOARD TRANSFORMER
	KILOWATT HOUR METER
	DENOTES CABLE OR CONDUIT TURNING UP IN PLAN VIEW
	DENOTES CABLE OR CONDUIT TURNING DOWN IN PLAN VIEW
	JUNCTION BOX
	PULL BOX TO NEC/TELCO STANDARDS
	OVERHEAD UTILITIES
	UNDERGROUND TELCO
	UNDERGROUND POWER
	DENOTES REFERENCE NOTE
	EXOTHERMIC WELD CONNECTION
	MECHANICAL CONNECTION (eg LUG, C-TAP)
	GROUND ROD
	GROUND ROD WITH INSPECTION SLEEVES
	GROUND BAR
	PIN AND SLEEVE RECEPTACLE
	GROUND CONDUCTOR

## ABBREVIATIONS

AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
BFG	BELOW FINISHED GRADE
C	CONDUIT
CRGB	CELL REFERENCE GROUND BAR
CU	COPPER
C/W	COMPLETE WITH
D.T.T.	DRY TYPE TRANSFORMER
EC	EMPTY CONDUIT
G	GROUND
GE	GROUNDING ELECTRODE
GEC	GROUNDING ELECTRODE CONDUCTOR
GRC	GALVANIZED RIGID CONDUIT
MTS	MANUAL TRANSFER SWITCH
NEC	NATIONAL ELECTRICAL CODE
O/H	OVERHEAD
RNC	RIGID NON-METALLIC CONDUIT (SCHEDULE 80 PVC)
SD	SERVICE DISCONNECT SWITCH
SE	SERVICE ENTRANCE
SN	SOLID NEUTRAL
TGB	TELCO GROUND BAR
TEGB	TOWER EXIT GROUND BAR
TR	TRANSFORMER
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
WP	WEATHERPROOF - NEMA 3R
U/G	UNDERGROUND
PPC	POWER PROTECTION SHELTER

**TILLMAN**  
**INFRASTRUCTURE**  
152 W. 57TH STREET  
NEW YORK, NEW YORK 10019  
TEL: 212-708-1677

**creospan**  
1515 E WOODFIELD RD, SUITE 860  
SCHAUMBURG, IL 60173

**WESTCHESTER**  
SERVICES LLC  
604 FOX GLEN  
BARRINGTON, IL 60010  
TELEPHONE: 847.277.0070  
FAX: 847.277.0080  
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STATE OF KENTUCKY  
**JEREMY D. SHARIT**  
26823  
REGISTERED PROFESSIONAL ENGINEER

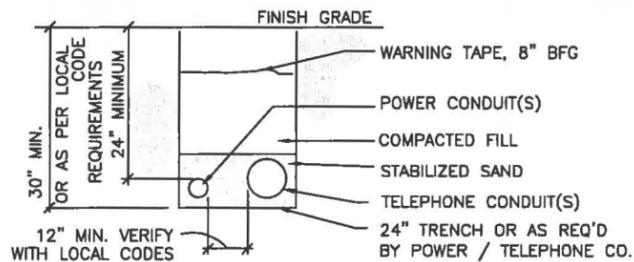
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**ELECTRICAL**  
**NOTES LEGEND**  
**AND**  
**ABBREVIATIONS**

**E-1**

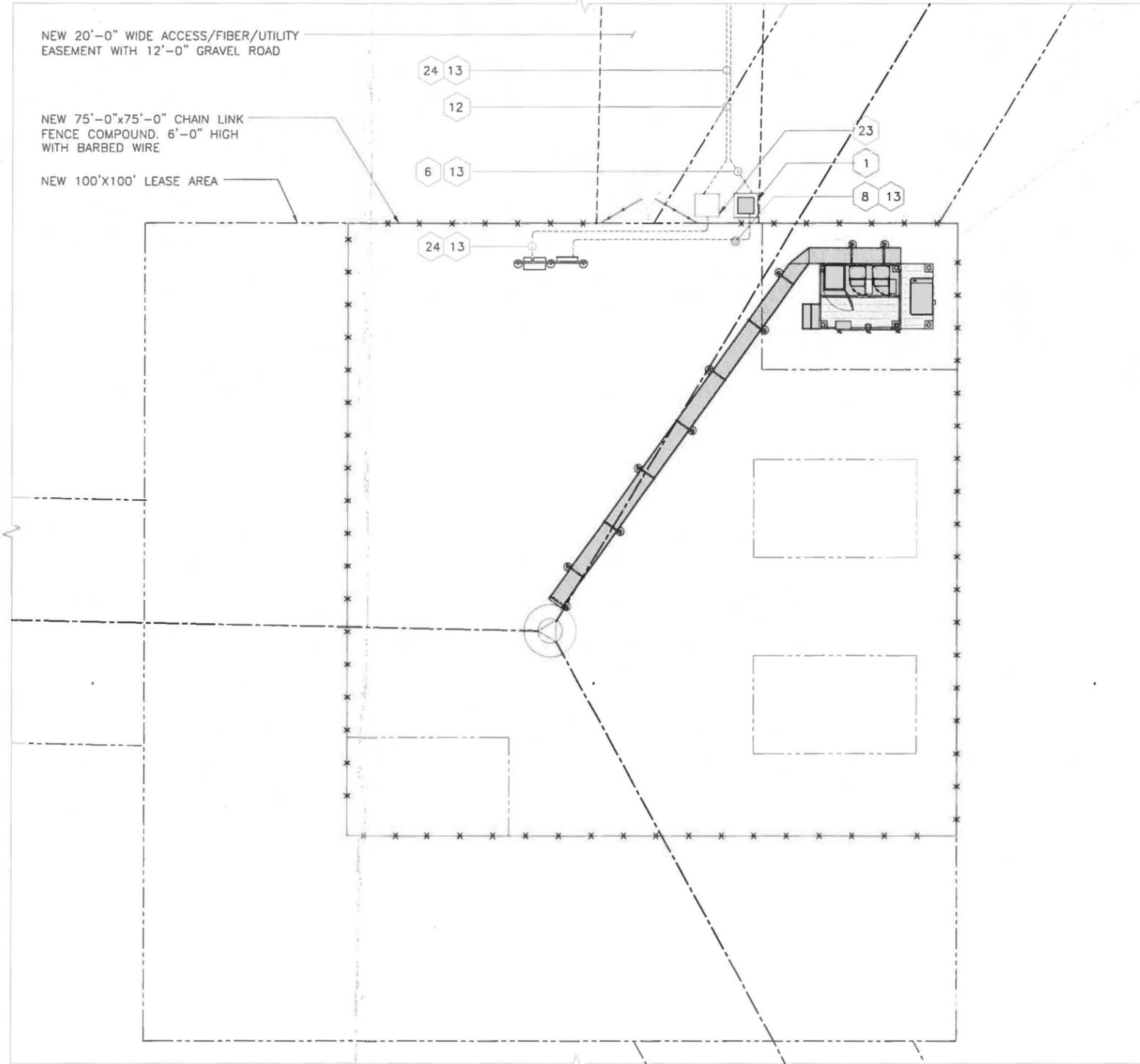
# ELECTRICAL REFERENCE NOTES

- ① PROPOSED NEW UTILITY PAD MOUNT TRANSFORMER IN FRONT OF COMPOUND FOR NEW 120/240V-1Ø-3W, 800A SERVICE TO METER CENTER. COORDINATE ALL REQUIREMENTS WITH POWER COMPANY.
- ② NEW 4-GANG, 600A RATED 240/120V-1Ø-3W, NEMA 3R, MULTI-METER CENTER ON NEW SERVICE H-FRAME. COORDINATE WITH UTILITY COMPANY FOR NEW 200A; 120/ 240V-1Ø-3W SERVICE FOR AT&T, AND FOR NEW 100A, 120/240V-1Ø-3W SERVICE FOR TILLMAN INFRASTRUCTURE.
- ③ NEW MAIN SERVICE H-FRAME.
- ④ PROPOSED NEMA 3R TELCO ENCLOSURE.
- ⑤ NEW TOWER LIGHT CONTROLLER. COORDINATE WITH TOWER MANUFACTURER FOR SPECIFICS.
- ⑥ PROPOSED PRIMARY UTILITY POWER CONDUITS TO FEED NEW UTILITY PAD MOUNTED TRANSFORMER. COORDINATE ALL REQUIREMENTS WITH POWER COMPANY.
- ⑦ PROPOSED NEW 100A-2P MAIN CIRCUIT BREAKER FOR TILLMAN INFRASTRUCTURE.
- ⑧ NEW (2) PARALLEL RUNS OF 4" PVC SCH 40 BFG & RMC AFG EACH WITH (3) 600 MCM CU.
- ⑨ PROPOSED NEW 200A-2P MAIN CIRCUIT BREAKER FOR AT&T.
- ⑩ PROPOSED 3" PVC B.F.G. AND RMC A.F.G. EQUIPPED WITH (3) #3/0 AWG CU. AND (1) #6 AWG CU. GROUND.
- ⑪ NEW 2" SCH. 40 PVC B.F.G. AND RMC A.F.G. WITH (4) #2/0 AWG CU DC CONDUCTORS.
- ⑫ CONDUIT TO FIBER DEMARC LOCATION. COORDINATE ALL REQUIREMENTS WITH FIBER PROVIDER.
- ⑬ CONTRACTOR TO ARRANGE AND PAY FOR UNDERGROUND UTILITY SURVEYS FOR ALL TRENCHING. REUSE NATIVE BACKFILL AND REINSTATE TO ORIGINAL CONDITION. INSTALL 6" WIDE METALLIC LINED RED PLASTIC MARKER TAPE 8" ABOVE ALL BURIED CONDUIT.
- ⑭ 24 GAUGE TWISTED PAIR CAT 3 CABLE WITH 12 PAIRS AND A DRAIN LEAD IN 3/4" C.
- ⑮ NEW 125A RATED, 120/240V-1Ø-3W, NEMA-3R, LOAD CENTER FOR TILLMAN INFRASTRUCTURE WITH (1) 100A-2P MAIN CIRCUIT BREAKER & 12 SPACE LOAD CENTER.
- ⑯ NEW TOWER LIGHTING CONTROLLER CORD IN 2" SCH. 40 PVC CONDUIT B.F.G. AND SECURLEY FASTENED TO TOWER A.F.G. COORINATE WITH TOWER CONTROLLER MANUF. CUIDELINES.
- ⑰ NEW JUNCTION BOX. TOTAL NUMBER OF JUNCTION DEPENDENT OF LIGHTING SCHEME.
- ⑱ NEW RED DUAL OBSTRUCTION LIGHTS (DOL). COORDINATE WITH TOWER MANUFACTURER.
- ⑲ NEW RED/WHITE MEDIUM INTENSITY BEACON LIGHT. WHITE DURING DAY, RED DURING NIGHT. COORDINATE WITH TOWER MANUFACTURE.
- ⑳ POLAR POWER B220-100 DIESEL GENERATOR INSTALLED AS PER MANUF.
- ㉑ PROPOSED 200A, 240V, 1Ø, 3W UTILITY METER SOCKET PER UTILITY STANDARDS. PROVIDE MECH. ATTACHED ENGRAVED NAME PLATE INDICATING "AT&T METER".
- ㉒ PROPOSED 200A, 240V, 1Ø, 3W UTILITY METER SOCKET PER UTILITY STANDARDS. PROVIDE MECH. ATTACHED ENGRAVED NAME PLATE INDICATING "TILMAN INFRASTRUCTURE".
- ㉓ NEW 24"x36" HANDHOLE FOR FIBER JUST OUTSIDE COMPOUND. HANDHOLE AND CONDUIT SPECIFICATIONS TO BE COORDINATED WITH FIBER PROVIDER.
- ㉔ SUPPLY AND INSTALL (1) 4" RNC W/ MULE TAPE AND (3) 1-1/4" INNERDUCT FOR FIBER.



**NOTES:**

1. LEAN CONCRETE, RED-COLORED TOP, MAY BE USED IN PLACE OF COMPACTED SAND.
2. CONDUIT SIZE, TYPE, QUANTITY AND SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS
3. CONTRACTOR TO USE SCHEDULE 80 GALV. PIPE UNDER ALL TRAFFIC CONDITIONS, U/G SWEEPS AND TRANSITIONS AFG
4. INSTALL (2) MARKER TAPES IF TRENCH EXCEEDS 16" WIDE



**TILLMAN INFRASTRUCTURE**  
 152 W. 57TH STREET  
 NEW YORK, NEW YORK 10019  
 TEL: 212-706-1677

**creospan**  
 1515 E WOODFIELD RD. SUITE 860  
 SCHAUMBURG, IL 60173

**WESTCHESTER SERVICES LLC**  
 604 FOX GLEN  
 BARRINGTON, IL 60010  
 TELEPHONE: 847.277.0070  
 FAX : 847.277.0080  
 ae@westchesterservices.com

14220570  
 1641 LEE BURD RD  
 BENTON, KY 42025  
 MARSHALL COUNTY

REVISIONS			
REV	DATE	DESCRIPTION	BY
2	11/09/17	PERMIT/CONSTRUCTION	MC
1	10/25/17	PERMIT/CONSTRUCTION	MC
0	10/20/17	PERMIT/CONSTRUCTION	DS

STATE OF KENTUCKY  
 JEREMY D. SHARTT  
 26823  
 PROFESSIONAL ENGINEER

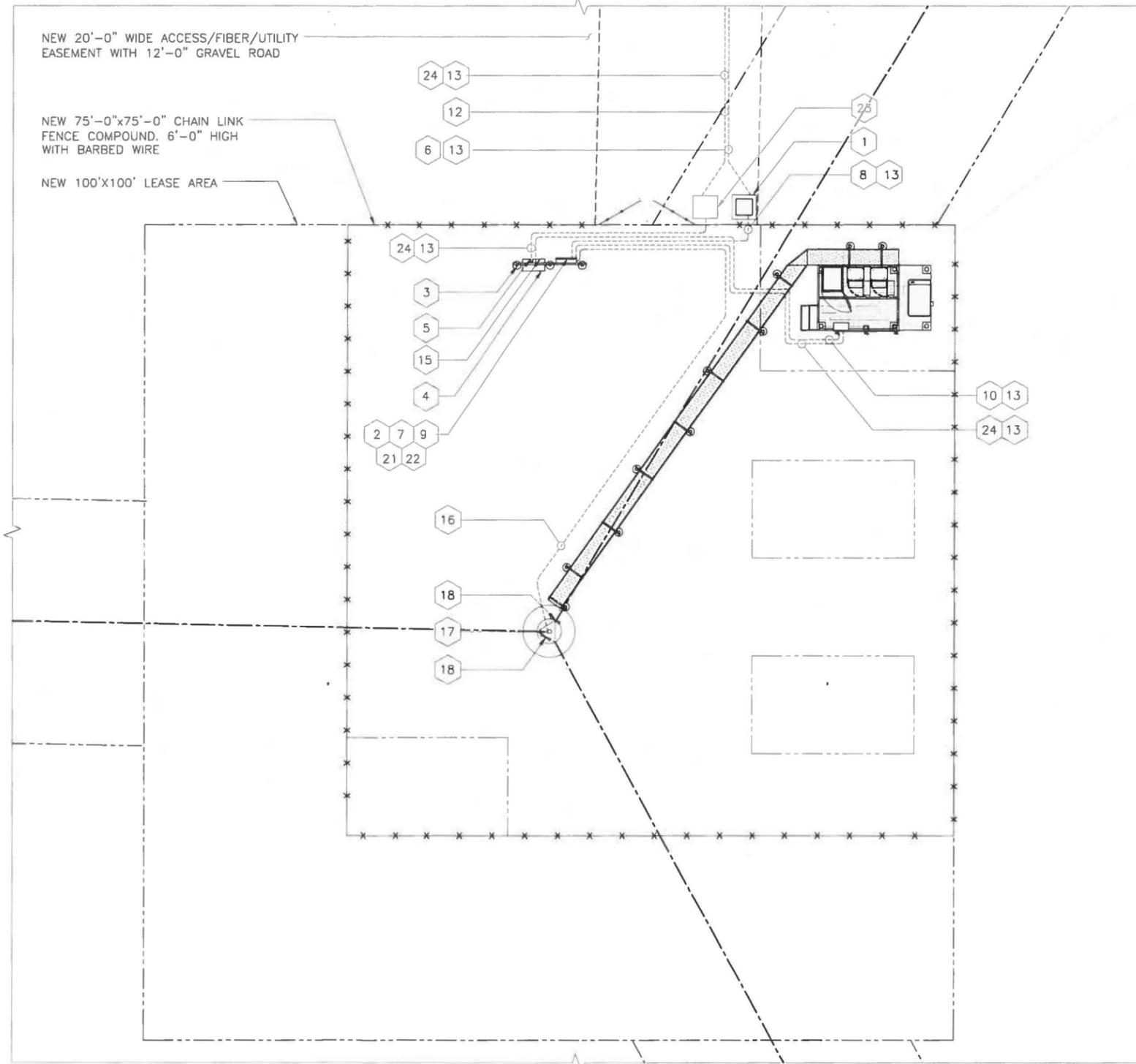
**ELECTRICAL SITE PLAN**

**E-2**

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# GROUNDING REFERENCE NOTES

- 1 PROPOSED NEW UTILITY PAD MOUNT TRANSFORMER IN FRONT OF COMPOUND FOR NEW 120/240V-1Ø-3W, 800A SERVICE TO METER CENTER. COORDINATE ALL REQUIREMENTS WITH POWER COMPANY.
- 2 NEW 4-GANG, 600A RATED 240/120V-1Ø-3W, NEMA 3R, MULTI-METER CENTER ON NEW SERVICE H-FRAME. COORDINATE WITH UTILITY COMPANY FOR NEW 200A; 120/ 240V-1Ø-3W SERVICE FOR AT&T, AND FOR NEW 100A, 120/240V-1Ø-3W SERVICE FOR TILLMAN INFRASTRUCTURE.
- 3 NEW MAIN SERVICE H-FRAME.
- 4 PROPOSED NEMA 3R TELCO ENCLOSURE.
- 5 NEW TOWER LIGHT CONTROLLER. COORDINATE WITH TOWER MANUFACTURER FOR SPECIFICS.
- 6 PROPOSED PRIMARY UTILITY POWER CONDUITS TO FEED NEW UTILITY PAD MOUNTED TRANSFORMER. COORDINATE ALL REQUIREMENTS WITH POWER COMPANY.
- 7 PROPOSED NEW 100A-2P MAIN CURCUIT BREAKER FOR TILLMAN INFRASTRUCTURE.
- 8 NEW (2) PARALLEL RUNS OF 4" PVC SCH 40 BFG & RMC AFG EACH WITH (3) 600 MCM CU.
- 9 PROPOSED NEW 200A-2P MAIN CIRCUIT BREAKER FOR AT&T.
- 10 PROPOSED 3" PVC B.F.G. AND RMC A.F.G. EQUIPPED WITH (3) #3/0 AWG CU. AND (1) #6 AWG CU. GROUND.
- 11 NEW 2" SCH. 40 PVC B.F.G. AND RMC A.F.G. WITH (4) #2/0 AWG CU DC CONDUCTORS.
- 12 CONDUIT TO FIBER DEMARC LOCATION. COORDINATE ALL REQUIREMENTS WITH FIBER PROVIDER.
- 13 CONTRACTOR TO ARRANGE AND PAY FOR UNDERGROUND UTILITY SURVEYS FOR ALL TRENCHING. REUSE NATIVE BACKFILL AND REINSTATE TO ORIGINAL CONDITION. INSTALL 6" WIDE METALLIC LINED RED PLASTIC MARKER TAPE 8" ABOVE ALL BURIED CONDUIT.
- 14 24 GAUGE TWISTED PAIR CAT 3 CABLE WITH 12 PAIRS AND A DRAIN LEAD IN 3/4" C.
- 15 NEW 125A RATED, 120/240V-1Ø-3W, NEMA-3R, LOAD CENTER FOR TILLMAN INFRASTRUCTURE WITH (1) 100A-2P MAIN CIRCUIT BREAKER & 12 SPACE LOAD CENTER.
- 16 NEW TOWER LIGHTING CONTROLLER CORD IN 2" SCH. 40 PVC CONDUIT B.F.G. AND SECURLEY FASTENED TO TOWER A.F.G. COORINATE WITH TOWER CONTROLLER MANUF. CUIDELINES.
- 17 NEW JUNCTION BOX. TOTAL NUMBER OF JUNCTION DEPENDENT OF LIGHTING SCHEME.
- 18 NEW RED DUAL OBSTRUCTION LIGHTS (DOL). COORDINATE WITH TOWER MANUFACTURER.
- 19 NEW RED/WHITE MEDIUM INTENSITY BEACON LIGHT. WHITE DURING DAY, RED DURING NIGHT. COORDINATE WITH TOWER MANUFACTURE.
- 20 POLAR POWER B220-100 DIESEL GENERATOR INSTALLED AS PER MANUF.
- 21 PROPOSED 200A, 240V, 1Ø, 3W UTILITY METER SOCKET PER UTILITY STANDARDS. PROVIDE MECH. ATTACHED ENGRAVED NAME PLATE INDICATING "AT&T METER".
- 22 PROPOSED 200A, 240V, 1Ø, 3W UTILITY METER SOCKET PER UTILITY STANDARDS. PROVIDE MECH. ATTACHED ENGRAVED NAME PLATE INDICATING "TILMAN INFRASTRUCTURE".
- 23 NEW 24"x36" HANDHOLE FOR FIBER JUST OUTSIDE COMPOUND. HANDHOLE AND CONDUIT SPECIFICATIONS TO BE COORDINATED WITH FIBER PROVIDER.
- 24 SUPPLY AND INSTALL (1) 4" RNC W/ MULE TAPE AND (3) 1-1/4" INNERDUCT FOR FIBER.



NOTE:  
POWER AND FIBER CONDUITS  
APPROX. ±60'

TRUE NORTH

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## ELECTRICAL COMPOUND PLAN

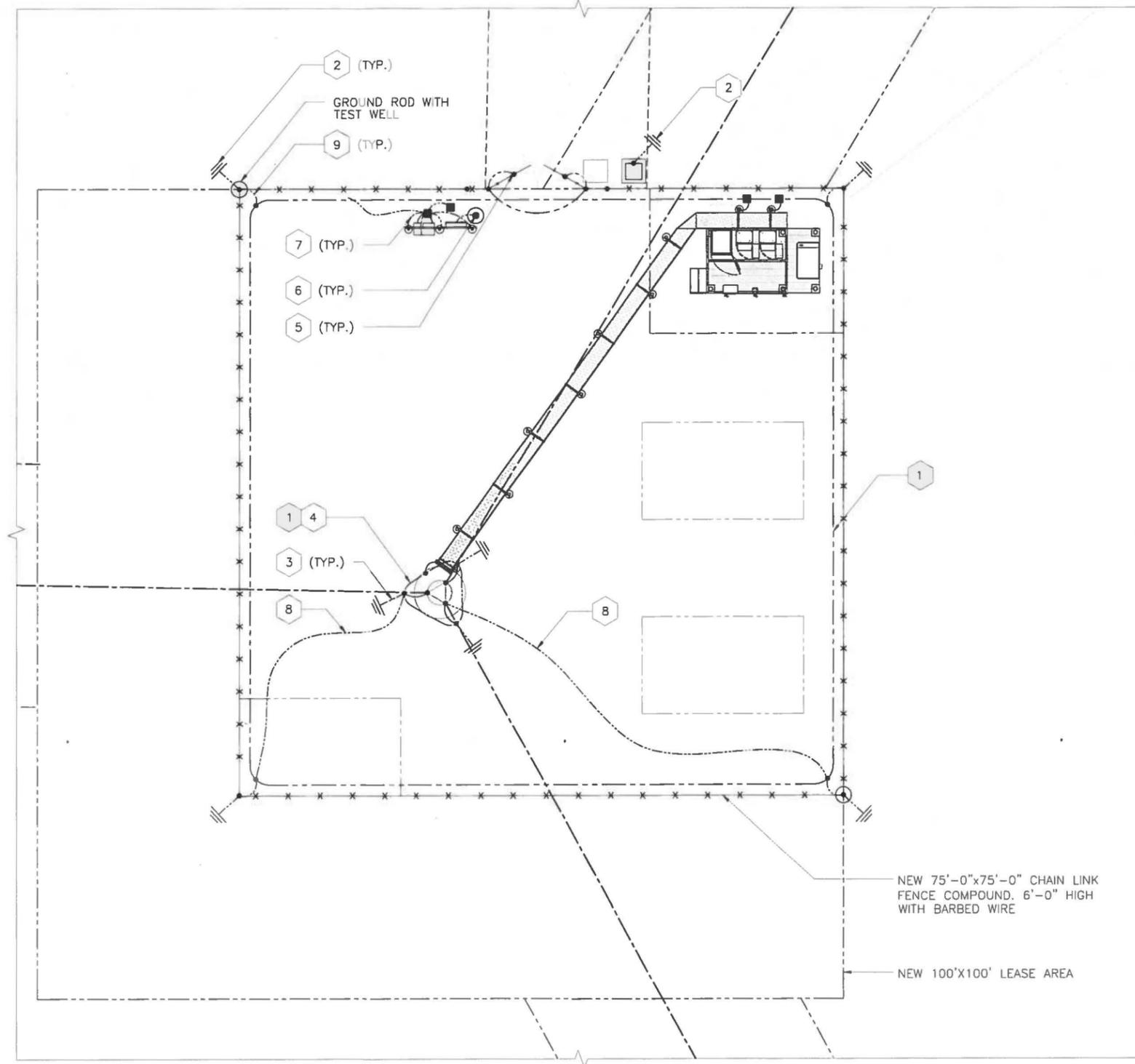
0 2' 4' 8' SCALE: 1/8" = 1'-0" (24x36)  
(OR) 1/16" = 1'-0" (11x17)

1

APPLICANT	 <b>TILLMAN INFRASTRUCTURE</b> <small>152 W. 57TH STREET NEW YORK, NEW YORK 10019 TEL: 212-706-1677</small>																				
APPLICANT	 <b>creospan</b> <small>1515 E WOODFIELD RD. SUITE 860 SCHAUMBURG, IL 60173</small>																				
ENGINEER	 <b>WESTCHESTER SERVICES LLC</b> <small>604 FOX GLEN BARRINGTON, IL 60010 TELEPHONE: 847.277.0070 FAX : 847.277.0080 ae@westchesterservices.com</small>																				
SITE INFORMATION	<p>14220570 1641 LEE BURD RD BENTON, KY 42025 MARSHALL COUNTY</p>																				
DESIGN RECORD	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>11/09/17</td> <td>PERMIT/CONSTRUCTION MC</td> <td></td> </tr> <tr> <td>1</td> <td>10/25/17</td> <td>PERMIT/CONSTRUCTION MC</td> <td></td> </tr> <tr> <td>0</td> <td>10/20/17</td> <td>PERMIT/CONSTRUCTION DS</td> <td></td> </tr> </tbody> </table>	REVISIONS				REV	DATE	DESCRIPTION	BY	2	11/09/17	PERMIT/CONSTRUCTION MC		1	10/25/17	PERMIT/CONSTRUCTION MC		0	10/20/17	PERMIT/CONSTRUCTION DS	
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PROFESSIONAL STAMP	 <small>JEREMY D. SHARIT 26823 REGISTERED PROFESSIONAL ENGINEER</small>																				
SHEET TITLE	<p><b>ELECTRICAL COMPOUND PLAN</b></p>																				
SHEET NUMBER	<p><b>E-3</b></p>																				

# ELECTRICAL GENERAL NOTES

- ① APPROXIMATE LOCATION OF #2 AWG SOLID BARE TINNED GROUND RING. GROUND RING SHALL BE BURIED 36" BELOW THE FROST LINE OR 18" BELOW GRADE, WHICHEVER IS GREATER. EXACT LOCATION AND NUMBER OF GROUND RODS TO BE DETERMINED ON SITE AND BASED ON "FALL OF POTENTIAL GROUND RESISTANCE METHOD" FOR RESISTANCE < 5 OHMS. UNLESS OTHERWISE NOTED, DRIVEN GROUND RODS ARE TO BE BURIED AT 16 FEET INTERVALS. SEE SHEET E-5 FOR ADDITIONAL GROUNDING INFORMATION.
- ② PROVIDE 5/8" X 10'-0" LONG COPPER CLAD STEEL (COPPER WELD) GROUND ROD AS SHOWN. PROVIDE INSPECTION SLEEVE AT GROUND ROD TO SHOW BOND TO EXTERIOR BURIED GROUND RING (MINIMUM OF 4 INSPECTION SLEEVES). INSTALL GROUND ROD TWO (2) FEET MINIMUM AWAY FROM ANY SLAB. INSTALL SO THAT TOP OF GROUND ROD IS 30" BELOW GRADE OR FROST LINE, WHICHEVER IS DEEPER. EXACT LOCATION AND NUMBER OF GROUND RODS TO BE ESTABLISHED ON SITE AND BASED ON "FALL OF POTENTIAL GROUND RESISTANCE METHOD" FOR RESISTANCE < 5 OHMS. UNLESS OTHERWISE NOTED, DRIVEN GROUND RODS ARE BONDED TO THE BURIED GROUND RING AT 16 FEET INTERVALS.
- ③ NEW #2 AWG SOLID BARE TINNED COPPER CONDUCTOR FROM TOWER GROUNDING FLANGE AT BASE OF TOWER TO TOWER GROUND RING.
- ④ NEW #2 AWG SOLID BARE TINNED TOWER GROUND RING WITH GROUND RODS. TOWER GROUND RING SHALL BE SPACED A MINIMUM OF 2'-0" FROM TOWER FOUNDATION.
- ⑤ NEW #2 AWG WELDING CABLE OR FLEXIBLE CABLE, GATE JUMPER.
- ⑥ NEW #2 AWG GROUND FROM SERVICE ENTRANCE GROUND ELECTRODE TO EXTERNAL GROUND RING.
- ⑦ BOND "H-FRAME" TO EXTERNAL GROUND RING USING A #2 AWG GROUND CONDUCTOR (TYP OF 2 PLACES).
- ⑧ NEW #2 AWG GROUND FROM TOWER GROUNDING TO EXTERNAL GROUND RING.
- ⑨ BOND FENCE POST TO GROUND RING AS SHOWN WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR USING AN EXOTHERMIC WELD.



NOTE: PIGTAIL ALL GROUNDING FOR FUTURE EQUIPMENT AS REQUIRED.

### NOTES:

1. CONTRACTOR SHALL INSPECT AND TEST ANY NEW AT&T GROUNDING SYSTEM WITH A BIDDLE-MEGGER TESTER UTILIZING THE FALL OF POTENTIAL METHOD AND CONTACT CONSTRUCTION MANAGER IF RESISTANCE EXCEEDS 5 OHMS AND SHALL FIELD MODIFY GROUNDING SYSTEM AS NECESSARY TO ACHIEVE COMPLIANCE. TEST RESULTS AND CONCLUSIONS SHALL BE RECORDED FOR PROJECT CLOSE-OUT DOCUMENTATION.
2. CONTRACTOR SHALL PROVIDE PRE-CAST CONCRETE INSPECTION WELL WITH CAST IRON TRAFFIC RATED LID WHEN WELL WILL BE IN AN AREA WHERE THEY CAN BE DAMAGED.

## GROUNDING PLAN

TRUE NORTH



0 2' 4' 8' SCALE: 1/8" = 1'-0" (24x36)  
(OR) 1/16" = 1'-0" (11x17)

1

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ENGINEER  
SITE INFORMATION  
DESIGN RECORD  
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SHEET TITLE  
SHEET NUMBER

**TILLMAN**  
**INFRASTRUCTURE**  
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## GROUNDING PLAN AND NOTES

**E-4**

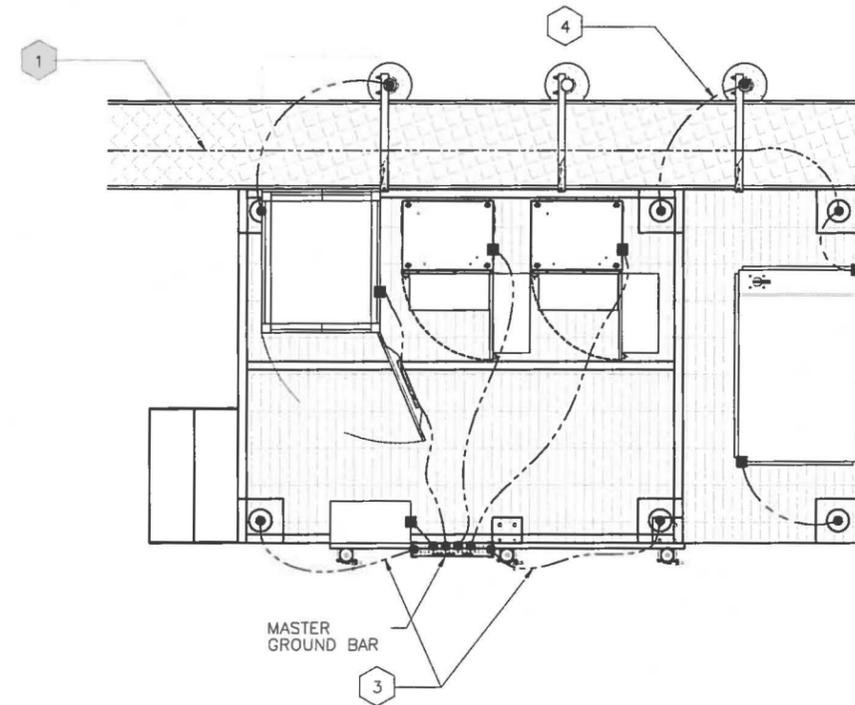
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## ELECTRICAL GENERAL NOTES

- ① PROVIDE #2 AWG. SOLID BARE TINNED COPPER GROUNDING CONDUCTOR AND RUN FROM ONE SUPPORT FRAME TO THE NEXT. ATTACH TO EACH SUPPORT USING GROUND CLAMP AS SHOWN IN WAVEGUIDE BRIDGE AND CABLE GROUNDING FOR HORIZONTAL RUNS ACROSS STRUCTURE. BOND CONDUCTOR TO ANY OTHER GROUNDING CONDUCTORS WHERE THEY CROSS USING A PARALLEL TYPE U.L. LISTED CONNECTOR SUITABLE FOR THE MATERIALS BEING CONNECTED.
- ② WHERE APPLICABLE BOND ALL STEEL SUPPORT BEAMS TOGETHER, EXOTHERMICALLY WELD CONNECTIONS TO STEEL SUPPORT BEAMS. TYPICAL FOR ALL. REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF STEEL SUPPORT BEAMS.
- ③ BOND EQUIPMENT CABINET MASTER GROUND BAR TO GROUND RING WITH A (2) #2 AWG SOLID TINNED COPPER CONDUCTOR.
- ④ BOND EACH CABLE BRIDGE SUPPORT STAND POST TO GROUND WITH #2 SOLID BARE TINNED COPPER LEAD. EXOTHERMICALLY WELD ON POST BELOW TOP OF GRAVEL. DO NOT DAISY CHAIN WITH OTHER POST. USE SEPERATE GROUNDS.
- ⑤ BOND MISCELLANEOUS METALLIC EQUIPMENT WITHIN 10'-0" TO PERIMETER GROUND LOOP. EXOTHERMICALLY WELD CONNECTION TO PERIMETER GROUND LOOP.
- ⑥ BOND GENERATOR TO EXTERIOR GROUND RING WITH A #2 AWG SOLID BARE TINNED COPPER CONDUCTOR AT OPPOSITE CORNERS.
- ⑦ NOT USED.
- ⑧ NOT USED.
- ⑨ NOT USED.
- ⑩ IF METAL BOND FENCE POST TO GROUND RING AS SHOWN USING AN EXOTHERMIC WELD. BOND FENCE GATE TO POST WITH A FLEXIBLE COPPER JUMPER STRAP IF NOT ALREADY PROVIDED. PROVIDE EXOTHERMIC WELD TO BOND STRAP TO GATE AND FENCE POST. PROVIDE LENGTH AS REQUIRED TO MAKE CONNECTION.
- ⑪ APPROXIMATE LOCATION OF #2 AWG SOLID BARE TINNED GROUND RING. EXACT LOCATION AND NUMBER OF GROUND RODS TO BE DETERMINED ON SITE AND BASED ON "FALL OF POTENTIAL GROUND RESISTANCE METHOD" FOR RESISTANCE < 5 OHMS. UNLESS OTHERWISE NOTED, DRIVEN GROUND RODS ARE TO BE BURIED AT 16 FEET INTERVALS.
- ⑫ NOT USED.
- ⑬ NOT USED.
- ⑭ PROVIDE 5/8" x 10'-0" LONG COPPER CLAD STEEL (COPPER WELD) GROUND ROD AS SHOWN. PROVIDE INSPECTION SLEEVE AT GROUND ROD TO SHOW BOND TO EXTERIOR BURIED GROUND RING. INSTALL GROUND ROD TWO (2) FEET MINIMUM AWAY FROM SLAB. INSTALL SO THAT TOP OF GROUND ROD IS 30" BELOW GRADE OR FROST LINE, WHICHEVER IS DEEPER. REFER TO GROUND ROD INSPECTION SLEEVE. EXACT LOCATION AND NUMBER OF GROUND RODS TO BE ESTABLISHED ON SITE AND BASED ON "FALL OF POTENTIAL GROUND RESISTANCE METHOD" FOR RESISTANCE < 5 OHMS.. UNLESS OTHERWISE NOTED, DRIVEN GROUND RODS ARE BONDED TO THE BURIED GROUND RING AT 16 FEET INTERVALS.
- ⑮ EQUIPMENT GROUND RING AND EXISTING TOWER GROUNDING RING SHALL BE BONDED TOGETHER IN AT LEAST TWO (2) POINTS USING A #2 AWG SOLID BARE TINNED COPPER CONDUCTOR.
- ⑯ NEW TOWER GROUND RING AND GROUND RODS.
- ⑰ NEW #2 SOLID BARE TINNED COPPER CONDUCTOR FROM TOWER GROUNDING FLANGE AT BASE OF TOWER LEG TO TOWER GROUND RING.
- ⑱ REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ANTENNA(S) AND ANTENNA SUPPORTS FRAME.
- ⑲ EXTEND GROUNDING CONDUCTOR TO ANTENNA LOCATIONS AND BOND TO ANTENNA PIPE MOUNT. USE AN EXOTHERMIC WELD AT ANTENNA PIPE MOUNT. SUPPORT CONDUCTOR AS REQUIRED EVERY TWO (2) FEET MINIMUM.
- ⑳ PROVIDE #2 SOLID BARE TINNED COPPER CONDUCTOR FROM TEGB TO TOWER GROUND RING. TYPICAL OF TWO (2).
- ㉑ PROVIDE ANTENNA CABLE GROUND BAR. BOND ANTENNA CABLE GROUNDING KITS TO GROUND BAR. CONNECTION SHALL BE THE RESPONSIBILITY OF THE ANTENNA CABLE INSTALLER. PROVIDE A U.L. LISTED CONNECTOR SUITABLE FOR THE MATERIALS BEING CONNECTED PROVIDE EXOTHERMIC WELDS FOR BONDS TO STEEL BEAM OR FRAME.
- ㉒ THE TOWER EXIT GROUND BUS BAR (TEGB) SHALL BE INSTALLED BELOW THE TRANSMISSION LINE GROUND KITS, NEAR THE AREA OF THE TOWER AT THE POINT WHERE THE ANTENNA TRANSMISSION LINES TRANSITION FROM THE TOWER TO THE CABINETS. VERIFY EXACT LOCATION OF GROUNDING BAR FOR PROPER CONDUCTOR LENGTH. GROUNDING BAR PROVIDED BY THE ANTENNA CABLE INSTALLER. FINAL EXOTHERMIC WELD FROM THE BURIED GROUNDING RING TO GROUND BAR SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. COORDINATE WITH ANTENNA CABLE INSTALLER FOR SCHEDULE TO MAKE CONNECTION. PROVIDE 3/4" PVC SLEEVE WITH SWEEP BEND FOR CONNECTION OF TEGB TO TOWER GROUND RING.
- ㉓ EXTEND GROUNDING CONDUCTORS TO REMAINING SECTOR ANTENNA PIPE MOUNT LOCATIONS AND BOND WITH EXOTHERMIC WELDS TO ANTENNA GROUND BARS. SUPPORT CONDUCTOR AS REQUIRED EVERY TWO FEET MINIMUM.
- ㉔ THE TOWER STRUCTURE STEEL SHALL BE UTILIZED FOR DISSIPATING THE LIGHTNING ENERGY. THE TOWER GROUND BARS FOR ANTENNA GROUNDING SHALL BE DIRECTLY FASTENED TO THE STEEL STRUCTURE WITH STAINLESS STEEL HARDWARE AND/OR ANGLE ADAPTORS (E.G. PIROD/ VALMONT PART #: 167105 OR EQUIVALENT- WITHOUT "CHERRY" INSULATORS). THIS TYPE OF INSTALLATION SPECIFICALLY PRECLUDES THE USE OF INSULATORS BETWEEN THE TOWER STRUCTURE AND THE GROUND BARS AND DOES NOT ALLOW ANY DRILLING OR WELDING TO THE TOWER.
- ㉕ BOND REBAR IN NEW CONCRETE PAD TO BURIED GROUND RING. PROVIDE A #2 AWG SOLID BARE TINNED COPPER GROUNDING CONDUCTOR, LENGTH AS REQUIRED.

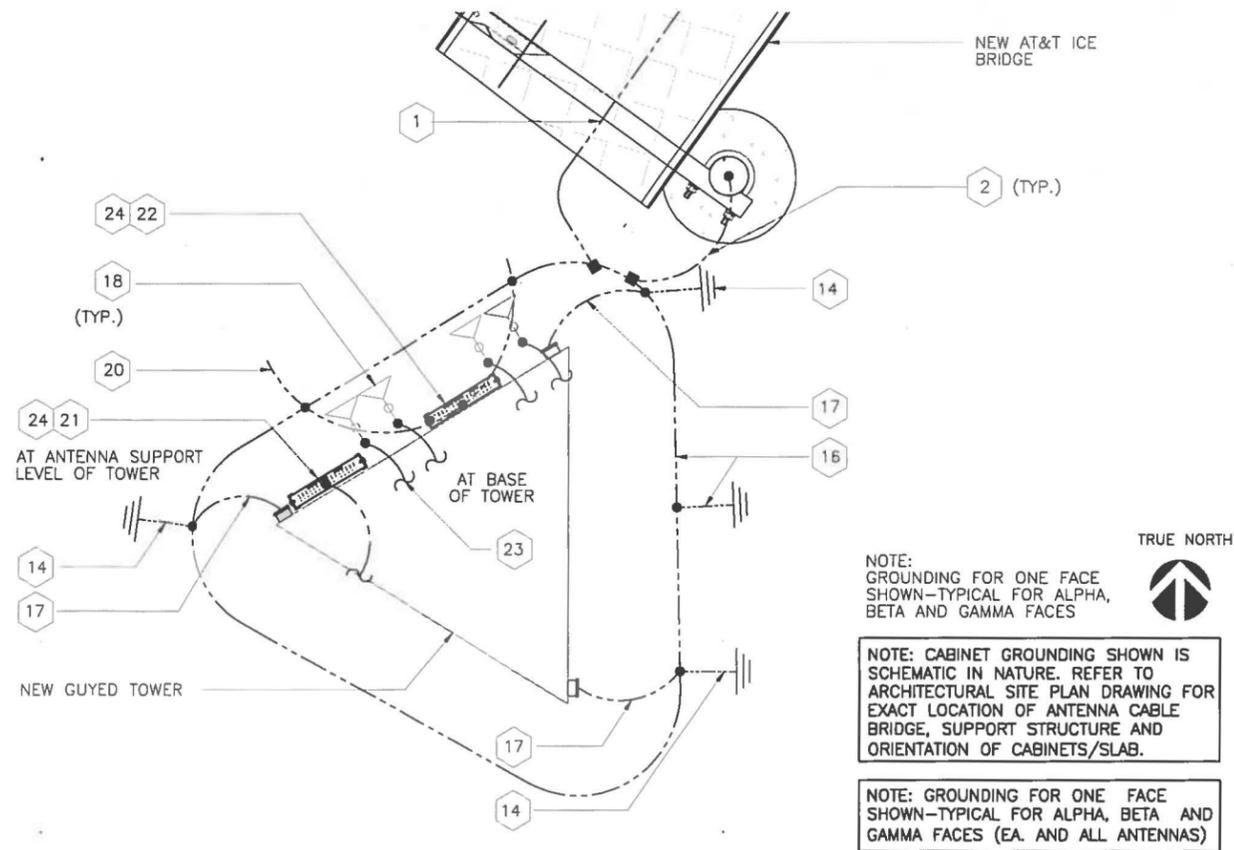
### LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
□	NON-FUSIBLE DISCONNECT SWITCH	PB	PULL BOX TO NEC/TELCO STANDARDS ABOVE GROUND SERVICES	⬇	GROUND ROD
□	FUSIBLE DISCONNECT SWITCH	—	MECHANICAL CONNECTION (eg LUG, C-TAP)	—	GROUND BAR
TR	TRANSFORMER	---	UNDER GROUND SERVICES	⊗	PIN AND SLEEVE RECEPTACLE
Ⓚ	KILOWATT HOUR METER	•	EXOTHERMIC WELD CONNECTION	Ⓚ	GROUND ROD WITH INSPECTION SLEEVE
JB	JUNCTION BOX				



**TYPICAL CABINET GROUNDING PLAN**

**1**



**SELF-SUPPORT TOWER GROUNDING PLAN**

**2**

**TILLMAN**  
INFRASTRUCTURE

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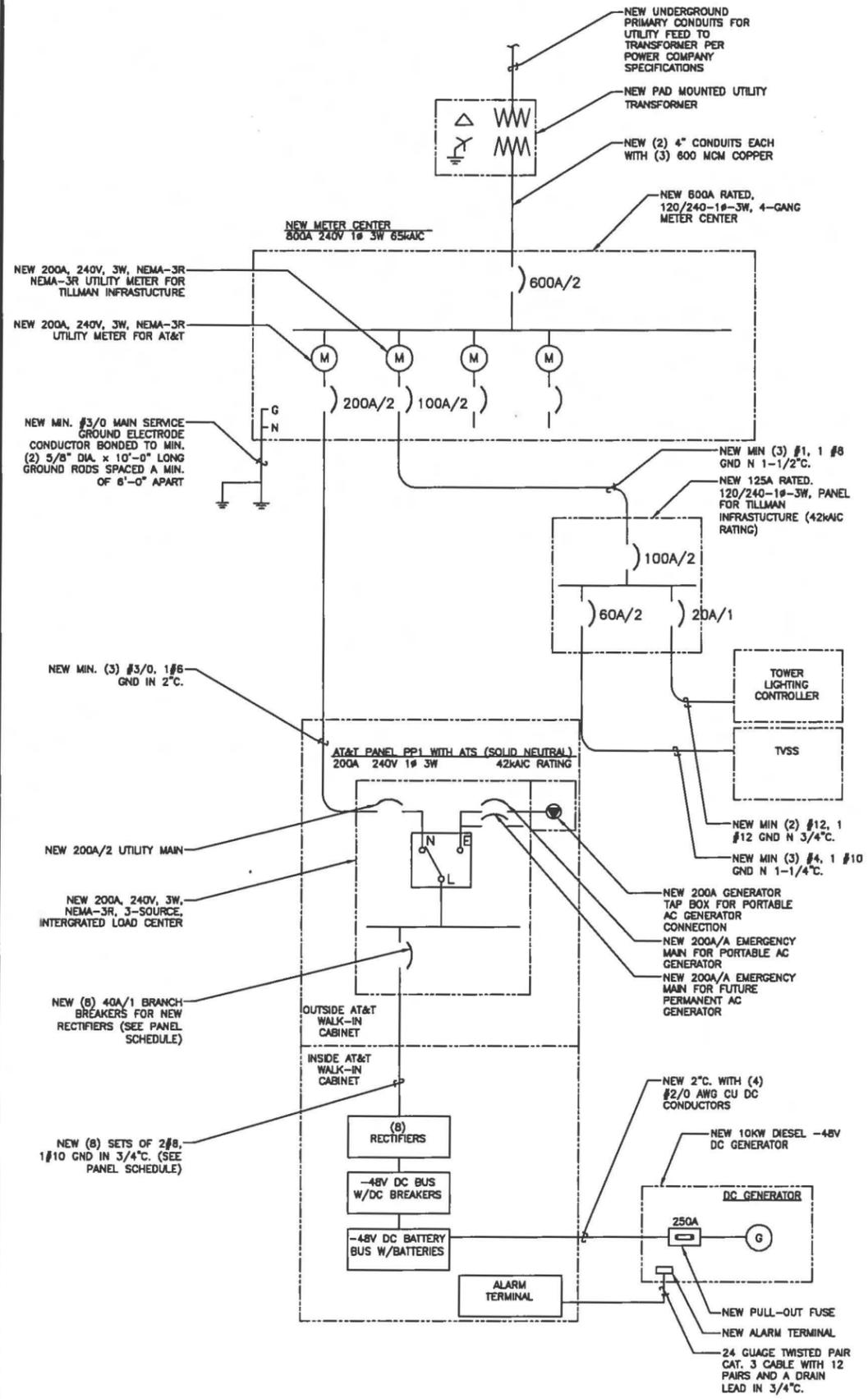
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## GROUNDING PLAN AND NOTES

**E-5**

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### AT&T INTEGRATED LOAD CENTER

LOAD DESCRIPTION	QTY.	UNIT V.A.	LOAD PER PHASE (VA)		WIRE COLOR	LOADS CONTINUOUS	LOADS NON-CONTINUOUS	LOADS SUB-PANEL	WIRE SIZE	GROUNDING WIRE SIZE	TRIP	TRIP	GROUNDING WIRE SIZE	WIRE SIZE	LOADS SUB-PANEL	LOADS NON-CONTINUOUS	LOADS CONTINUOUS	WIRE COLOR	LOAD PER PHASE (VA)		UNIT V.A.	QTY.	LOAD DESCRIPTION
			A	B															A	B			
1	RECTIFIER #1	1	1400	1400	BLK	X			8	(10)	40	40	(10)	8			X	BLK	1400	1400	1400	1	RECTIFIER #5
3		1	1400	1400	RED													RED	1400	1400	1400	1	RECTIFIER #4
5	RECTIFIER #2	1	1400	1400	BLK	X			8	(10)	40	40	(10)	8			X	BLK	1400	1400	1400	1	RECTIFIER #6
7		1	1400	1400	RED													RED	1400	1400	1400	1	RECTIFIER #8
9	RECTIFIER #3	1	1400	1400	BLK	X			8	(10)	40	40	(10)	8			X	BLK	1400	1400	1400	1	RECTIFIER #7
12		1	1400	1400	RED													RED	1400	1400	1400	1	RECTIFIER #12
13	RECTIFIER #4	1	1400	1400	BLK	X			8	(10)	40	40	(10)	8			X	BLK	1400	1400	1400	1	RECTIFIER #14
15		1	1400	1400	RED													RED	1400	1400	1400	1	RECTIFIER #16
17					BLK													BLK					RECTIFIER #18
19					RED													RED					RECTIFIER #20
21	GFCI RECEPTACLES	2	180	360	BLK	X			12	(12)	20							BLK					RECTIFIER #22
23	OPTIONAL FIBER BOX RECEPTACLE	1	180	180	RED	X			12	12	20							RED					RECTIFIER #24
25					BLK													BLK					RECTIFIER #26
27					RED													RED					RECTIFIER #28
29					BLK													BLK					RECTIFIER #30
SUBTOTAL CONTINUOUS			5,960	5,780															5,600	5,600	SUBTOTAL CONTINUOUS	TOTAL KVA CONTINUOUS x 1.25	28,675
SUBTOTAL NON-CONTINUOUS			-	-															-	-	SUBTOTAL NON-CONTINUOUS	TOTAL KVA NON-CONTINUOUS	-
SUBTOTAL SUB-PANEL			-	-															-	-	SUBTOTAL SUB-PANEL	TOTAL KVA SUB-PANEL	-
TOTAL KVA																						TOTAL KVA	28,675
TOTAL AMPS																						TOTAL AMPS	119

PANEL DESIGNATION: ELECTRICAL PANEL (ITEM 2)

MAIN LUGS: N/A MAIN BREAKER: 200 AMP BRANCH BREAKER TYPE: SIEMENS - BL

VOLTAGE: 120/240 CYCLE: 60 PHASE: 1 WIRES: 3 MAIN COPPER BUS: 200 AMPS NEUTRAL: 200 AMPS

ELECTRICAL ONE-LINE DIAGRAM

1 PANEL SCHEDULE

2

**TILLMAN INFRASTRUCTURE**  
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 NEW YORK, NEW YORK 10019  
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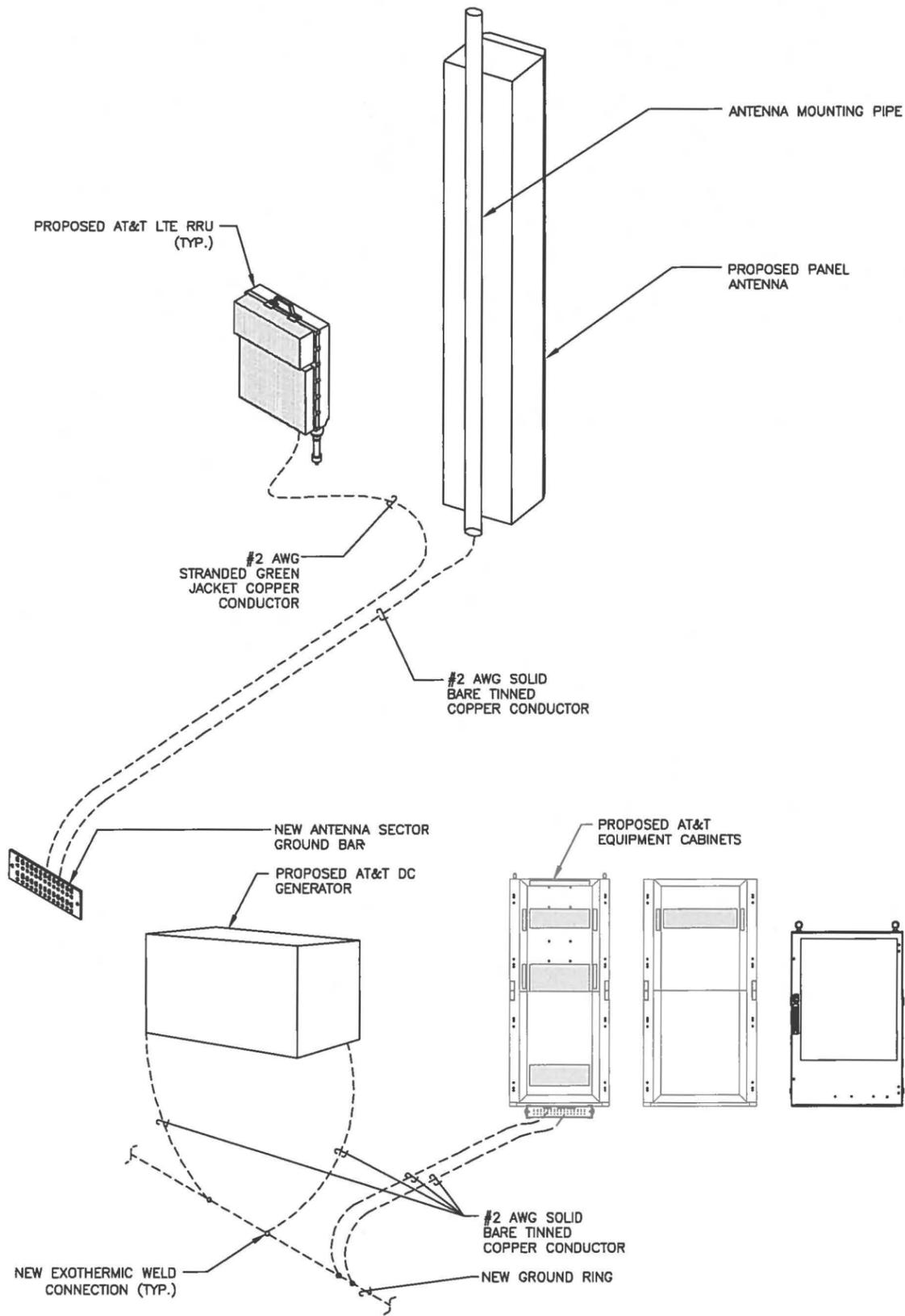
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**ELECTRICAL ONE-LINE AND PANEL DIAGRAM**

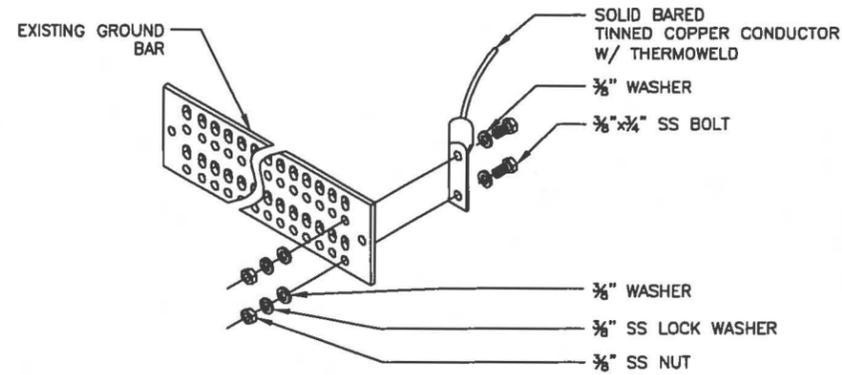
**E-6**

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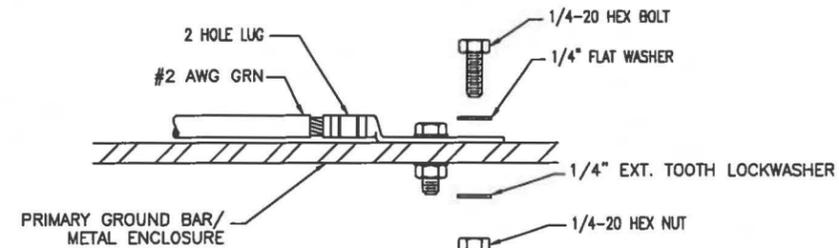
**GROUNDING DIAGRAM (TYP.)**

**1**



**TYPICAL GROUND BAR CONNECTION DETAIL**

**2**

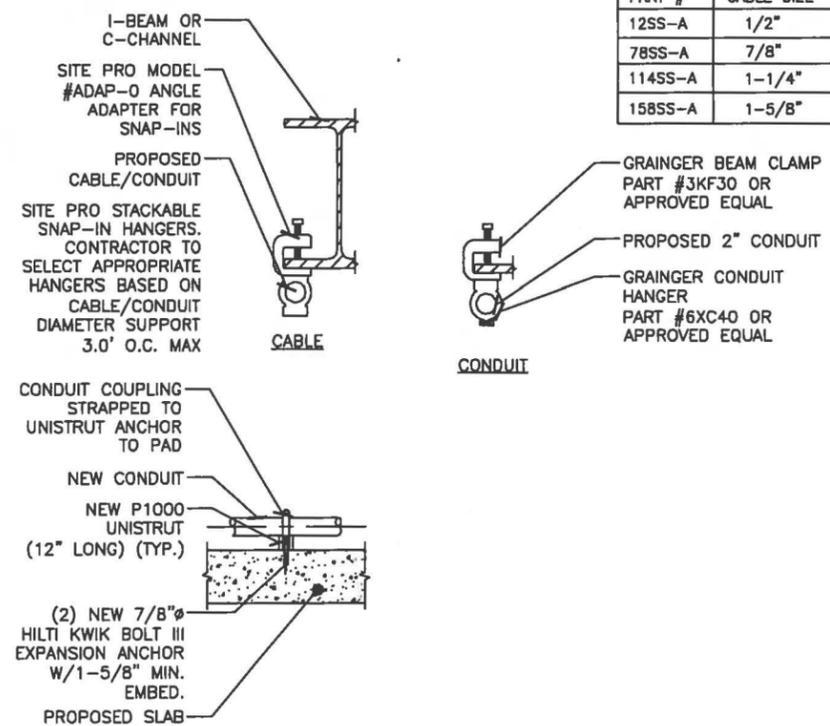


**INSTALLATION NOTES:**

1. SELECT BOLT LENGTH TO PROVIDE A MINIMUM OF TWO EXPOSED THREADS.
2. BURNISH MOUNTING SURFACE TO REMOVE PAINT IN THE AREA OF LUG CONTACT.
3. APPLY ANTI-OXIDANT COMPOUND TO MATING SURFACE OF LUG AND WIPE CLEAN EXCESS COMPOUND.
4. USE SOLID COPPER WIRE AND MECHANICAL 2-HOLE LUG FOR ALL EXTERIOR GROUNDING.

**GROUND CONNECTION DETAIL**

**3**



**TYPICAL CONDUIT SUPPORT DETAILS**

**4**

**TILLMAN INFRASTRUCTURE**  
 152 W. 57TH STREET  
 NEW YORK, NEW YORK 10019  
 TEL: 212-708-1677

**creospan**  
 1515 E WOODFIELD RD. SUITE 860  
 SCHAUMBURG, IL 60173

**WESTCHESTER SERVICES LLC**  
 604 FOX GLEN  
 BARRINGTON, IL 60010  
 TELEPHONE: 847.277.0070  
 FAX: 847.277.0080  
 ae@westchesterservices.com

14220570  
 1641 LEE BURD RD  
 BENTON, KY 42025  
 MARSHALL COUNTY

**REVISIONS**

REV	DATE	DESCRIPTION	BY
2	11/09/17	PERMIT/CONSTRUCTION MC	
1	10/25/17	PERMIT/CONSTRUCTION MC	
0	10/20/17	PERMIT/CONSTRUCTION DS	

**STATE OF KENTUCKY**  
**JEREMY D. SHARIT**  
 26823  
 PROFESSIONAL ENGINEER

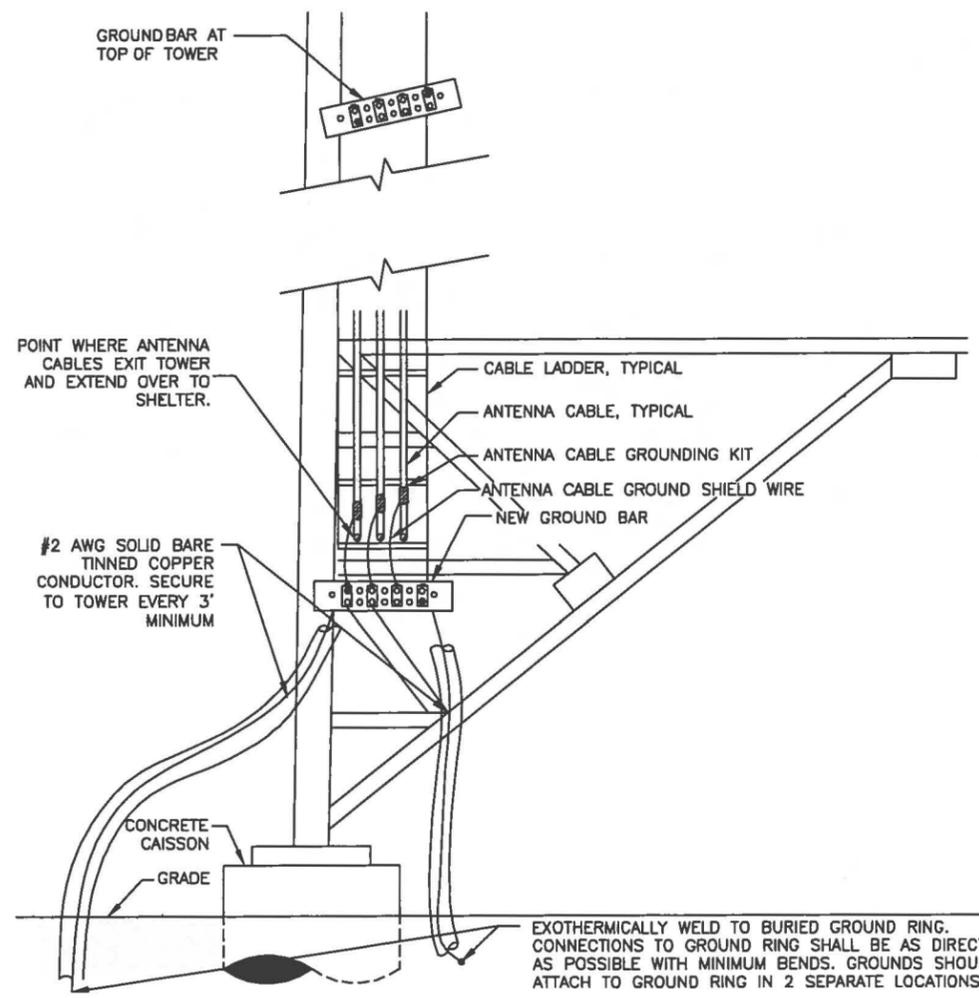
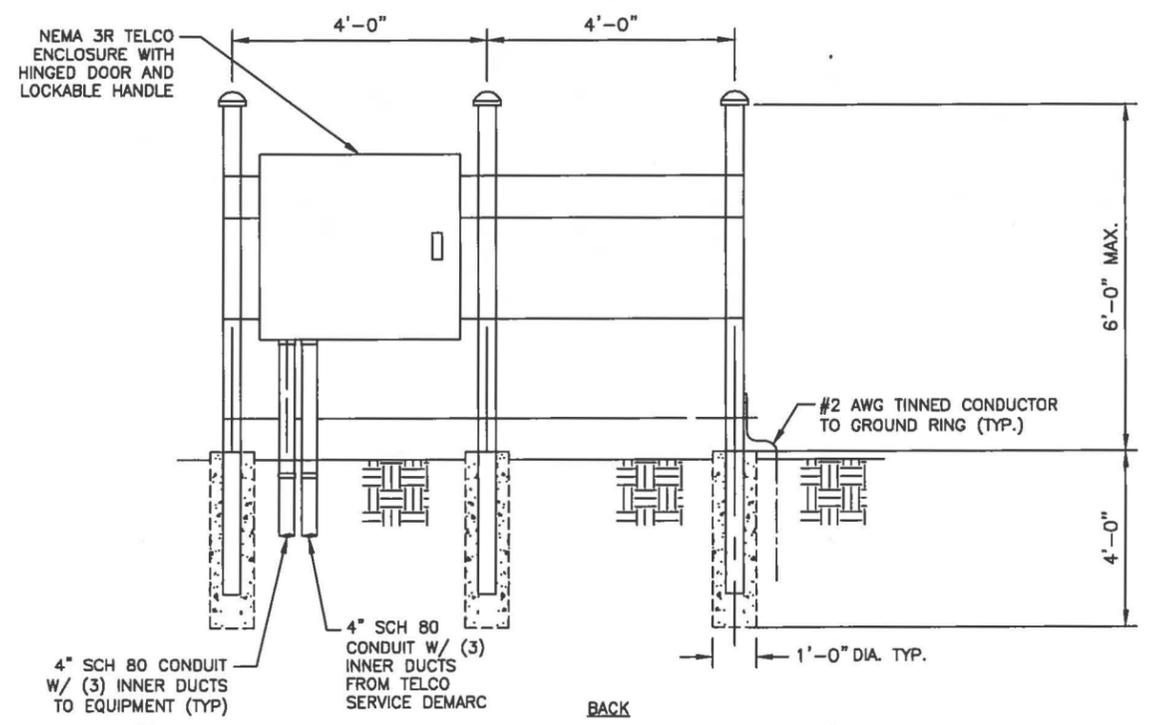
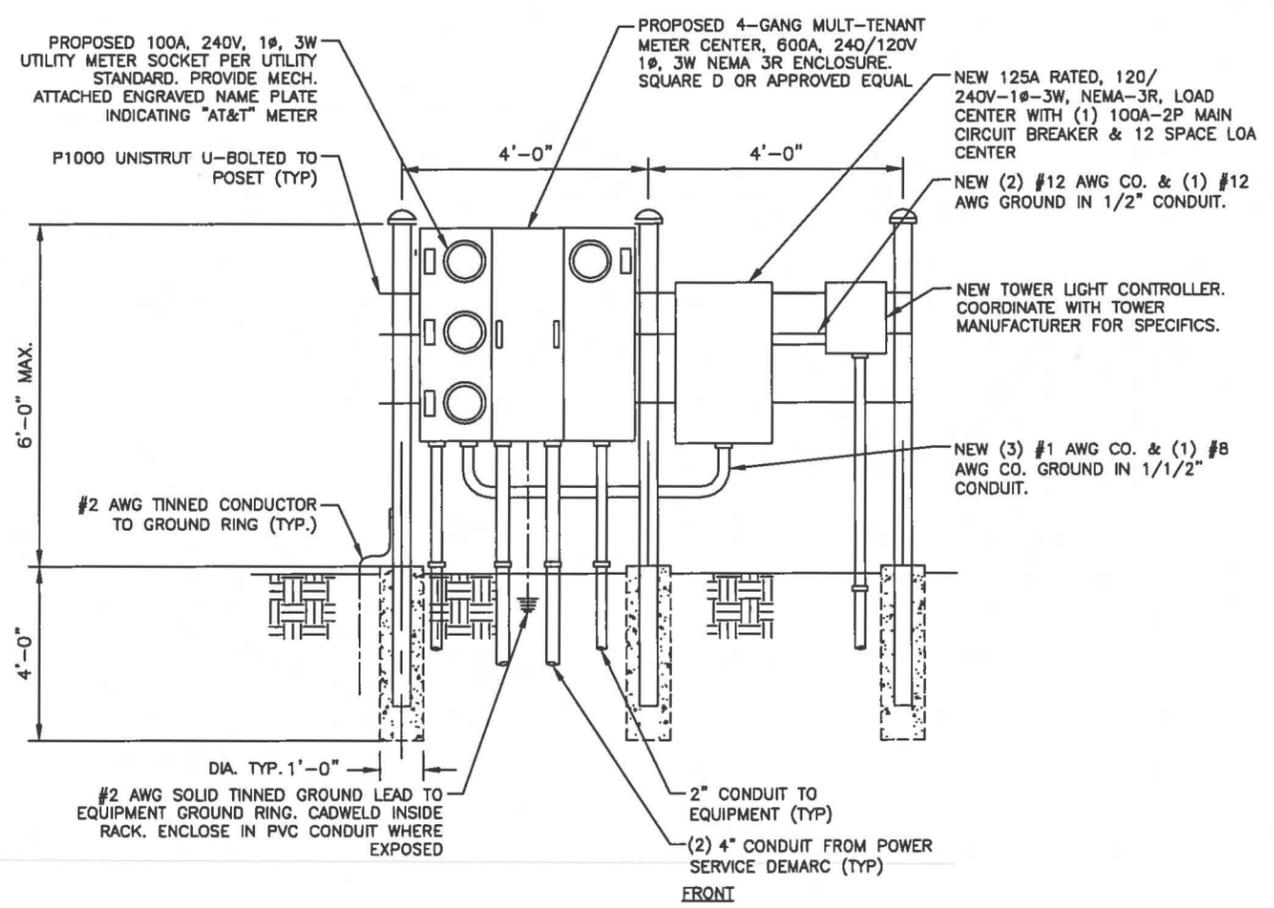
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY.

**GROUNDING DETAILS**

**E-7**

APPLICANT APPLICANT ENGINEER SITE INFORMATION DESIGN RECORD PROFESSIONAL STAMP SHEET TITLE SHEET NUMBER

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**ELECTRICAL SERVICE BACKBOARD DETAIL**

**1 GROUND BAR DETAIL**

**2**

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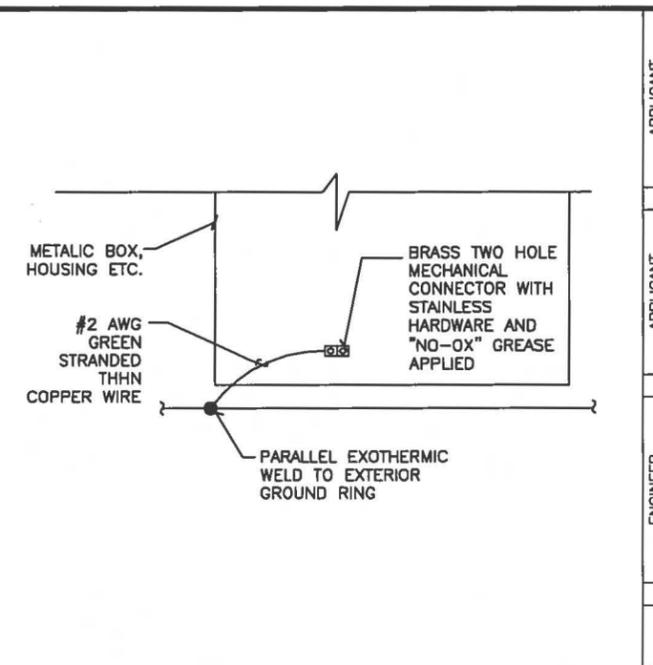
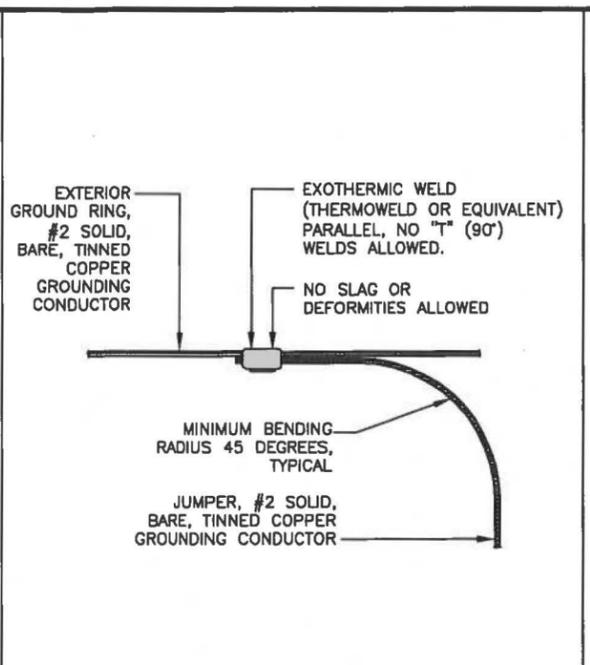
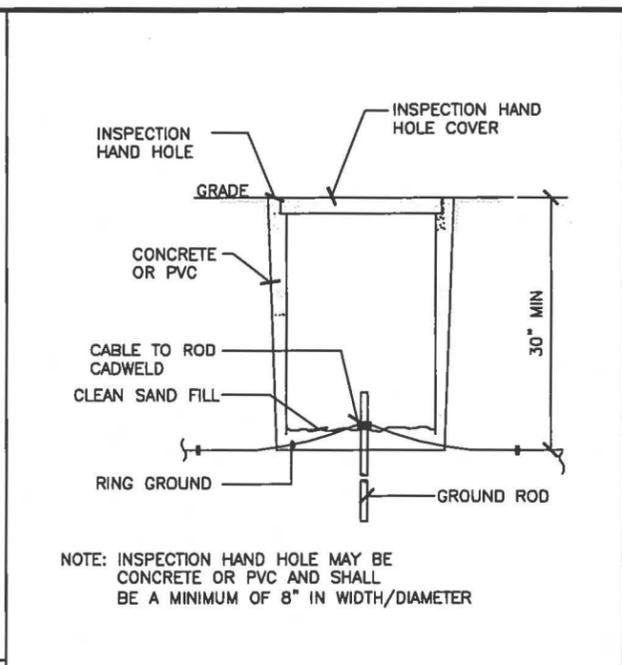
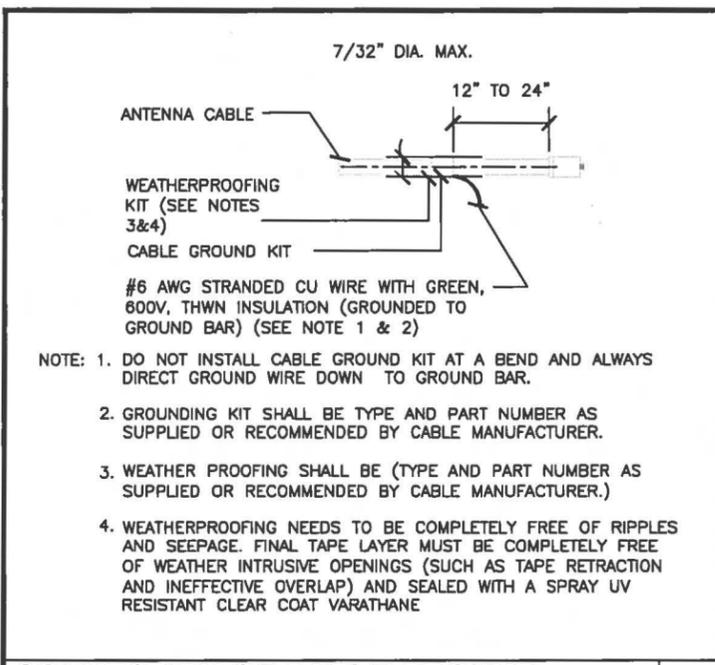
STATE OF KENTUCKY  
**JEREMY D. SHARIT**  
 26823  
 PROFESSIONAL ENGINEER

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**GROUNDING DETAILS**

**E-8**

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**CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE**

**1 GROUND ROD WITH ACCESS AREA**

**2 TYP. GROUNDING CONNECTION**

**3 TYP. METALLIC GROUNDING DETAIL**

**SECTION "P" - SURGE PROTECTORS**

CABLE ENTRY PORTS (HATCH PLATES) (#2)  
GENERATOR FRAMEWORK (IF AVAILABLE) (#2)  
TELCO GROUND BAR  
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)  
+24V POWER SUPPLY RETURN BAR (#2)  
-48V POWER SUPPLY RETURN BAR (#2)  
RECTIFIER FRAMES.

**SECTION "A" - SURGE ABSORBERS**

INTERIOR GROUND RING (#2)  
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)  
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)  
BUILDING STEEL (IF AVAILABLE) (#2)

**SECTION "I" - ISOLATED GROUND ZONE**

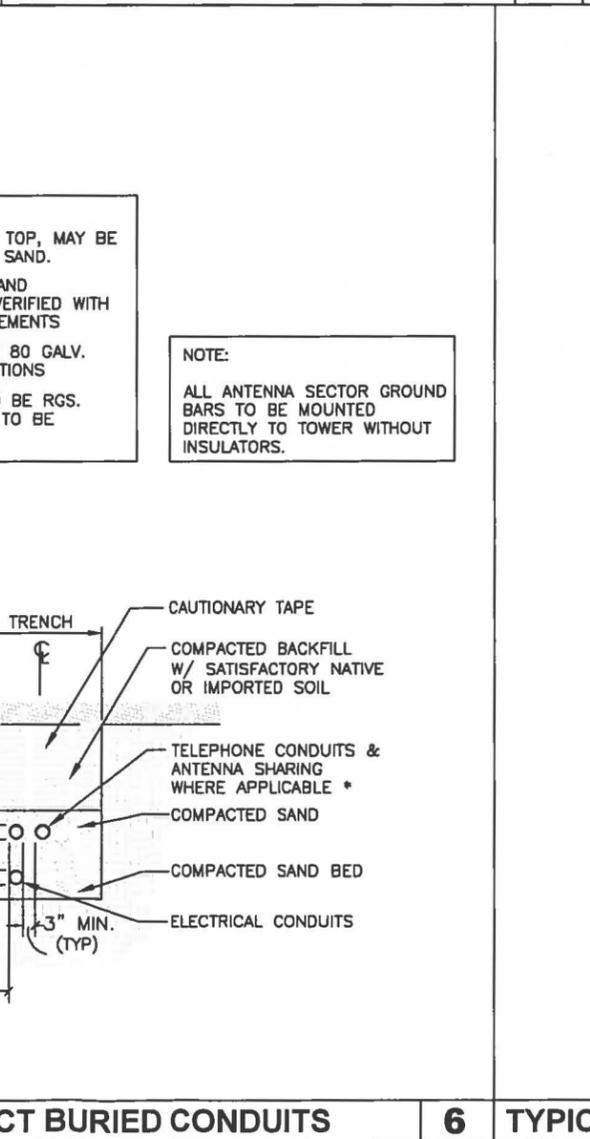
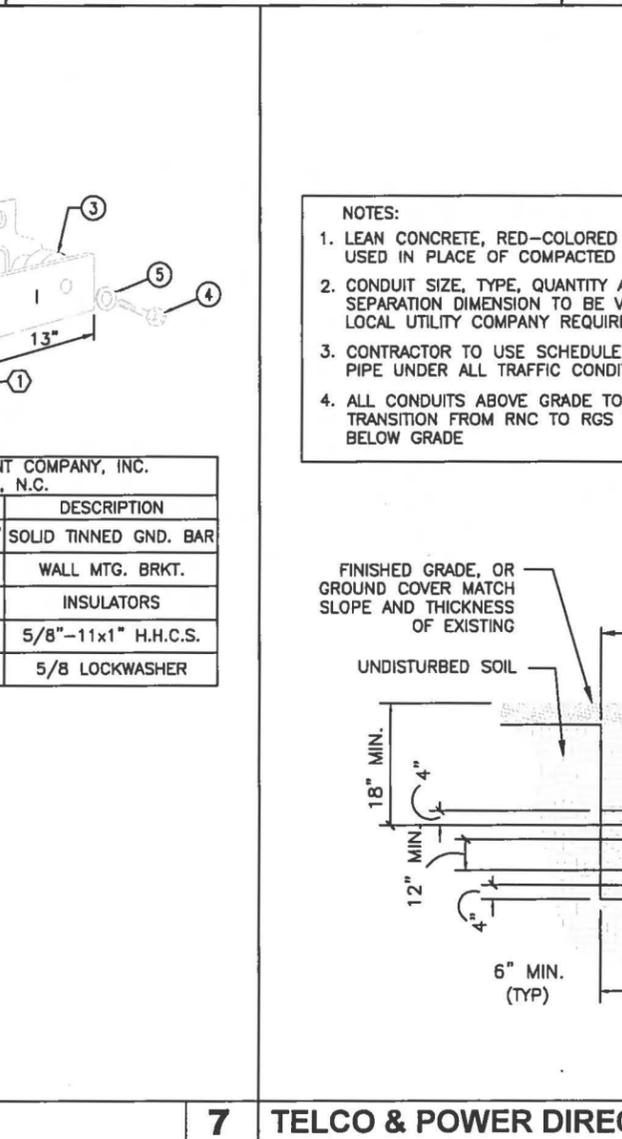
ALL COMMUNICATIONS EQUIPMENT FRAMES.  
ISOLATED GROUND BAR - IGB (#2)

**DETAIL NOTES:**

- TWO-HOLE, LONG BARREL COMPRESSION LUG WITH 2 AWG STRANDED COPPER CONDUCTOR AND GREEN THHN INSULATION TO GROUND BAR. ROUTE CONDUCTOR TO MASTER GROUND BAR AND CONNECT WITH TWO-HOLE LUG.
- USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.
- GROUND BAR TO BE TIN COATED AND BE STAMPED WITH THE FOLLOWING "STOLEN FROM T-MOBILE-PLEASE CONTACT (866) 672-6727"
- ALL MECHANICAL CONNECTIONS SHALL HAVE "NO-OX" GREASE APPLIED

**NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C.**

NO.	REQ.	PART NO.	DESCRIPTION
①	1	1/4"x4"x30"	SOLID TINNED GND. BAR
②	2	A-6056	WALL MTG. BRKT.
③	2	3061-4	INSULATORS
④	4	3012-1	5/8"-11x1" H.H.C.S.
⑤	4	3015-8	5/8 LOCKWASHER



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0	10/20/17	PERMIT/CONSTRUCTION	DS

**PROFESSIONAL STAMP**

STATE OF KENTUCKY  
JEREMY D. SHARIT  
26823  
REGISTERED PROFESSIONAL ENGINEER

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**GROUNDING DETAILS**

**E-9**

**GROUND BAR DETAILS**

**7 TELCO & POWER DIRECT BURIED CONDUITS**

**6 TYPICAL MULTIPLE CONDUITS GROUND**

**5**

**TILLMAN INFRASTRUCTURE**  
152 W. 57TH STREET  
NEW YORK, NEW YORK 10019  
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**GROUNDING DETAILS**

**E-9**

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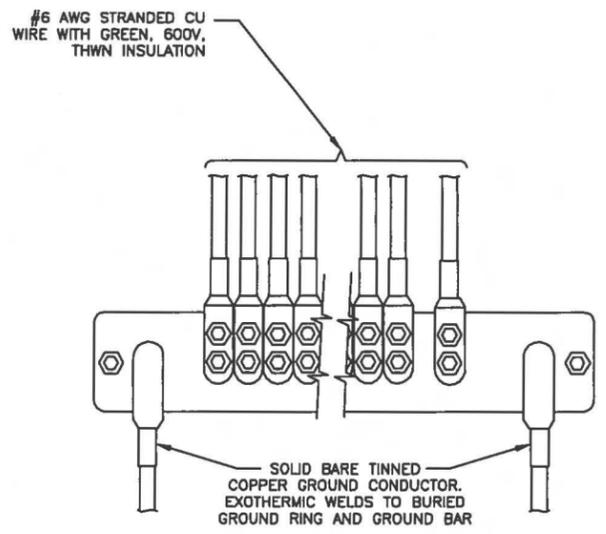
**TILLMAN**  
**INFRASTRUCTURE**  
 152 W. 57TH STREET  
 NEW YORK, NEW YORK 10019  
 TEL: 212-706-1677

**creospan**  
 1425 W. WOODFIELD RD SUITE 860  
 AUMBURG, IL 60173

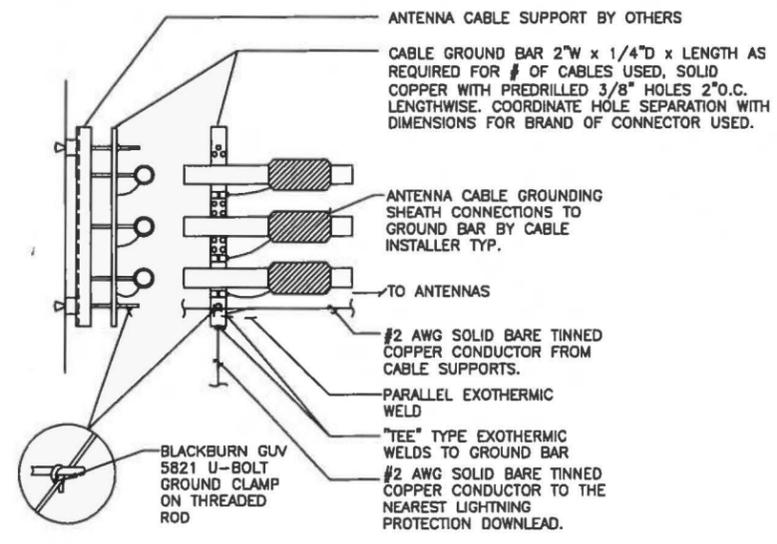
**WESTCHESTER**  
**SERVICES LLC**  
 604 FOX GLEN  
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 BENTON, KY 42025  
 MARSHALL COUNTY

APPLICANT APPLICANT ENGINEER SITE INFORMATION DESIGN RECORD PROFESSIONAL STAMP SHEET TITLE SHEET NUMBER



- NOTES:**
1. CONTRACTOR SHALL REFER TO AT&T GROUNDING AND BONDING PRACTICE TP-76416.
  2. PROVIDE WEATHER PROOFING AND GROUNDING KIT TO BOND DC POWER CABLE SHIELD TO EXTERNAL HATCH PLATE GROUND BAR.
  3. PROVIDE GROUND CONNECTION FOR DC POWER CABLE SHIELD TO "P" SECTION OF CRGB WITHIN SHELTER.



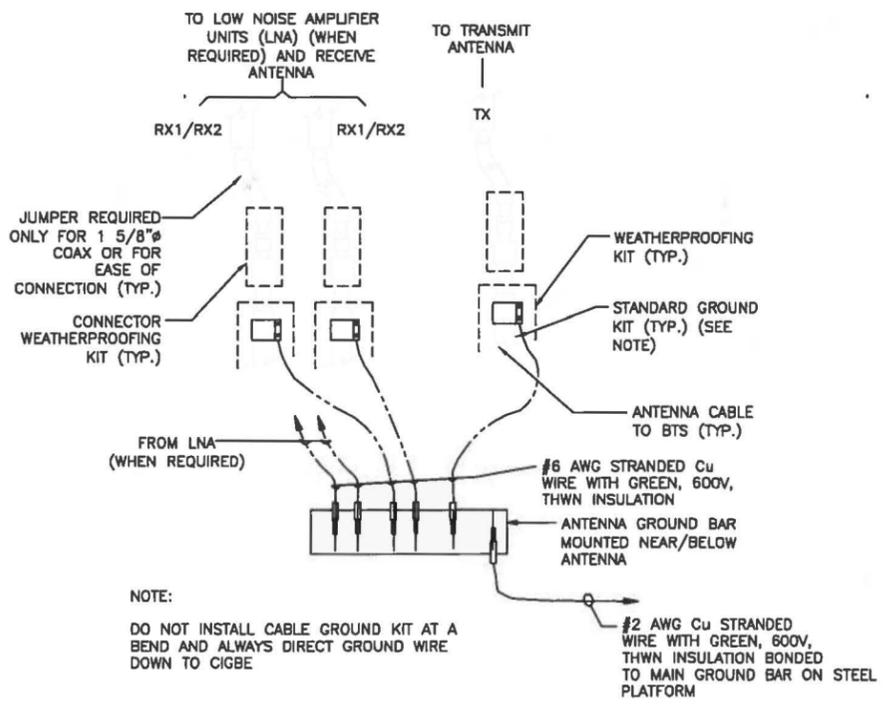
**INSTALLATION OF GROUND WIRE TO GROUND BAR**

**3 ANTENNA GROUND BAR DETAIL**

**2**

**REVISIONS**

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0	10/20/17	PERMIT/CONSTRUCTION DS	



**NOTE:**  
 DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

**CONNECTION OF GROUND WIRE TO GROUND BAR**

**1**

**STATE OF KENTUCKY**  
**JEREMY D. SHARIT**  
**26823**  
**PROFESSIONAL ENGINEER**

**GROUNDING DETAILS**

**E-10**

**EXHIBIT C**  
**TOWER AND FOUNDATION DESIGN**



**Structural Design Report**  
306' 3600SRWD Guyed Tower  
Site: Benton, KY  
Site Number: 14220570

Prepared for: TILLMAN INFRASTRUCTURE, LLC  
by: Sabre Towers & Poles™

Job Number: 18-2794-TJH-R1

October 31, 2017

Tower Profile.....	1
Line Arrangement.....	2
Foundation Design Summary.....	3-4
Maximum Leg Loads and Face Shears.....	5
Maximum Deflections, Tilts, and Twists.....	6
Maximum Guy Tensions, Anchor Loads, and Base Loads.....	7
Calculations.....	8-37

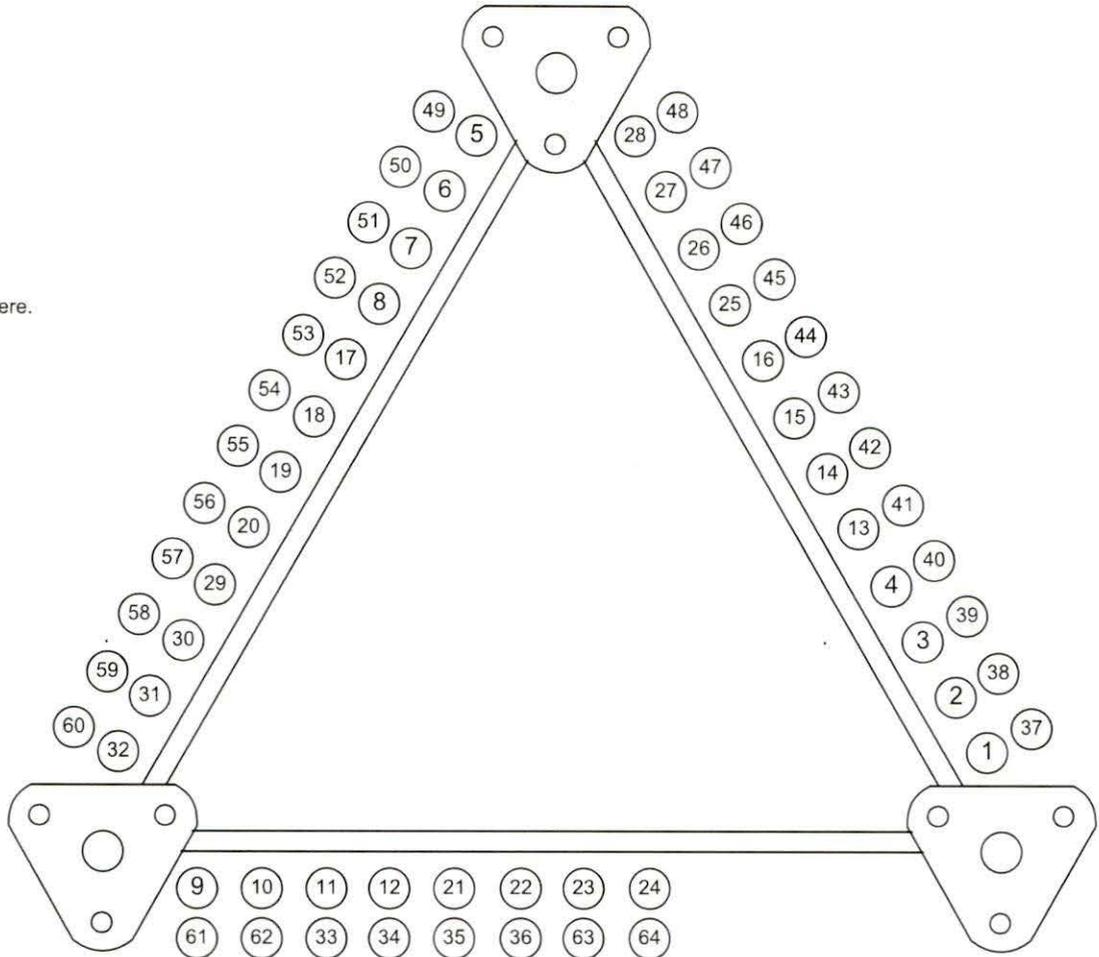




**Additional Lines\***

(65)	1 5/8
(66)	1 5/8
(67)	1 5/8
(68)	1 5/8
(69)	1 5/8
(70)	1 5/8
(71)	1 5/8
(72)	1 5/8

\* May be located anywhere.



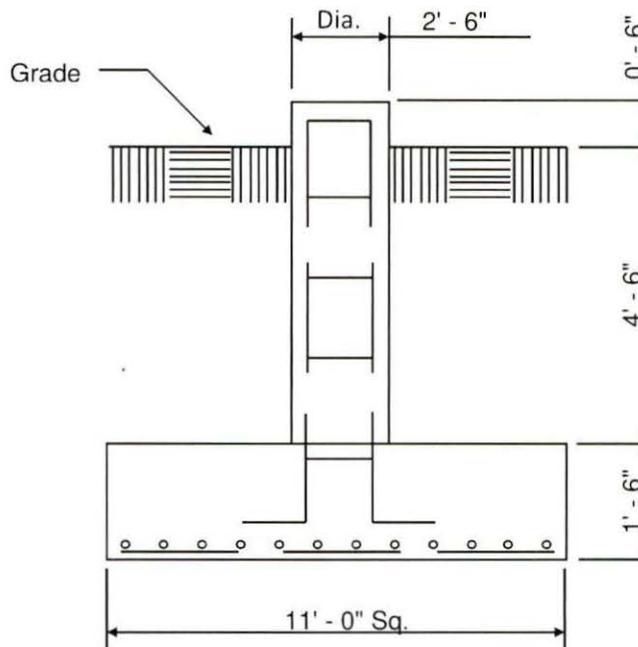
**NOTE:** THE LINES ARE NUMBERED FROM HIGHEST ELEVATION TO LOWEST ELEVATION

	<b>Sabre Communications Corporation</b> 7101 Southbridge Drive P.O. Box 658 Sioux City, IA 51102-0658 Phone: (712) 258-6690 Fax: (712) 279-0814	Job: <b>18-2794-TJH-R1</b>
	Customer: TILLMAN INFRASTRUCTURE, LLC	Site Name: Benton, KY 14220570
	Description: 306' 3600SRWD	Date: 10/31/2017
	By: NM	
	<small>Information contained herein is the sole property of Sabre Communications Corporation, constitutes a trade secret as defined by Iowa Code Ch. 550 and shall not be reproduced, copied or used in whole or part for any purpose whatsoever without the prior written consent of Sabre Communications Corporation.</small>	

**Customer: TILLMAN INFRASTRUCTURE, LLC**

**Site: Benton, KY 14220570**

306 ft. Model 3600 SRWD Guyed Tower (36 in. face) At  
89 mph Wind with no ice and 30 mph wind with 1 in. Ice per ANSI/TIA-222-G.  
Antenna Loading per Page 1



**TOWER BASE**

(7.63 Cu. Yds. Each)

(NOT TO SCALE)

Rebar Schedule	
<b>PIER</b>	(6) #7 vertical rebar w/ #3 ties @12" spacing
<b>PAD</b>	(12) #7 horizontal rebar Ea. Way Evenly Spaced Bottom Only

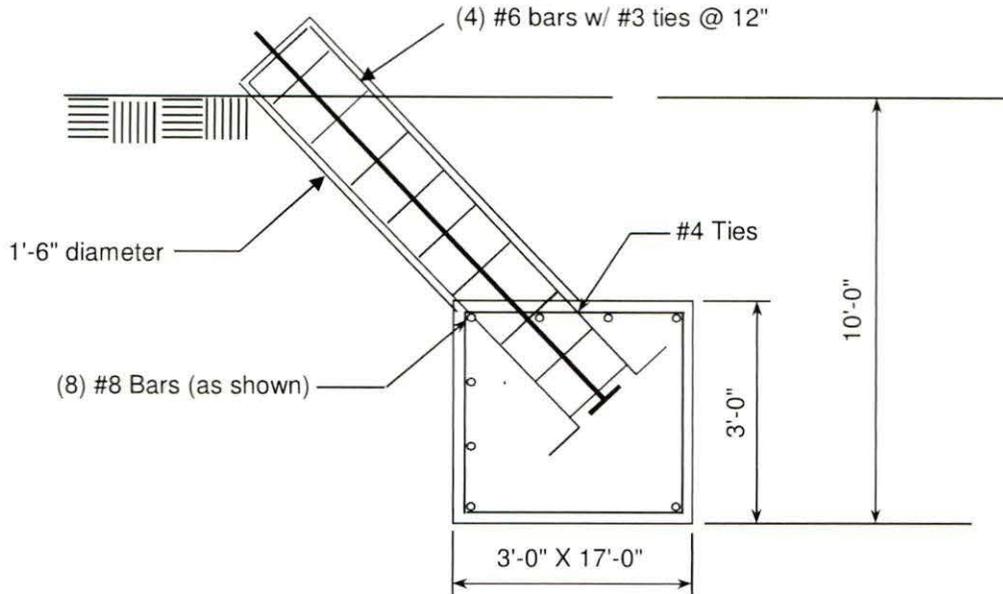
**NOTES**

- 1.) Concrete shall have a minimum 28 day compressive strength of 4500 PSI, in accordance with ACI 318-11.
- 2.) Rebar to conform to ASTM specification A615 Grade 60.
- 3.) All rebar to have a minimum of 3" concrete cover.
- 4.) All exposed concrete corners to be chamfered 3/4".
- 5.) The foundation design is based on the geotechnical report by Ramaker & Associates, Inc.; project# 36211 dated September 6, 2017.
- 6.) The foundation design is based on the following factored reactions:  
Factored Axial load (kips) = 376.91  
Factored Shear (kips) = 1.29
- 7.) See the geotechnical report for compaction requirements, if specified.
- 8.) Use Type V Portland cement with a maximum water/cement ratio of 0.45.

**Customer: TILLMAN INFRASTRUCTURE, LLC**

**Site: Benton, KY 14220570**

306 ft. Model 3600 SRWD Guyed Tower (36 in. face) At  
89 mph Wind with no ice and 30 mph wind with 1 in. Ice per ANSI/TIA-222-G.  
Antenna Loading per Page 1



**GUY ANCHOR**

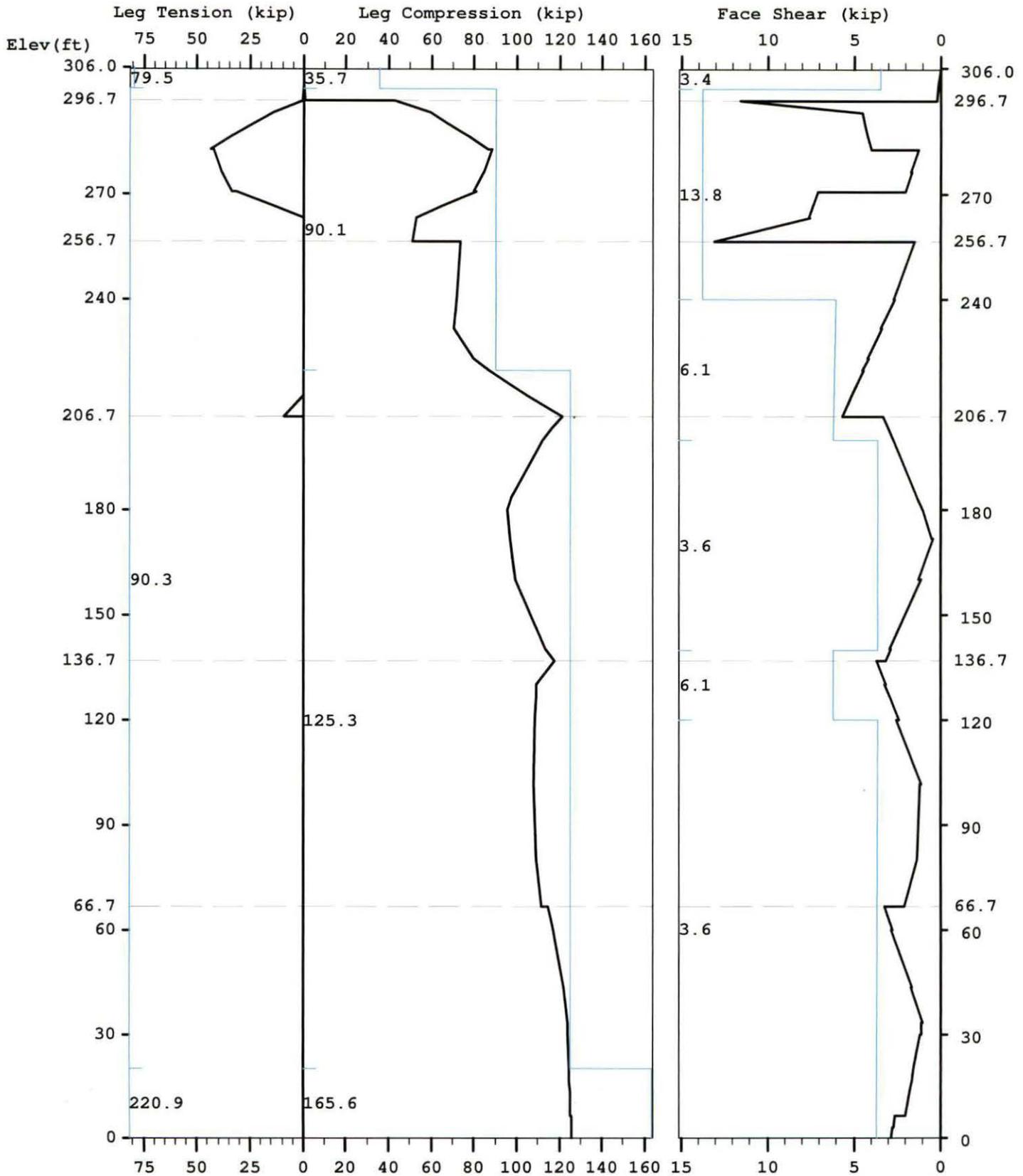
(5.67 Cu. Yds. Concrete - does not include shaft encasement)  
(3 REQUIRED; NOT TO SCALE)

Rebar Schedule Per Anchor	
<b>GUY ANCHOR</b>	(8) #8 horizontal rebar X 16'-6" (18) #4 ties evenly spaced

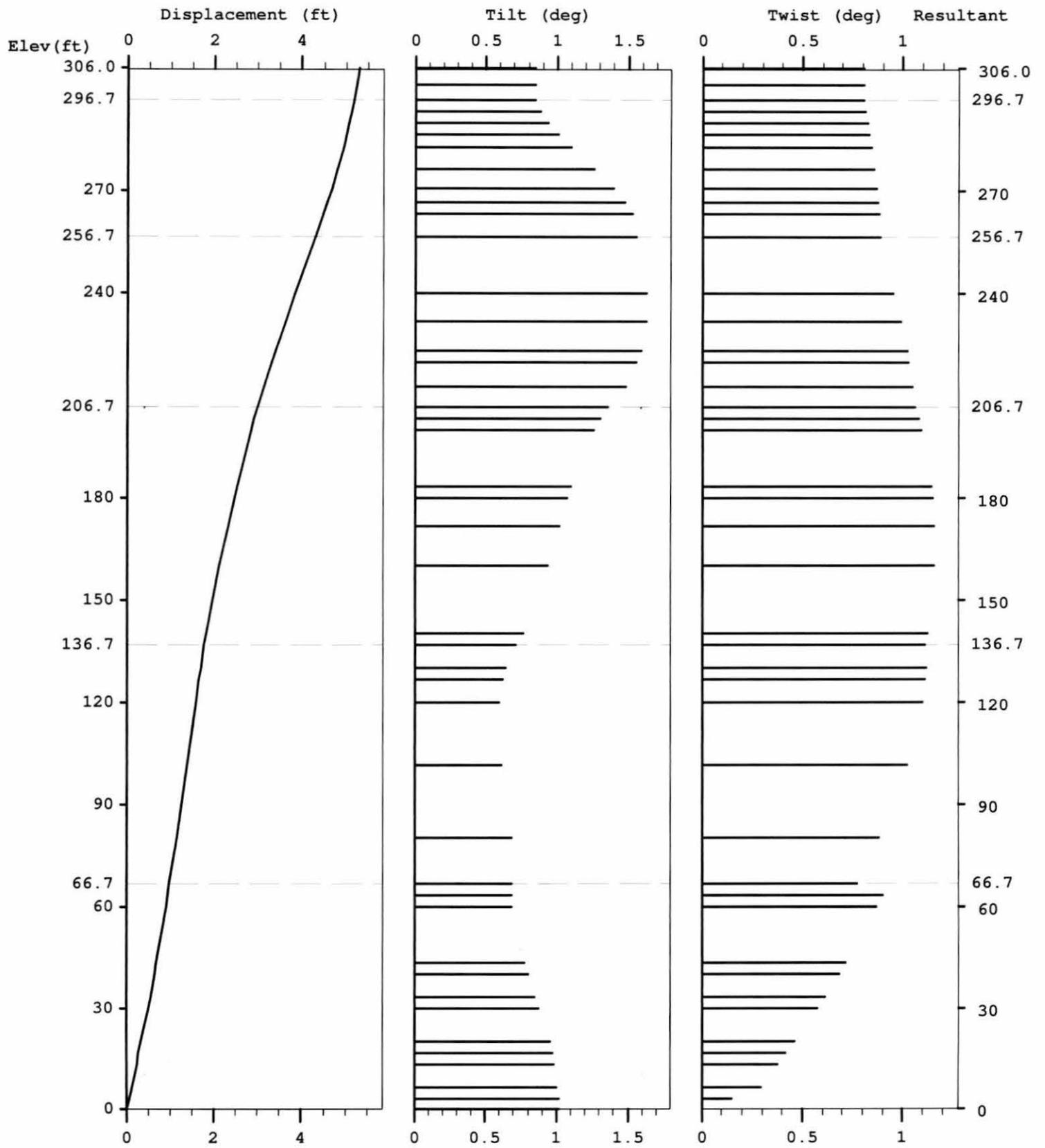
**NOTES**

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- 2.) Rebar to conform to ASTM specification A615 Grade 60.
- 3.) All rebar to have a minimum of 3" concrete cover.
- 4.) The foundation design is based on the geotechnical report by Ramaker & Associates, Inc.; project# 36211 dated September 6, 2017.
- 5.) The foundation design is based on the following factored reactions:  
Uplift (kips) = 109.52  
Horizontal force (kips) = 91.25
- 6.) See the geotechnical report for these parameters and compaction requirements, if specified.
- 7.) Use Type V Portland cement with a maximum water/cement ratio of 0.45.

Maximum

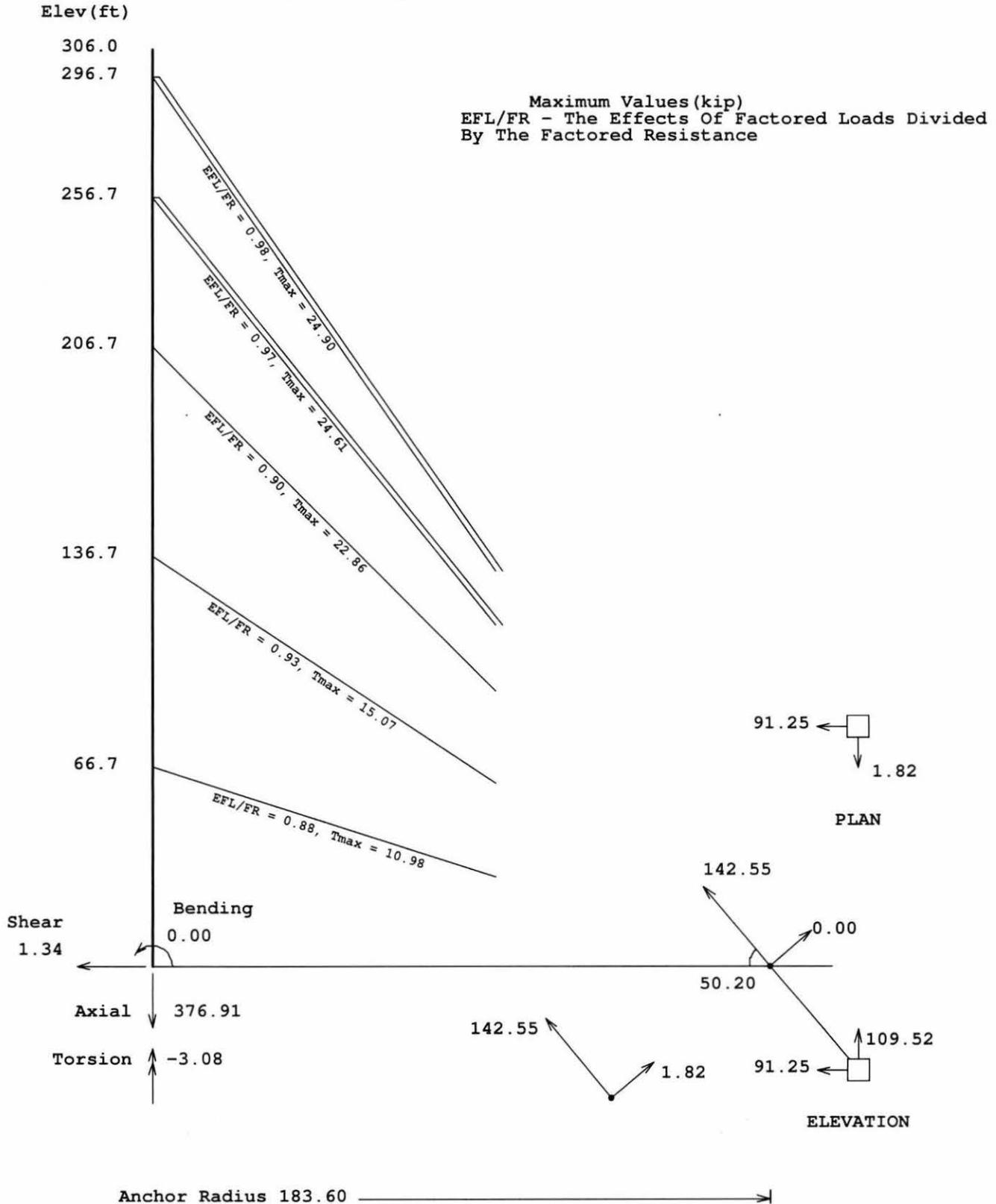


Maximum



Maximum

Guy Tensions, Anchor Loads and Base Loads



=====

GUYMAST-G (USA)-Guyed Tower Analysis (c)2005 Guymast Inc.

Tel:(416)736-7453 Fax:(416)736-4372 web:www.guymast.com

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MAST DATA

=====

UPPER ELEV FT	MAST TYPE OF WEB	NO OF LEGS *	FACE WIDTH FT *	GEOM PANEL HEIGHT FT *	X-SECTION-AREA ONE LEG IN.SQ.	ONE DIAG IN.SQ. *	BARE WEIGHT K/FT.	ELASTIC MODULUS KIP/IN.SQ	TEMP COEFF /DEG
306.0	4	3	3.000	3.333	1.770	0.600	0.028	29000.0	0.0000117
300.0	4	3	3.000	3.333	3.140	1.230	0.053	29000.0	0.0000117
280.0	4	3	3.000	3.333	3.140	1.230	0.053	29000.0	0.0000117
260.0	4	3	3.000	3.333	3.140	1.230	0.053	29000.0	0.0000117
240.0	4	3	3.000	3.333	3.140	0.790	0.047	29000.0	0.0000117
220.0	4	3	3.000	3.333	3.980	0.790	0.055	29000.0	0.0000117
200.0	4	3	3.000	3.333	3.980	0.600	0.053	29000.0	0.0000117
180.0	4	3	3.000	3.333	3.980	0.600	0.053	29000.0	0.0000117
160.0	4	3	3.000	3.333	3.980	0.600	0.053	29000.0	0.0000117
140.0	4	3	3.000	3.333	3.980	0.790	0.055	29000.0	0.0000117
120.0	4	3	3.000	3.333	3.980	0.600	0.053	29000.0	0.0000117
100.0	4	3	3.000	3.333	3.980	0.600	0.053	29000.0	0.0000117
80.0	4	3	3.000	3.333	3.980	0.600	0.053	29000.0	0.0000117
60.0	4	3	3.000	3.333	3.980	0.600	0.053	29000.0	0.0000117
40.0	4	3	3.000	3.333	3.980	0.600	0.053	29000.0	0.0000117
20.0	4	3	3.000	3.333	4.910	0.600	0.062	29000.0	0.0000117
6.7	4	3	2.000	3.333	4.910	0.600	0.062	29000.0	0.0000117

\* If NO OF LEGS is 1 : that part of the mast is assumed to be cylindrical  
 and : FACE WIDTH = outside diameter  
 PANEL HEIGHT = thickness  
 AREA OF DIAG = Poisson ratio

GUY GEOMETRY

=====

ELEV FT	GUY AZI DEG	DIAMETER IN.	HEIGHT FT.	RADIUS FT.	MAST ATTACH RADIUS FT.	ATTACH AZI DEG	INITIAL TENSION KIP
296.7	0.0	0.625	300.7	183.6	3.464	300.0	4.240
296.7	240.0	0.625	292.7	183.6	3.464	300.0	4.240
296.7	240.0	0.625	292.7	183.6	3.464	180.0	4.240
296.7	120.0	0.625	296.7	183.6	3.464	180.0	4.240
296.7	120.0	0.625	296.7	183.6	3.464	60.0	4.240
296.7	0.0	0.625	300.7	183.6	3.464	60.0	4.240
256.7	0.0	0.625	260.7	183.6	3.464	300.0	2.970

18-2794-TJH-R1

256.7	240.0	0.625	252.7	183.6	3.464	300.0	2.970
256.7	240.0	0.625	252.7	183.6	3.464	180.0	2.970
256.7	120.0	0.625	256.7	183.6	3.464	180.0	2.970
256.7	120.0	0.625	256.7	183.6	3.464	60.0	2.970
256.7	0.0	0.625	260.7	183.6	3.464	60.0	2.970
206.7	240.0	0.625	202.7	183.6	1.732	240.0	3.390
206.7	120.0	0.625	206.7	183.6	1.732	120.0	3.390
206.7	0.0	0.625	210.7	183.6	1.732	0.0	3.390
136.7	240.0	0.500	132.7	183.6	1.732	240.0	3.230
136.7	120.0	0.500	136.7	183.6	1.732	120.0	3.230
136.7	0.0	0.500	140.7	183.6	1.732	0.0	3.230
66.7	240.0	0.438	62.7	183.6	1.732	240.0	3.120
66.7	120.0	0.438	66.7	183.6	1.732	120.0	3.120
66.7	0.0	0.438	70.7	183.6	1.732	0.0	3.120

GUY MATERIAL PROPERTIES

=====

ELEV FT	GUY AZI DEG	BREAKING STRENGTH KIP	GUY WEIGHT LBS/FT	GUY AREA IN. SQ	ELASTIC MODULUS KIP/IN. SQ	THERMAL COEFF /DEG	UNSTRESS LENGTH FT
296.7	0.0	42.400	0.819	0.234	20000.0	0.0000117	351.115
296.7	240.0	42.400	0.819	0.234	20000.0	0.0000117	344.300
296.7	240.0	42.400	0.819	0.234	20000.0	0.0000117	344.300
296.7	120.0	42.400	0.819	0.234	20000.0	0.0000117	347.701
296.7	120.0	42.400	0.819	0.234	20000.0	0.0000117	347.701
296.7	0.0	42.400	0.819	0.234	20000.0	0.0000117	351.115
256.7	0.0	42.400	0.819	0.234	20000.0	0.0000117	317.697
256.7	240.0	42.400	0.819	0.234	20000.0	0.0000117	311.176
256.7	240.0	42.400	0.819	0.234	20000.0	0.0000117	311.176
256.7	120.0	42.400	0.819	0.234	20000.0	0.0000117	314.428
256.7	120.0	42.400	0.819	0.234	20000.0	0.0000117	314.428
256.7	0.0	42.400	0.819	0.234	20000.0	0.0000117	317.697
206.7	240.0	42.400	0.819	0.234	20000.0	0.0000117	272.143
206.7	120.0	42.400	0.819	0.234	20000.0	0.0000117	275.132
206.7	0.0	42.400	0.819	0.234	20000.0	0.0000117	278.146
136.7	240.0	26.900	0.525	0.150	20000.0	0.0000117	224.895
136.7	120.0	26.900	0.525	0.150	20000.0	0.0000117	227.272
136.7	0.0	26.900	0.525	0.150	20000.0	0.0000117	229.694
66.7	240.0	20.800	0.388	0.115	21000.0	0.0000117	192.127
66.7	120.0	20.800	0.388	0.115	21000.0	0.0000117	193.465
66.7	0.0	20.800	0.388	0.115	21000.0	0.0000117	194.877

FACTORED LEG AND FACE SHEAR RESISTANCE

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BOTTOM ELEV ft	TOP ELEV ft	LEG COMP kip	FACE SHEAR kip	LEG TENS kip
0.00	20.00	165.56	3.65	220.89
20.00	40.00	125.33	3.60	90.30
40.00	60.00	125.33	3.60	90.30
60.00	80.00	125.33	3.60	90.30
80.00	100.00	125.33	3.60	90.30
100.00	120.00	125.33	3.60	90.30
120.00	140.00	125.33	6.14	90.30
140.00	160.00	125.33	3.60	90.30
160.00	180.00	125.33	3.60	90.30
180.00	200.00	125.33	3.60	90.30
200.00	220.00	125.33	6.14	90.30
220.00	240.00	90.09	6.05	90.30
240.00	260.00	90.09	13.78	90.30
260.00	280.00	90.09	13.78	90.30
280.00	300.00	90.09	13.78	90.30
300.00	306.00	35.70	3.44	79.52

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\* 12 wind directions were analyzed. Only 2 condition(s) shown in full  
 \* Some wind loads may have been derived from full-scale wind tunnel testing

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LOADING CONDITION A

89 mph wind with no ice. Wind Azimuth: 0°

18-2794-TJH-R1

MAST LOADING

=====

LOAD TYPE	ELEV FT	.FORCES (KIP & KIP/FT)			.MOMENTS(FT.K & FT.K/FT)			ANT-ORIENT	
		N	E	DOWN	N	E	TORSION	AZI DEG	VERT DEG
C	296.7	-0.448	0.000	0.625	0.00	0.00	0.00	0.0	0.00
C	295.0	-10.357	0.000	7.200	0.00	0.00	0.00	0.0	0.00
C	283.0	-7.682	0.000	4.800	0.00	0.00	0.00	0.0	0.00
C	271.0	-7.612	0.000	4.800	0.00	0.00	0.00	0.0	0.00
C	259.0	-7.540	0.000	4.800	0.00	0.00	0.00	0.0	0.00
C	256.7	-0.434	0.000	0.625	0.00	0.00	0.00	0.0	0.00
D	306.0	-0.035	0.000	0.048	0.00	0.00	0.00		
D	300.0	-0.036	0.000	0.051	0.00	0.00	0.00		
D	300.0	-0.041	0.000	0.076	0.00	0.00	0.00		
D	296.7	-0.041	0.000	0.076	0.00	0.00	0.00		
D	296.7	-0.063	0.000	0.087	0.00	0.00	0.00		
D	293.3	-0.063	0.000	0.087	0.00	0.00	0.00		
D	293.3	-0.086	0.000	0.098	0.00	0.00	0.00		
D	283.3	-0.086	0.000	0.098	0.00	0.00	0.00		
D	283.3	-0.100	0.000	0.119	0.00	0.00	0.00		
D	273.3	-0.101	0.000	0.121	0.00	0.00	0.00		
D	273.3	-0.104	0.000	0.127	0.00	0.00	0.00		
D	270.0	-0.104	0.000	0.127	0.00	0.00	0.00		
D	270.0	-0.109	0.000	0.143	0.01	0.01	-0.01		
D	260.0	-0.109	0.000	0.143	0.01	0.01	-0.01		
D	260.0	-0.136	0.000	0.159	0.01	0.00	0.00		
D	256.7	-0.136	0.000	0.159	0.01	0.00	0.00		
D	256.7	-0.149	0.000	0.166	0.01	0.00	0.00		
D	240.0	-0.150	0.000	0.166	0.01	0.00	0.00		
D	240.0	-0.145	0.000	0.159	0.01	0.00	0.00		
D	223.3	-0.146	0.000	0.159	0.01	0.00	0.00		
D	223.3	-0.146	0.000	0.159	0.01	0.00	0.00		
D	220.0	-0.146	0.000	0.159	0.01	0.00	0.00		
D	220.0	-0.144	0.000	0.169	0.01	0.00	0.00		
D	203.3	-0.145	0.000	0.169	0.01	0.00	0.00		
D	203.3	-0.144	0.000	0.168	0.01	0.00	0.00		
D	183.3	-0.140	0.000	0.165	0.01	0.00	0.00		
D	183.3	-0.140	0.000	0.166	0.01	0.00	0.00		
D	160.0	-0.138	0.000	0.166	0.01	0.00	0.00		
D	160.0	-0.134	0.000	0.166	0.01	0.00	0.00		
D	140.0	-0.136	0.000	0.166	0.01	0.00	0.00		
D	140.0	-0.131	0.000	0.169	0.01	0.00	0.00		
D	130.0	-0.132	0.000	0.169	0.01	0.00	0.00		
D	130.0	-0.132	0.000	0.169	0.01	0.00	0.00		
D	120.0	-0.133	0.000	0.169	0.01	0.00	0.00		
D	120.0	-0.126	0.000	0.166	0.01	0.00	0.00		
D	100.0	-0.129	0.000	0.166	0.01	0.00	0.00		
D	100.0	-0.122	0.000	0.166	0.01	0.00	0.00		
D	80.0	-0.125	0.000	0.166	0.01	0.00	0.00		
D	80.0	-0.116	0.000	0.166	0.01	0.00	0.00		
D	63.3	-0.119	0.000	0.166	0.01	0.00	0.00		
D	63.3	-0.120	0.000	0.166	0.01	0.00	0.00		
D	60.0	-0.120	0.000	0.166	0.01	0.00	0.00		
D	60.0	-0.110	0.000	0.166	0.01	0.00	0.00		
D	43.3	-0.113	0.000	0.166	0.01	0.00	0.00		
D	43.3	-0.114	0.000	0.166	0.01	0.00	0.00		
D	40.0	-0.114	0.000	0.166	0.01	0.00	0.00		
D	40.0	-0.101	0.000	0.166	0.01	0.00	0.00		
D	20.0	-0.108	0.000	0.166	0.01	0.00	0.00		
D	20.0	-0.088	0.000	0.177	0.01	0.00	0.00		
D	10.0	-0.088	0.000	0.177	0.01	0.00	0.00		
D	10.0	-0.089	0.000	0.178	0.01	0.00	0.00		
D	0.0	-0.088	0.000	0.176	0.01	0.00	0.00		

GUY LOADING

=====

.. WIND LOADING		...	TEMP	.ICE	LOAD..	CONV	PROFILES.	.LOAD FACTORS.			
AZI	SPEED	REF	CHANGE	RAD	DENS	TOL	CAB	WIND	WIND	DEAD	ICE
DEG	MPH	PRESS	DEG	IN	PCF						
0.0	89.0	0.00	0.00	0.00	56.00	0.0100	2	4	1.60	1.00	1.00

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CABLE PROFILE: 1 - CATENARY 2 - PARABOLIC

- WIND PROFILE: 1 - EIA 222 G default  
 2 - Constant Kz=1, Kiz=1  
 3 - Step function for Kz, Kiz  
 (requires definition of Exposure Factor Kz, Kiz table)  
 4 - Special Factors  
 5 - Site specific wind formula, Kiz as EIA 222 G default  
 (requires definition of Exposure Factor Qh formula table)

SUPPRESS PRINTING  
 =====

INPUT LOADS	...FOR THIS LOADING..				.....MAXIMUMS.....			
	DISPL	INTRNL FORCES	MEMBER LOADS	ALL	DISPL	INTRNL FORCES	MEMBER LOADS	
	no	yes	yes	no	no	no	no	
SPECIAL FACTOR TABLE								
ELEV	GUY AZI	ATTACH MAST AZI	RADIAL ICE	WIND GUST FACT	GUY SHAPE FACT	WIND HEIGHT FACT	TEMP CHANGE DEG	
FT	DEG	DEG	IN.					
296.7	240.0	300.0	0.000	0.850	1.200	1.169	0.00	
296.7	120.0	60.0	0.000	0.850	1.200	1.169	0.00	
296.7	120.0	180.0	0.000	0.850	1.200	1.169	0.00	
296.7	0.0	300.0	0.000	0.850	1.200	1.169	0.00	
296.7	0.0	60.0	0.000	0.850	1.200	1.169	0.00	
296.7	240.0	180.0	0.000	0.850	1.200	1.169	0.00	
256.7	240.0	300.0	0.000	0.850	1.200	1.134	0.00	
256.7	120.0	60.0	0.000	0.850	1.200	1.134	0.00	
256.7	120.0	180.0	0.000	0.850	1.200	1.134	0.00	
256.7	0.0	300.0	0.000	0.850	1.200	1.134	0.00	
256.7	0.0	60.0	0.000	0.850	1.200	1.134	0.00	
256.7	240.0	180.0	0.000	0.850	1.200	1.134	0.00	
206.7	120.0	120.0	0.000	0.850	1.200	1.083	0.00	
206.7	0.0	0.0	0.000	0.850	1.200	1.083	0.00	
206.7	240.0	240.0	0.000	0.850	1.200	1.083	0.00	
136.7	120.0	120.0	0.000	0.850	1.200	0.993	0.00	
136.7	0.0	0.0	0.000	0.850	1.200	0.993	0.00	
136.7	240.0	240.0	0.000	0.850	1.200	0.993	0.00	
66.7	120.0	120.0	0.000	0.850	1.200	0.854	0.00	
66.7	0.0	0.0	0.000	0.850	1.200	0.854	0.00	
66.7	240.0	240.0	0.000	0.850	1.200	0.854	0.00	

LOADING CONDITION M =====

30 mph wind with 1 ice. Wind Azimuth: 0°

MAST LOADING  
 =====

LOAD TYPE	ELEV FT	.FORCES (KIP & KIP/FT)			.MOMENTS (FT.K & FT.K/FT)			ANT-ORIENT	
		N	E	DOWN	N	E	TORSION	AZI DEG	VERT DEG
C	296.7	-0.045	0.000	2.013	0.00	0.00	0.00	0.0	0.00
C	295.0	-1.473	0.000	22.139	0.00	0.00	0.00	0.0	0.00
C	283.0	-1.898	0.000	14.718	0.00	0.00	0.00	0.0	0.00
C	271.0	-1.875	0.000	14.675	0.00	0.00	0.00	0.0	0.00
C	259.0	-1.851	0.000	14.630	0.00	0.00	0.00	0.0	0.00
C	256.7	-0.043	0.000	2.001	0.00	0.00	0.00	0.0	0.00
D	306.0	-0.009	0.000	0.191	-0.01	0.01	0.00		
D	302.7	-0.009	0.000	0.191	-0.01	0.01	0.00		
D	302.7	-0.009	0.000	0.204	-0.01	0.01	0.00		
D	300.0	-0.009	0.000	0.204	-0.01	0.01	0.00		

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D	300.0	-0.009	0.000	0.225	-0.01	0.01	0.00
D	293.3	-0.012	0.000	0.220	-0.01	0.01	0.00
D	293.3	-0.016	0.000	0.182	-0.02	0.01	0.00
D	290.0	-0.016	0.000	0.182	-0.02	0.01	0.00
D	290.0	-0.016	0.000	0.138	-0.02	0.01	0.00
D	286.7	-0.016	0.000	0.138	-0.02	0.01	0.00
D	286.7	-0.016	0.000	0.095	-0.03	0.01	0.00
D	283.3	-0.016	0.000	0.095	-0.03	0.01	0.00
D	283.3	-0.018	0.000	0.348	-0.02	0.02	0.00
D	280.0	-0.018	0.000	0.348	-0.02	0.02	0.00
D	280.0	-0.018	0.000	0.364	0.10	0.01	0.00
D	276.7	-0.018	0.000	0.364	0.10	0.01	0.00
D	276.7	-0.018	0.000	0.335	0.12	0.01	0.00
D	273.3	-0.018	0.000	0.335	0.12	0.01	0.00
D	273.3	-0.019	0.000	0.354	0.11	0.01	0.00
D	270.0	-0.019	0.000	0.354	0.11	0.01	0.00
D	270.0	-0.019	0.000	0.458	0.02	0.00	0.00
D	266.7	-0.019	0.000	0.458	0.02	0.00	0.00
D	266.7	-0.019	0.000	0.457	-0.01	-0.01	0.00
D	263.3	-0.019	0.000	0.457	-0.01	-0.01	0.00
D	263.3	-0.019	0.000	0.457	-0.03	-0.01	0.00
D	260.0	-0.019	0.000	0.457	-0.03	-0.01	0.00
D	260.0	-0.019	0.000	0.504	0.08	0.01	0.00
D	256.7	-0.019	0.000	0.504	0.08	0.01	0.00
D	256.7	-0.020	0.000	0.540	0.04	0.01	0.00
D	240.0	-0.019	0.000	0.539	0.03	0.02	0.00
D	240.0	-0.019	0.000	0.530	0.06	0.00	0.00
D	220.0	-0.019	0.000	0.530	0.06	0.00	0.00
D	220.0	-0.019	0.000	0.540	0.06	0.00	0.00
D	203.3	-0.019	0.000	0.539	0.06	0.00	0.00
D	203.3	-0.019	0.000	0.537	0.06	0.00	0.00
D	180.0	-0.018	0.000	0.530	0.06	0.00	0.00
D	180.0	-0.018	0.000	0.530	0.06	0.00	0.00
D	170.0	-0.018	0.000	0.530	0.06	0.00	0.00
D	170.0	-0.018	0.000	0.530	0.06	0.00	0.00
D	160.0	-0.018	0.000	0.530	0.06	0.00	0.00
D	160.0	-0.018	0.000	0.526	0.06	0.00	0.00
D	140.0	-0.018	0.000	0.525	0.06	0.00	0.00
D	140.0	-0.017	0.000	0.527	0.06	0.00	0.00
D	126.7	-0.017	0.000	0.527	0.06	0.00	0.00
D	126.7	-0.017	0.000	0.525	0.06	0.00	0.00
D	100.0	-0.016	0.000	0.516	0.06	0.00	0.00
D	100.0	-0.016	0.000	0.514	0.05	0.00	0.00
D	80.0	-0.016	0.000	0.513	0.05	0.00	0.00
D	80.0	-0.015	0.000	0.509	0.05	0.00	0.00
D	70.0	-0.015	0.000	0.509	0.05	0.00	0.00
D	70.0	-0.015	0.000	0.508	0.05	0.00	0.00
D	60.0	-0.015	0.000	0.508	0.05	0.00	0.00
D	60.0	-0.014	0.000	0.502	0.05	0.00	0.00
D	40.0	-0.014	0.000	0.501	0.05	0.00	0.00
D	40.0	-0.013	0.000	0.493	0.04	0.00	0.00
D	30.0	-0.013	0.000	0.494	0.04	0.00	0.00
D	30.0	-0.013	0.000	0.494	0.04	0.00	0.00
D	20.0	-0.013	0.000	0.494	0.05	0.00	0.00
D	20.0	-0.011	0.000	0.516	0.04	0.00	0.00
D	16.7	-0.011	0.000	0.516	0.04	0.00	0.00
D	16.7	-0.011	0.000	0.571	0.04	0.00	0.00
D	13.3	-0.011	0.000	0.571	0.04	0.00	0.00
D	13.3	-0.011	0.000	0.626	0.05	0.00	0.00
D	10.0	-0.011	0.000	0.626	0.05	0.00	0.00
D	10.0	-0.010	0.000	0.679	0.05	0.00	0.00
D	6.7	-0.010	0.000	0.679	0.05	0.00	0.00
D	6.7	-0.010	0.000	0.732	0.06	0.00	0.00
D	3.3	-0.010	0.000	0.732	0.06	0.00	0.00
D	3.3	-0.010	0.000	0.772	0.07	0.00	0.00
D	0.0	-0.010	0.000	0.772	0.07	0.00	0.00

GUY LOADING

=====

.. WIND LOADING ...			TEMP	.ICE LOAD..		CONV	PROFILES.		.LOAD FACTORS.		
AZI	SPEED	REF	CHANGE	RAD	DENS	TOL	CAB	WIND	WIND	DEAD	ICE
DEG	MPH	PRESS	DEG	IN	PCF						
		PSF									
0.0	30.0	0.00	-10.00	1.00	56.00	0.0100	2	4	1.00	1.00	1.00

CABLE PROFILE: 1 - CATENARY                      2 - PARABOLIC

- WIND PROFILE: 1 - EIA 222 G default  
 2 - Constant Kz=1, Kiz=1  
 3 - Step function for Kz, Kiz  
 (requires definition of Exposure Factor Kz, Kiz table)  
 4 - Special Factors  
 5 - Site specific wind formula, Kiz as EIA 222 G default  
 (requires definition of Exposure Factor Qh formula table)

SUPPRESS PRINTING

=====

INPUT LOADS	...FOR THIS LOADING..				.....MAXIMUMS.....			
	DISPL	INTRNL FORCES	MEMBER LOADS		ALL	DISPL	INTRNL FORCES	MEMBER LOADS
	no	yes	yes	yes	no	no	no	no

SPECIAL FACTOR TABLE

=====

ELEV	GUY AZI	ATTACH MAST AZI	RADIAL ICE	WIND GUST FACT	GUY SHAPE FACT	WIND HEIGHT FACT	TEMP CHANGE DEG
FT	DEG	DEG	IN.				
296.7	240.0	300.0	2.324	0.850	1.200	1.169	-10.00
296.7	120.0	60.0	2.324	0.850	1.200	1.169	-10.00
296.7	120.0	180.0	2.324	0.850	1.200	1.169	-10.00
296.7	0.0	300.0	2.324	0.850	1.200	1.169	-10.00
296.7	0.0	60.0	2.324	0.850	1.200	1.169	-10.00
296.7	240.0	180.0	2.324	0.850	1.200	1.169	-10.00
256.7	240.0	300.0	2.291	0.850	1.200	1.134	-10.00
256.7	120.0	60.0	2.291	0.850	1.200	1.134	-10.00
256.7	120.0	180.0	2.291	0.850	1.200	1.134	-10.00
256.7	0.0	300.0	2.291	0.850	1.200	1.134	-10.00
256.7	0.0	60.0	2.291	0.850	1.200	1.134	-10.00
256.7	240.0	180.0	2.291	0.850	1.200	1.134	-10.00
206.7	120.0	120.0	2.242	0.850	1.200	1.083	-10.00
206.7	0.0	0.0	2.242	0.850	1.200	1.083	-10.00
206.7	240.0	240.0	2.242	0.850	1.200	1.083	-10.00
136.7	120.0	120.0	2.151	0.850	1.200	0.993	-10.00
136.7	0.0	0.0	2.151	0.850	1.200	0.993	-10.00
136.7	240.0	240.0	2.151	0.850	1.200	0.993	-10.00
66.7	120.0	120.0	2.002	0.850	1.200	0.854	-10.00
66.7	0.0	0.0	2.002	0.850	1.200	0.854	-10.00
66.7	240.0	240.0	2.002	0.850	1.200	0.854	-10.00

MAXIMUM LEG LOADS AND FACE SHEARS ( KIP - stress in KSI )

=====

MAST ELEV FT	MAX LEG LOADS					MAX FACE SHEARS		
	AXIAL	BENDING		TOTAL		TORSN	BEAM	TOTAL
		TENS	COMP	TENS	COMP			
306.00	0.0K	0.0C	0.0E	0.0K	0.0W	0.0A	0.0G	0.0G
301.35	0.3W	0.1A	0.1K	0.1A	0.4W	0.0H	-0.1F	0.1F
	0.3W	0.1A	0.1K	0.1A	0.4W	0.0H	0.1L	0.1F
296.70	0.6W	0.6A	0.6G	0.4A	0.8W	0.0H	0.2L	0.2F
	25.4C	24.2C	22.5A	0.0A	42.6L	0.6H	12.0J	11.6L
293.33	28.0W	41.8C	39.2A	13.9G	59.8L	0.6H	4.9J	4.5L
	28.0W	41.8C	39.2A	13.9G	59.8L	0.6H	4.9J	4.5L
290.00	28.2W	51.9C	48.7A	24.0G	68.2L	0.6H	-4.7H	4.3L

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	28.2W	51.9C	48.7A	24.0G	68.2L	0.6H	-4.7H	4.4L
286.67	28.4W	61.6C	57.8A	33.6G	77.2A	0.5H	-4.5H	4.2L
	28.4W	61.6C	57.8A	33.6G	77.2A	0.5H	-4.5H	4.2L
283.00	28.5W	71.5G	67.2A	43.6G	86.7A	0.5H	-4.3H	4.0L
	33.4W	71.5G	67.2A	42.0G	88.3A	0.5H	0.9D	1.3H
276.70	34.2W	68.4G	63.3A	38.7G	84.6A	0.4H	1.3D	1.7D
	34.2W	68.4G	63.3A	38.7G	84.6A	0.4H	1.3D	1.7D
271.00	34.8W	63.6G	58.0A	33.6G	79.6A	0.4H	1.7D	2.0D
	39.7W	63.6G	58.0A	32.0G	81.2A	0.4H	6.8D	7.1D
266.67	40.4W	46.0G	40.3A	14.2G	64.9L	0.3H	7.1D	7.4D
	40.4W	46.0G	40.3A	14.2G	64.9L	0.3H	7.1D	7.4D
263.33	40.9W	31.7G	26.0A	0.0A	52.7M	0.3H	7.4D	7.6D
	40.9W	31.7G	26.0A	0.0A	52.7M	0.3H	7.4D	7.6D
256.70	46.8W	12.7I	6.8I	0.0A	51.0M	0.2H	-12.9J	13.1F
	64.4O	19.1G	12.0A	0.0A	73.9M	-1.2B	0.5X	1.5B
240.00	67.4O	9.3B	6.9L	0.0A	72.0M	-1.1B	-1.7C	2.7B
	67.4O	9.3B	6.9L	0.0A	72.0M	-1.1B	-1.7C	2.6B
231.70	68.9O	7.3J	5.7C	0.0A	70.4S	-1.0B	2.5D	3.4B
	68.9O	7.3J	5.7C	0.0A	70.4S	-0.9B	2.5D	3.4B
223.34	70.4O	18.5J	21.3C	0.0A	80.0C	-0.9B	3.3L	4.2B
	70.4O	18.5J	21.4C	0.0A	80.0C	-0.9B	3.3L	4.2B
220.00	71.0O	23.7J	28.5C	0.0A	87.4C	-0.8B	3.6L	4.5B
	71.0O	23.7J	28.5C	0.0A	87.4C	-0.8B	3.6L	4.4B
212.74	72.3O	37.5I	45.9C	0.0A	105.1C	-0.8B	4.4L	5.1B
	72.3O	37.5I	45.9C	0.0A	105.1C	-0.7B	4.4L	5.1B
206.70	73.4O	51.9E	61.9C	9.1I	121.5C	-0.7B	5.0L	5.7B
	81.1O	42.8I	52.5C	0.0A	121.6C	-0.8B	-3.6L	3.3E
203.34	81.7O	36.9J	47.6C	0.0A	116.9C	-0.8B	-3.2L	3.0E
	81.7O	36.9J	47.6C	0.0A	116.9C	-0.7B	-3.2L	3.0E
200.00	82.3O	32.6D	43.1C	0.0A	112.6C	-0.7B	-2.9L	2.7E
	82.3O	32.6D	43.1C	0.0A	112.6C	-0.6B	-2.9L	2.7I
183.34	85.2O	17.0D	27.2C	0.0A	97.6C	-0.5B	1.3J	1.3I
	85.2O	17.0D	27.2C	0.0A	97.6C	-0.5B	1.3J	1.3I
180.00	85.8O	15.2D	25.4C	0.0A	96.0C	-0.5B	1.0J	1.0I
	85.8O	15.2D	25.4C	0.0A	96.0C	-0.4B	1.0J	1.0I
171.70	87.3O	12.4D	23.1C	0.0A	97.1W	-0.4B	-0.3J	0.5B
	87.3O	12.4D	23.1C	0.0A	97.1W	-0.3B	-0.3J	0.4B
160.00	89.3O	13.2D	24.9C	0.0A	99.5W	-0.2B	-1.0B	1.2B
	89.3O	13.2D	24.9C	0.0A	99.5W	0.2K	-1.0B	1.1L
140.26	92.8O	27.1A	40.7C	0.0A	113.5C	-0.3D	-2.9B	2.9L

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	92.80	27.1A	40.7C	0.0A	113.5C	-0.3D	-2.9B 2.9L
136.70	93.40	32.4A	45.1C	0.0A	118.1C	-0.3D	-3.2B 3.2L
	98.60	27.3A	40.4C	0.0A	118.1C	-0.2D	-3.8L 3.7B
130.00	99.80	15.6D	27.0C	0.0A	109.4S	-0.2D	-3.2L 3.2D
	99.80	15.6D	27.0C	0.0A	109.4S	-0.2D	-3.2L 3.2D
126.67	100.40	11.4C	21.0C	0.0A	109.2S	-0.2D	-2.9L 2.9D
	100.40	11.4C	21.0C	0.0A	109.2S	-0.3D	-2.9L 3.0D
120.00	101.60	9.2D	11.9D	0.0A	108.7S	-0.3D	-2.2L 2.4D
	101.60	9.2D	11.9D	0.0A	108.7S	-0.4D	-2.2L 2.5D
101.70	104.70	10.4G	15.1I	0.0A	107.9S	-0.5D	0.7C 1.1D
	104.70	10.4G	15.1I	0.0A	107.9S	-0.6D	0.7C 1.2D
80.00	108.40	8.8G	8.6I	0.0A	109.5U	-0.7D	-1.3B 1.3D
	108.40	8.8G	8.6I	0.0A	109.5U	-0.7D	-1.3B 1.4H
66.70	110.70	8.0A	8.8F	0.0A	111.6V	-0.8D	-2.4B 2.1I
	113.50	5.8A	7.1F	0.0A	114.5P	-0.7D	2.7B 3.2B
63.33	114.10	3.4D	2.5D	0.0A	115.8M	-0.7D	2.4B 3.0B
	114.10	3.4D	2.5D	0.0A	115.8M	-0.7D	2.4B 3.0B
60.00	114.70	8.4G	5.8B	0.0A	117.1M	-0.7D	2.1B 2.8B
	114.70	8.4G	5.8B	0.0A	117.1M	-0.8D	2.1B 2.8B
43.33	117.50	25.2G	20.9I	0.0A	122.0Q	-0.9D	0.8F 1.7H
	117.50	25.2G	20.9I	0.0A	122.0Q	-0.9D	0.8F 1.7H
40.00	118.00	26.7G	22.4I	0.0A	122.7M	-0.9D	0.6F 1.4H
	118.00	26.7G	22.4I	0.0A	122.7M	-0.9D	0.6F 1.5H
33.35	119.10	27.9G	23.8I	0.0A	123.8Q	-1.0D	0.1H 1.1D
	119.10	27.9G	23.8I	0.0A	123.8Q	-1.0D	0.1H 1.1D
30.00	119.70	27.6G	23.7I	0.0A	124.2Q	-1.0D	-0.2K 1.1D
	119.70	27.6G	23.7I	0.0A	124.2Q	-1.0D	0.2C 1.1D
20.00	121.30	23.0G	20.1I	0.0A	124.8Q	-1.1D	0.9L 1.5D
	121.30	23.0G	20.1I	0.0A	124.8Q	-1.1D	0.9L 1.5D
16.67	121.90	20.3G	17.8I	0.0A	124.8Q	-1.1D	1.1L 1.6D
	121.90	20.3G	17.8I	0.0A	124.8Q	-1.1D	1.1L 1.7D
13.33	122.50	17.2G	15.1I	0.0A	124.9Q	-1.1D	1.3L 1.8B
	122.50	17.2G	15.1I	0.0A	124.9Q	-1.1D	-1.3B 1.8B
6.67	124.00	9.5G	8.4I	0.0A	125.1P	-1.1D	-1.7B 2.0B
	124.00	14.2G	12.6I	0.0A	125.8Q	-1.7D	-1.7B 2.6B
3.33	124.80	7.4G	6.6I	0.0A	125.6P	-1.7D	-2.0B 2.7B
	124.80	7.4G	6.6I	0.0A	125.6P	-1.8D	-2.0B 2.7B
0.00	125.60	0.0E	0.0A	0.0A	125.60	-1.8D	-2.2B 2.9B

CAPACITY RATIO TABLE

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MAST ELEV FT	LEG LOAD			FACE SHEAR		
	MAX COMP	COMP CAP	COMP/ CAP RATIO	MAX FACE SHEAR	FACE SHEAR CAP	COMP/ CAP RATIO
306.00	0.00	35.70	0.00	0.00	3.44	0.00
	0.36	35.70	0.01	0.10	3.44	0.03
301.35	0.36	35.70	0.01	0.10	3.44	0.03
	0.49	35.70	0.01	0.13	3.44	0.04
300.00	0.49	90.09	0.01	0.13	13.78	0.01
	0.83	90.09	0.01	0.22	13.78	0.02
296.70	42.59	90.09	0.47	11.55	13.78	0.84
	59.76	90.09	0.66	4.51	13.78	0.33
293.33	59.76	90.09	0.66	4.53	13.78	0.33
	68.23	90.09	0.76	4.34	13.78	0.32
290.00	68.23	90.09	0.76	4.36	13.78	0.32
	77.17	90.09	0.86	4.17	13.78	0.30
286.67	77.17	90.09	0.86	4.18	13.78	0.30
	86.71	90.09	0.96	3.98	13.78	0.29
283.00	88.31	90.09	0.98	1.27	13.78	0.09
	86.55	90.09	0.96	1.47	13.78	0.11
280.00	86.55	90.09	0.96	1.47	13.78	0.11
	84.62	90.09	0.94	1.68	13.78	0.12
276.70	84.62	90.09	0.94	1.66	13.78	0.12
	79.62	90.09	0.88	2.04	13.78	0.15
271.00	81.22	90.09	0.90	7.09	13.78	0.51
	64.91	90.09	0.72	7.39	13.78	0.54
266.67	64.91	90.09	0.72	7.37	13.78	0.53
	52.74	90.09	0.59	7.59	13.78	0.55
263.33	52.74	90.09	0.59	7.56	13.78	0.55
	51.86	90.09	0.58	10.35	13.78	0.75
260.00	51.86	90.09	0.58	10.35	13.78	0.75
	50.99	90.09	0.57	13.11	13.78	0.95
256.70	73.86	90.09	0.82	1.48	13.78	0.11
	71.98	90.09	0.80	2.70	13.78	0.20
240.00	71.98	90.09	0.80	2.65	6.05	0.44
	70.37	90.09	0.78	3.44	6.05	0.57
231.70	70.37	90.09	0.78	3.38	6.05	0.56
	80.04	90.09	0.89	4.18	6.05	0.69
223.34	80.04	90.09	0.89	4.16	6.05	0.69
	87.40	90.09	0.97	4.48	6.05	0.74
220.00	87.40	125.33	0.70	4.44	6.14	0.72
	105.14	125.33	0.84	5.12	6.14	0.83
212.74	105.14	125.33	0.84	5.09	6.14	0.83
	121.52	125.33	0.97	5.66	6.14	0.92
206.70	121.63	125.33	0.97	3.28	6.14	0.53
	116.89	125.33	0.93	2.99	6.14	0.49
203.34	116.89	125.33	0.93	2.99	6.14	0.49
	112.60	125.33	0.90	2.70	6.14	0.44
200.00	112.60	125.33	0.90	2.70	3.60	0.75
	97.63	125.33	0.78	1.30	3.60	0.36
183.34	97.63	125.33	0.78	1.30	3.60	0.36
	96.03	125.33	0.77	1.03	3.60	0.29
180.00	96.03	125.33	0.77	1.02	3.60	0.28
	97.12	125.33	0.77	0.49	3.60	0.14

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171.70	97.12	125.33	0.77	0.42	3.60	0.12
	99.53	125.33	0.79	1.25	3.60	0.35
160.00	99.53	125.33	0.79	1.13	3.60	0.31
	113.49	125.33	0.91	2.89	3.60	0.80
140.26	113.49	125.33	0.91	2.87	3.60	0.80
	113.83	125.33	0.91	2.90	3.60	0.80
140.00	113.83	125.33	0.91	2.90	6.14	0.47
	118.09	125.33	0.94	3.18	6.14	0.52
136.70	118.09	125.33	0.94	3.71	6.14	0.60
	109.45	125.33	0.87	3.17	6.14	0.52
130.00	109.45	125.33	0.87	3.18	6.14	0.52
	109.18	125.33	0.87	2.92	6.14	0.48
126.67	109.18	125.33	0.87	2.95	6.14	0.48
	108.67	125.33	0.87	2.42	6.14	0.39
120.00	108.67	125.33	0.87	2.50	3.60	0.70
	107.87	125.33	0.86	1.10	3.60	0.31
101.70	107.87	125.33	0.86	1.20	3.60	0.33
	108.00	125.33	0.86	1.21	3.60	0.34
100.00	108.00	125.33	0.86	1.21	3.60	0.34
	109.50	125.33	0.87	1.30	3.60	0.36
80.00	109.50	125.33	0.87	1.36	3.60	0.38
	111.56	125.33	0.89	2.12	3.60	0.59
66.70	114.55	125.33	0.91	3.25	3.60	0.90
	115.82	125.33	0.92	2.99	3.60	0.83
63.33	115.82	125.33	0.92	3.00	3.60	0.83
	117.09	125.33	0.93	2.75	3.60	0.76
60.00	117.09	125.33	0.93	2.83	3.60	0.79
	122.00	125.33	0.97	1.67	3.60	0.46
43.33	122.00	125.33	0.97	1.68	3.60	0.47
	122.70	125.33	0.98	1.45	3.60	0.40
40.00	122.70	125.33	0.98	1.47	3.60	0.41
	123.77	125.33	0.99	1.06	3.60	0.29
33.35	123.77	125.33	0.99	1.07	3.60	0.30
	124.17	125.33	0.99	1.11	3.60	0.31
30.00	124.17	125.33	0.99	1.15	3.60	0.32
	124.78	125.33	1.00	1.52	3.60	0.42
20.00	124.78	165.56	0.75	1.54	3.65	0.42
	124.84	165.56	0.75	1.64	3.65	0.45
16.67	124.84	165.56	0.75	1.65	3.65	0.45
	124.89	165.56	0.75	1.77	3.65	0.48
13.33	124.89	165.56	0.75	1.79	3.65	0.49
	125.07	165.56	0.76	2.02	3.65	0.55
6.67	125.78	165.56	0.76	2.60	3.65	0.71
	125.57	165.56	0.76	2.73	3.65	0.75
3.33	125.57	165.56	0.76	2.75	3.65	0.75
	125.64	165.56	0.76	2.87	3.65	0.79
0.00						

MAXIMUM MAST DEFORMATION CALCULATED

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MAST ELEV FT	DEFLECTIONS (FT)			DOWN	ROTATIONS (DEG)			TWIST
	NORTH	EAST	TOTAL		NORTH	EAST	TOTAL	

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306.0	5.17G	-4.56C	5.31C	0.220	0.72G	-0.75C	0.85C	0.81D
301.4	5.12G	-4.50C	5.24C	0.220	0.72G	-0.75C	0.85C	0.81D
-----								
296.7	5.06G	-4.44C	5.17C	0.220	0.71G	-0.75C	0.84C	0.80D
-----								
293.3	5.01G	-4.40C	5.12C	0.220	0.76G	-0.78C	0.88C	0.81D
290.0	4.97G	-4.35C	5.07C	0.220	0.81G	-0.83C	0.94C	0.82D
286.7	4.92G	-4.30C	5.01C	0.220	0.88G	-0.89C	1.01C	0.83D
283.0	4.86G	-4.24C	4.95C	0.210	0.97G	-0.96C	1.10C	0.84D
276.7	4.75G	-4.13C	4.82C	0.210	1.13G	-1.10C	1.26C	0.86D
271.0	4.63G	-4.01C	4.69C	0.210	1.27G	-1.22C	1.39C	0.87D
266.7	4.53G	-3.92C	4.58C	0.210	1.35G	-1.29C	1.48C	0.87D
263.3	4.45G	-3.84C	4.49C	0.210	1.40G	-1.33C	1.53C	0.88D
-----								
256.7	4.28G	-3.69C	4.31C	0.200	1.44G	-1.36C	1.56C	0.89D
-----								
240.0	3.85G	-3.28C	3.85G	0.190	1.52G	-1.41C	1.63C	0.95D
231.7	3.63G	-3.08C	3.63G	0.190	1.53G	-1.41C	1.63C	0.99D
223.3	3.41G	-2.88C	3.41G	0.180	1.50G	-1.37C	1.59C	1.02D
220.0	3.32G	-2.80C	3.32G	0.180	1.48G	-1.34C	1.56C	1.03D
212.7	3.14G	-2.63C	3.14G	0.170	1.41G	-1.27C	1.48C	1.05D
-----								
206.7	2.99G	-2.50C	2.99G	0.170	1.29G	-1.17C	1.36C	1.06D
-----								
203.3	2.92G	-2.43C	2.92G	0.170	1.24G	-1.12C	1.31C	1.08D
200.0	2.85G	-2.37C	2.85G	0.160	1.20G	-1.08C	1.26C	1.09D
183.3	2.52G	-2.08C	2.52G	0.150	1.06G	-0.93C	1.10C	1.14D
180.0	2.46G	-2.03C	2.46G	0.150	1.04G	-0.91C	1.07C	1.15D
171.7	2.31G	-1.90C	2.31G	0.140	0.99G	-0.86C	1.02C	1.16D
160.0	2.12G	-1.73C	2.12G	0.140	0.93G	-0.79C	0.94C	1.16D
140.3	1.82G	-1.48C	1.82G	0.120	0.77G	-0.64C	0.77G	1.12D
-----								
136.7	1.78G	-1.44C	1.78G	0.120	0.72G	-0.60C	0.72G	1.11D
-----								
130.0	1.70G	-1.37C	1.70G	0.110	0.65G	-0.53C	0.65G	1.12D
126.7	1.66G	-1.34C	1.66G	0.110	0.62G	-0.51C	0.62G	1.11D
120.0	1.59G	-1.29C	1.59G	0.110	0.60G	-0.49C	0.60G	1.10D
101.7	1.40G	-1.13C	1.40G	0.090	0.61G	-0.49C	0.61G	1.02D
80.0	1.15G	-0.93C	1.15G	0.070	0.69G	-0.55C	0.69G	0.88D
-----								
66.7	0.99G	-0.80C	0.99G	0.060	0.69G	-0.55C	0.69G	0.78D
-----								
63.3	0.95G	-0.77C	0.95G	0.060	0.68G	-0.55C	0.68G	0.90D
60.0	0.91G	-0.74C	0.91G	0.050	0.69G	-0.55C	0.69G	0.87D
43.3	0.70G	-0.57C	0.70G	0.040	0.78G	-0.63C	0.78G	0.72D
40.0	0.65G	-0.53C	0.65G	0.040	0.80G	-0.65C	0.80G	0.68D
33.3	0.56G	-0.46C	0.56G	0.030	0.85G	-0.69C	0.85G	0.61D
30.0	0.51G	-0.41C	0.51G	0.030	0.88G	-0.72C	0.88G	0.58D
20.0	0.35G	-0.28C	0.35G	0.020	0.95G	-0.78C	0.95G	0.46D
16.7	0.29G	-0.24C	0.29G	0.010	0.97G	-0.79C	0.97G	0.42D
13.3	0.23G	-0.19C	0.23G	0.010	0.98G	-0.80C	0.98G	0.38D
6.7	0.12G	-0.10C	0.12G	0.010	1.01G	-0.82C	1.01G	0.29D
3.3	0.06G	-0.05C	0.06G	0.000	1.02G	-0.83C	1.02G	0.15D
0.0	0.00A	0.00A	0.00A	0.00A	1.02G	-0.84C	1.02G	0.00A

MAXIMUM ANTENNA ROTATIONS

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ELEV FT	ORIENTATION		..... BEAM DEFLECTIONS (DEG)			..... TOTAL
	AZI DEG	ELEV DEG	ROLL	YAW	PITCH	
296.7	0.0	0.0	0.746 C	0.808 D	-0.715 G	0.870 H
295.0	0.0	0.0	0.763 C	0.813 D	-0.735 G	0.887 H
283.0	0.0	0.0	0.963 C	0.847 D	-0.969 G	1.065 H

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271.0	0.0	0.0	1.217 C	0.875 D	-1.267 G	1.294 H
259.0	0.0	0.0	1.346 C	0.893 D	-1.424 G	1.424 G
256.7	0.0	0.0	1.355 C	0.895 D	-1.436 G	1.437 G

MAXIMUM INTERNAL MAST FORCES

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MAST ELEV FT	TOTAL AXIAL KIP	.....SHEAR.....		.....MOMENT.....		TORSION FT-KIP
		N - S KIP	E - W KIP	N - S FT-KIP	E - W FT-KIP	
306.0	0.00 K	0.00 G	0.00 D	0.00 F	0.00 C	0.00 A
	0.90 W	-0.16 A	0.16 J	0.38 A	-0.37 J	0.03 H
301.4	0.90 W	0.16 G	0.16 J	0.38 A	-0.37 J	0.04 H
	1.92 W	0.34 G	-0.33 D	1.56 A	-1.51 J	0.05 H
296.7	* 74.97 C	+ -20.73 G	+ 20.15 D	& -59.37 A	& -61.05 D	@ -1.65 H
	76.14 C	-18.17 G	-17.98 J	62.34 G	-59.55 D	-1.57 H
293.3	84.11 W	-7.60 G	-7.40 J	107.89 G	-104.12 D	-1.55 H
	84.11 W	-7.60 G	-7.40 J	107.89 G	-104.12 D	-1.52 H
290.0	84.72 W	-7.30 G	-7.09 J	134.43 G	-129.69 D	-1.48 H
	84.72 W	-7.30 G	-7.09 J	134.43 G	-129.69 D	-1.45 H
286.7	85.18 W	-7.00 G	-6.77 J	159.64 G	-153.93 D	-1.42 H
	85.18 W	-7.00 G	-6.77 J	159.65 G	-153.93 D	-1.38 H
283.0	85.61 W	-6.67 G	-6.42 J	185.80 G	-179.00 D	-1.34 H
	100.33 W	-1.37 A	-1.28 D	185.80 G	-179.00 D	-1.25 H
276.7	102.58 W	-2.00 A	-1.96 D	177.78 G	-169.30 D	-1.16 H
	102.58 W	-2.00 A	-1.96 D	177.78 G	-169.30 D	-1.08 H
271.0	104.53 W	-2.58 A	-2.59 D	165.32 G	-155.63 D	-0.99 H
	119.20 W	-10.19 A	-10.20 D	165.32 G	-155.63 D	-0.93 H
266.7	121.08 W	-10.66 A	-10.67 D	119.56 G	-109.25 D	-0.86 H
	121.08 W	-10.66 A	-10.67 D	119.56 G	-109.25 D	-0.81 H
263.3	122.61 W	-11.03 A	-11.04 D	82.49 G	-71.88 D	-0.76 H
	122.61 W	-11.03 A	-11.04 D	82.49 G	-71.88 D	-0.66 H
	140.43 W	-19.38 A	19.39 J	27.52 A	-29.27 I	-0.56 H
256.7	* 67.44 C	+ -22.15 G	+ 21.70 D	& -56.11 A	& -58.68 D	@ 3.27 B
	193.28 O	-0.69 M	-0.66 P	49.57 G	-35.08 C	3.15 B
240.0	202.28 O	2.80 G	-2.56 D	24.05 G	-17.65 B	2.87 B
	202.28 O	2.80 G	-2.56 D	24.05 G	-17.65 B	2.73 B
231.7	206.68 O	4.03 G	-3.71 D	-7.92 D	-17.34 J	2.59 B
	206.68 O	4.03 G	-3.71 D	-7.92 D	-17.34 J	2.45 B
223.3	211.12 O	5.29 G	-4.88 D	-45.89 G	-53.74 J	2.31 B

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	211.12 O	5.29 G	-4.88 D	-45.89 G	-53.74 J	2.26 B
220.0	212.89 O	5.79 G	-5.34 D	-64.53 G	-70.63 J	2.20 B
	212.89 O	5.79 G	-5.34 D	-64.53 G	-70.62 J	2.08 B
212.7	216.80 O	6.86 G	-6.35 D	-109.83 G	111.82 D	1.97 B
	216.80 O	6.86 G	-6.35 D	-109.83 G	111.82 D	1.87 B
	220.06 O	7.76 G	-7.18 D	-152.03 G	150.45 D	1.77 B
206.7	* 28.87 G	+ -12.17 G	+ 11.25 D	& -24.45 A	& -22.92 D	@ -0.54 D
	243.17 O	-5.26 G	-5.07 J	-127.19 G	-127.74 J	2.01 B
203.3	244.98 O	-4.76 G	-4.60 J	-113.66 G	-114.44 J	1.96 B
	244.98 O	-4.76 G	-4.60 J	-113.66 G	-114.44 J	1.90 B
200.0	246.77 O	4.28 A	-4.15 J	-101.38 G	-102.33 J	1.85 B
	246.77 O	4.28 A	-4.14 J	-101.38 G	-102.33 J	1.58 B
183.3	255.66 O	1.91 A	-1.88 J	-58.39 G	62.15 C	1.31 B
	255.66 O	1.91 A	-1.89 J	-58.39 G	62.15 C	1.26 B
180.0	257.43 O	1.45 A	-1.44 J	-53.70 G	57.95 C	1.21 B
	257.43 O	1.44 A	-1.44 J	-53.70 G	57.95 C	1.08 B
171.7	261.83 O	0.29 A	-0.35 I	-47.93 G	52.21 C	0.95 B
	261.83 O	0.29 A	-0.35 I	-47.93 G	52.21 C	0.76 B
160.0	268.04 O	1.49 G	-1.24 D	-54.14 G	55.62 C	0.58 B
	268.04 O	1.49 G	-1.24 D	-54.14 G	55.62 C	-0.45 K
140.3	278.41 O	4.23 G	-3.79 D	-100.39 G	92.30 D	0.66 D
	278.41 O	4.23 G	-3.79 D	-100.39 G	92.30 D	0.71 D
	280.29 O	4.71 G	-4.24 D	-113.05 G	103.75 D	0.75 D
136.7	* 15.60 O	+ -9.57 G	+ 8.55 D	& -13.00 A	& -11.47 D	@ -0.44 H
	295.89 O	-5.90 G	5.32 D	-100.37 G	92.28 D	0.40 D
130.0	299.43 O	-4.99 G	4.47 D	-64.81 G	60.58 D	0.48 D
	299.43 O	-4.99 G	-4.47 J	-64.80 G	60.58 D	0.53 D
126.7	301.18 O	-4.53 G	-4.05 J	-48.84 G	46.47 D	0.57 D
	301.18 O	-4.54 G	4.05 D	-48.84 G	46.47 D	0.65 D
120.0	304.68 O	-3.63 G	3.20 D	-26.69 F	21.90 C	0.74 D
	304.68 O	-3.63 G	-3.20 J	-26.69 F	21.90 C	0.96 D
101.7	314.19 O	-1.23 G	1.11 C	-35.80 A	34.35 I	1.18 D
	314.19 O	-1.23 G	1.11 C	-35.80 A	34.35 I	1.44 D
80.0	325.34 O	-2.03 A	-1.78 E	22.83 G	19.61 I	1.70 D
	325.34 O	-2.03 A	-1.78 E	22.83 G	19.61 I	1.85 D
	332.10 O	-3.59 A	-3.15 E	-22.81 F	20.83 D	2.00 D
66.7	* 8.52 O	+ 8.12 A	+ 7.45 D	& -5.65 A	& -4.85 D	@ 0.26 B
	340.62 O	3.85 A	3.71 D	-18.56 F	15.98 D	1.79 D
	342.33 O	3.45 A	3.33 D	8.83 D	-8.15 C	1.83 D

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63.3	342.33 O	3.45 A	3.33 D	8.83 D	-8.15 C	1.87 D
	344.03 O	3.05 A	2.96 D	21.84 G	-19.25 C	1.90 D
60.0	344.03 O	3.05 A	2.96 D	21.84 G	-19.25 C	2.09 D
	352.38 O	1.20 A	1.17 D	65.43 G	-55.79 C	2.26 D
43.3	352.38 O	1.20 A	1.17 D	65.43 G	-55.79 C	2.30 D
	354.06 O	0.81 A	0.81 D	69.38 G	-59.08 C	2.34 D
40.0	354.06 O	0.82 A	0.81 D	69.38 G	-59.08 C	2.40 D
	357.33 O	-0.22 F	0.16 D	72.50 G	-61.62 C	2.47 D
33.3	357.33 O	-0.22 H	0.16 D	72.50 G	-61.62 C	2.50 D
	358.99 O	0.34 G	0.31 K	71.70 G	-60.90 C	2.54 D
30.0	358.99 O	0.34 G	-0.31 C	71.70 G	-60.90 C	2.64 D
	363.93 O	1.43 G	-1.23 C	59.79 G	-50.70 C	2.75 D
20.0	363.93 O	1.43 G	1.22 K	59.78 G	-50.69 C	2.77 D
	365.65 O	1.73 G	1.48 K	52.83 G	-44.78 C	2.80 D
16.7	365.65 O	1.73 G	-1.48 C	52.82 G	-44.78 C	2.83 D
	367.55 O	2.03 G	1.75 J	44.63 G	-37.81 C	2.86 D
13.3	367.55 O	2.03 G	1.75 J	44.62 G	-37.81 C	2.91 D
	371.90 O	2.64 G	2.31 J	24.66 G	20.99 J	2.97 D
6.7	371.90 O	2.64 G	2.31 J	24.66 G	20.99 J	3.00 D
	374.34 O	2.94 G	2.59 J	12.89 G	11.01 J	3.03 D
3.3	374.34 O	2.94 G	2.59 J	12.89 G	11.01 J	3.05 D
	376.91 O	3.25 G	2.88 J	0.00 A	0.00 E	3.08 D
base	376.91 O	1.34 A	-1.29 I	0.00 H	0.00 J	-3.08 D
reaction						

\* VERTICAL GUY LOAD                      & GUY ECCENTRIC MOMENT  
 + HORIZONTAL REACTION                    @ TORSIONAL RESISTANCE

MAXIMUM GUY FORCES AT MAST

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GUY LEVEL FT	GUY AZI	.....COMPONENTS AT MAST.....				EFL/FR * RATIO	...GUY ANGLES...	
		N KIP	E KIP	DOWN KIP	TOTAL KIP		VERT DEG	HORIZ DEG
296.7	0.0	12.8B	0.3I	21.4B	24.9B	1.0B	-64.1S	10.8H
	120.0	-6.4F	11.2D	21.2D	24.8D	1.0D	-63.8W	-10.9J
	120.0	-6.4F	10.9F	20.8F	24.4F	1.0F	-63.8W	10.9L
	240.0	-6.4H	-10.9H	20.6H	24.2H	0.9H	-63.5O	-11.0B
	240.0	-6.4H	-11.2J	20.9J	24.6J	1.0J	-63.5O	11.1D
	0.0	12.8L	-0.3E	21.4L	24.9L	1.0L	-64.1S	-10.8F
256.7	0.0	14.0B	0.2I	20.2B	24.6B	1.0B	-60.8S	11.1H
	120.0	-7.0F	12.0D	19.6F	24.0F	0.9F	-60.5W	11.3L
	120.0	-6.7F	11.4F	18.8F	23.0F	0.9F	-60.5W	11.2L
	240.0	-6.7H	-11.4H	18.6H	22.8H	0.9H	-60.1O	-11.3B
	240.0	-6.9H	-12.0J	19.3J	23.7J	0.9J	-60.2O	-11.5B
	0.0	14.0L	-0.2E	20.2L	24.6L	1.0L	-60.8S	-11.1F
206.7	0.0	14.9L	0.2I	17.4L	22.9L	0.9L	-54.7S	-10.7F

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	120.0	-7.1F	12.3F	16.3F	21.6F	0.8F	-54.2W	11.1L
	240.0	-7.1H	-12.2H	15.9H	21.3H	0.8H	-53.8O	-11.3B
136.7	0.0	11.9L	0.1I	9.3L	15.1L	0.9L	-43.1S	-9.5F
	120.0	-5.5F	9.5F	8.3F	13.7F	0.9F	-42.4W	10.3L
	240.0	-5.5H	-9.5H	8.1H	13.6H	0.8H	-41.7O	-10.4B
66.7	0.0	10.2B	0.1J	4.0B	11.0B	0.9B	-28.7G	-6.3F
	120.0	-4.8E	8.3E	3.5E	10.2E	0.8E	-27.5K	6.9L
	240.0	-4.8I	-8.3I	3.3I	10.1I	0.8I	-26.6C	-6.8B

\* EFL/FR = EFFECTS OF FACTORED LOADS DIVIDED BY THE FACTORED RESISTANCE

MAXIMUM GUY FORCES AT ANCHOR

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GUY LEVEL	GUY AZI	.....COMPONENTS AT ANCHOR.....				TOTAL KIP	EFL/FR * RATIO
		RAD KIP	LAT KIP	VERT KIP			
296.7	0.0	13.2B	-0.5K	20.8B	24.7B	1.0B	
	120.0	13.3D	0.5G	20.7D	24.6D	1.0D	
	120.0	13.0F	-0.5C	20.3F	24.1F	0.9F	
	240.0	13.0H	0.5K	20.1H	23.9H	0.9H	
	240.0	13.3J	-0.5G	20.4J	24.4J	1.0J	
	0.0	13.2L	0.5C	20.9L	24.7L	1.0L	
256.7	0.0	14.3B	-0.4K	19.8B	24.4B	1.0B	
	120.0	14.1F	0.5G	19.2F	23.8F	0.9F	
	120.0	13.5F	-0.4C	18.4F	22.8F	0.9F	
	240.0	13.5H	0.4K	18.1H	22.6H	0.9H	
	240.0	14.1J	-0.5G	18.9J	23.6J	0.9J	
	0.0	14.3L	0.4C	19.8L	24.4L	1.0L	
206.7	0.0	15.1L	0.3D	17.0L	22.7L	0.9L	
	120.0	14.4F	-0.3B	15.9F	21.4F	0.8F	
	240.0	14.4H	0.3L	15.5H	21.2H	0.8H	
136.7	0.0	12.0L	0.2D	9.1L	15.0L	0.9L	
	120.0	11.0F	-0.2B	8.1F	13.7F	0.8F	
	240.0	11.0H	0.2L	7.9H	13.5H	0.8H	
66.7	0.0	10.2B	0.1D	3.9B	11.0B	0.9B	
	120.0	9.6E	-0.1B	3.4E	10.2E	0.8E	
	240.0	9.6I	0.1L	3.2I	10.1I	0.8I	

MAXIMUM ANCHOR LOADS

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AZI DEG	RADIUS FT	GUY TO ELEV FT	....ANCHOR LOADS.....			.....SHAFT FORCES.....						
			HORIZ KIP	VERT KIP	LATERAL KIP	AXIAL KIP	...LATERAL... VERT PLANE KIP	HORIZ PLANE KIP	ANGLE DEG			
0.0	183.6	296.7	13.2L	20.9L	-0.3J	24.5L	3.2L	-0.3J				
		296.7	13.2B	20.8B	0.3D	24.5B	3.2B	0.3D				
		256.7	14.3L	19.8L	-0.3J	24.4L	1.6L	-0.3J				
		256.7	14.3B	19.8B	0.3D	24.3B	1.6B	0.3D				
		206.7	15.1L	17.0L	0.3D	22.7L	-0.8C	0.3D				
		136.7	12.0L	9.1L	0.2D	14.6L	-3.4L	0.2D				
		66.7	10.2B	3.9B	0.1D	9.6B	-5.4B	0.1D				
					91.2L	109.5L	-1.8J	142.6L	0.0K	-1.8J	50.2L	
		120.0	183.6	296.7	13.0F	20.3F	-0.3B	23.9F	3.1F	-0.3B		
				296.7	13.3D	20.7D	0.3H	24.4D	3.1F	0.3H		
256.7	13.5F			18.4F	-0.3B	22.8F	1.5E	-0.3B				
256.7	14.1F			19.2F	0.3H	23.8F	1.5E	0.3H				
206.7	14.4F			15.9F	-0.3B	21.4F	-0.9D	-0.3B				
136.7	11.0F			8.1F	-0.2B	13.3F	-3.2F	-0.2B				

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66.7	9.6E	3.4E	-0.1B	8.8E	-5.1E	-0.1B		
	88.7F	105.8F	-1.8B	138.0F	0.0E	-1.8B	50.0F	
240.0	183.6	296.7	13.3J	20.4J	-0.3F	24.2J	3.1H	-0.3F
		296.7	13.0H	20.1H	0.3L	23.7H	3.1H	0.3L
		256.7	14.1J	18.9J	-0.3F	23.5J	1.5I	-0.3F
		256.7	13.5H	18.1H	0.3L	22.6H	1.5I	0.3L
		206.7	14.4H	15.5H	0.3L	21.1H	-0.9J	0.3L
		136.7	11.0H	7.9H	0.2L	13.1H	-3.3H	0.2L
		66.7	9.6I	3.2I	0.1L	8.7I	-5.1I	0.1L
		88.6H	103.8H	1.8L	136.5H	0.0J	1.8L	49.5H

MAXIMUM LOADS ON TOWER PIER

AXIAL kip	SHEAR			MOMENT			
	NORTH kip	EAST kip	TOTAL kip	NORTH ft-kip	EAST ft-kip	TOTAL ft-kip	TORSIONAL ft-kip
376.9136	1.3355	-1.2899	1.4686	-0.0001	-0.0001	0.0001	-3.0831
O	A	I	I	H	J	J	D

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306' 3600SRWD / Benton, KY

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 \*\*\*\*\* Service Load Condition \*\*\*\*\*  
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\* 12 wind directions were analyzed. only 1 condition(s) shown in full  
 \* Some wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A

60 mph wind with no ice. Wind Azimuth: 0

MAST LOADING

LOAD TYPE	ELEV FT	FORCES (KIP & KIP/FT)			MOMENTS (FT.K & FT.K/FT)			ANT-ORIENT	
		N	E	DOWN	N	E	TORSION	AZI DEG	VERT DEG
C	296.7	-0.127	0.000	0.521	0.00	0.00	0.00	0.0	0.00
C	295.0	-2.942	0.000	6.000	0.00	0.00	0.00	0.0	0.00
C	283.0	-2.182	0.000	4.000	0.00	0.00	0.00	0.0	0.00
C	271.0	-2.162	0.000	4.000	0.00	0.00	0.00	0.0	0.00
C	259.0	-2.142	0.000	4.000	0.00	0.00	0.00	0.0	0.00
C	256.7	-0.123	0.000	0.521	0.00	0.00	0.00	0.0	0.00
D	306.0	-0.010	0.000	0.040	0.00	0.00	0.00		
D	300.0	-0.010	0.000	0.042	0.00	0.00	0.00		
D	300.0	-0.013	0.000	0.066	0.00	0.00	0.00		
D	283.3	-0.030	0.000	0.086	0.00	0.00	0.00		
D	283.3	-0.036	0.000	0.099	0.00	0.00	0.00		

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D	273.3	-0.037	0.000	0.101	0.00	0.00	0.00
D	273.3	-0.038	0.000	0.106	0.00	0.00	0.00
D	270.0	-0.038	0.000	0.106	0.00	0.00	0.00
D	270.0	-0.040	0.000	0.119	0.01	0.01	0.00
D	260.0	-0.040	0.000	0.119	0.01	0.01	0.00
D	260.0	-0.048	0.000	0.134	0.01	0.00	0.00
D	243.3	-0.052	0.000	0.140	0.01	0.00	0.00
D	243.3	-0.051	0.000	0.136	0.01	0.00	0.00
D	223.3	-0.049	0.000	0.130	0.01	0.00	0.00
D	223.3	-0.050	0.000	0.135	0.01	0.00	0.00
D	200.0	-0.049	0.000	0.144	0.01	0.00	0.00
D	200.0	-0.048	0.000	0.138	0.01	0.00	0.00
D	183.3	-0.048	0.000	0.138	0.01	0.00	0.00
D	183.3	-0.048	0.000	0.138	0.01	0.00	0.00
D	163.3	-0.047	0.000	0.138	0.01	0.00	0.00
D	163.3	-0.047	0.000	0.138	0.01	0.00	0.00
D	143.3	-0.046	0.000	0.138	0.01	0.00	0.00
D	143.3	-0.046	0.000	0.139	0.01	0.00	0.00
D	120.0	-0.045	0.000	0.141	0.01	0.00	0.00
D	120.0	-0.043	0.000	0.138	0.01	0.00	0.00
D	103.3	-0.044	0.000	0.138	0.01	0.00	0.00
D	103.3	-0.043	0.000	0.138	0.01	0.00	0.00
D	83.3	-0.041	0.000	0.138	0.01	0.00	0.00
D	83.3	-0.041	0.000	0.138	0.01	0.00	0.00
D	63.3	-0.040	0.000	0.138	0.01	0.00	0.00
D	63.3	-0.040	0.000	0.138	0.01	0.00	0.00
D	43.3	-0.038	0.000	0.138	0.01	0.00	0.00
D	43.3	-0.037	0.000	0.138	0.01	0.00	0.00
D	23.3	-0.035	0.000	0.138	0.01	0.00	0.00
D	23.3	-0.035	0.000	0.140	0.01	0.00	0.00
D	10.0	-0.028	0.000	0.150	0.01	0.00	0.00
D	10.0	-0.030	0.000	0.148	0.01	0.00	0.00
D	0.0	-0.030	0.000	0.146	0.01	0.00	0.00

GUY LOADING

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.. WIND LOADING ...		TEMP	.ICE LOAD..		CONV	PROFILES.		.LOAD FACTORS.			
AZI	SPEED	REF	CHANGE	RAD	DENS	TOL	CAB	WIND	WIND	DEAD	ICE
DEG	MPH	PRESS	DEG	IN	PCF						
0.0	60.0	0.00	0.00	0.00	56.00	0.0100	2	4	1.00	1.00	1.00

CABLE PROFILE: 1 - CATENARY                    2 - PARABOLIC

WIND PROFILE: 1 - EIA 222 G default  
 2 - Constant Kz=1, Kiz=1  
 3 - Step function for Kz, Kiz  
 (requires definition of Exposure Factor Kz, Kiz table)  
 4 - Special Factors  
 5 - Site specific wind formula, Kiz as EIA 222 G default  
 (requires definition of Exposure Factor Qh formula table)

SUPPRESS PRINTING

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INPUT LOADS	...FOR THIS LOADING..			.....MAXIMUMS.....			
	DISPL	INTRNL FORCES	MEMBER LOADS	ALL	DISPL	INTRNL FORCES	MEMBER LOADS
	no	yes	yes	no	no	no	no

SPECIAL FACTOR TABLE

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ELEV	GUY AZI	ATTACH MAST AZI	RADIAL ICE IN.	WIND GUST FACT	GUY SHAPE FACT	WIND HEIGHT FACT	TEMP CHANGE DEG
FT	DEG	DEG					
296.7	240.0	300.0	0.000	0.850	1.200	1.169	0.00
296.7	120.0	60.0	0.000	0.850	1.200	1.169	0.00
296.7	120.0	180.0	0.000	0.850	1.200	1.169	0.00
296.7	0.0	300.0	0.000	0.850	1.200	1.169	0.00

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296.7	0.0	60.0	0.000	0.850	1.200	1.169	0.00
296.7	240.0	180.0	0.000	0.850	1.200	1.169	0.00
256.7	240.0	300.0	0.000	0.850	1.200	1.134	0.00
256.7	120.0	60.0	0.000	0.850	1.200	1.134	0.00
256.7	120.0	180.0	0.000	0.850	1.200	1.134	0.00
256.7	0.0	300.0	0.000	0.850	1.200	1.134	0.00
256.7	0.0	60.0	0.000	0.850	1.200	1.134	0.00
256.7	240.0	180.0	0.000	0.850	1.200	1.134	0.00
206.7	120.0	120.0	0.000	0.850	1.200	1.083	0.00
206.7	0.0	0.0	0.000	0.850	1.200	1.083	0.00
206.7	240.0	240.0	0.000	0.850	1.200	1.083	0.00
136.7	120.0	120.0	0.000	0.850	1.200	0.993	0.00
136.7	0.0	0.0	0.000	0.850	1.200	0.993	0.00
136.7	240.0	240.0	0.000	0.850	1.200	0.993	0.00
66.7	120.0	120.0	0.000	0.850	1.200	0.854	0.00
66.7	0.0	0.0	0.000	0.850	1.200	0.854	0.00
66.7	240.0	240.0	0.000	0.850	1.200	0.854	0.00

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MAXIMUM LEG LOADS AND FACE SHEARS ( KIP - stress in KSI )

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MAST ELEV FT	MAX LEG LOADS					MAX FACE SHEARS		
	AXIAL	BENDING		TOTAL		TORSN	BEAM	TOTAL
		TENS	COMP	TENS	COMP			
306.00	0.0D	0.0H	0.0F	0.0G	0.0D	0.0A	0.0B	0.0B
301.35	0.1D	0.0A	0.0K	0.0A	0.1K	0.0H	0.0H	0.0F
	0.1D	0.0A	0.0K	0.0A	0.1K	0.0H	0.0H	0.0A
296.70	0.2D	0.2A	0.2K	0.0A	0.3K	0.0H	0.1H	0.1J
	8.4H	6.5C	6.4A	0.0A	14.8A	-0.3J	3.7J	3.5B
283.00	10.8H	22.7C	19.6A	12.4C	30.4A	-0.3J	1.5J	1.5C
	12.1H	22.7C	19.6A	11.1C	31.7A	-0.3J	0.2C	0.4D
276.70	12.3H	23.1C	18.8A	11.3C	31.1I	-0.2J	0.3E	0.4D
	12.3H	23.1C	18.8A	11.3C	31.1I	-0.2J	0.3E	0.4D
271.00	12.5H	22.9C	17.4A	10.9C	29.9A	-0.2J	0.4E	0.6D
	13.9H	22.9C	17.4A	9.6C	31.2A	-0.2J	1.8D	2.0D
264.95	14.1H	17.0C	10.4A	3.4C	24.5A	-0.2J	2.0D	2.2D
	14.1H	17.0C	10.4A	3.4C	24.5A	-0.2J	2.0D	2.1D
256.70	15.8H	5.9C	3.8D	0.0A	19.6D	-0.1J	3.7D	3.8D
	22.6D	11.8C	6.2C	0.0A	28.1C	-0.5J	0.4J	0.7J
243.34	23.2D	12.8C	6.7C	0.0A	29.4D	-0.4J	-0.2A	0.6J
	23.2D	12.8C	6.7C	0.0A	29.4D	-0.4J	-0.2A	0.5J
240.00	23.4D	12.4C	6.5C	0.0A	29.3D	-0.4J	-0.3B	0.7J
	23.4D	12.4C	6.5C	0.0A	29.3D	-0.4J	-0.3B	0.6J
231.70	23.8D	10.3C	5.5C	0.0A	28.6C	-0.4J	-0.6B	1.0J
	23.8D	10.3C	5.5C	0.0A	28.6C	-0.4J	-0.6B	0.9J
223.34	24.1D	6.6C	3.7D	0.0A	27.9D	-0.3J	0.9D	1.2J
	24.1D	6.6C	3.7D	0.0A	27.9D	-0.3J	0.9D	1.2J
220.00	24.3D	4.7C	3.7D	0.0A	28.0D	-0.3J	1.0D	1.4J
	24.3D	4.7C	3.7D	0.0A	28.0D	-0.3J	1.0D	1.3J

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211.04	24.7D	9.4I	4.8I	0.0A	29.1I	-0.3J	1.4D	1.7J
	24.7D	9.4I	4.8I	0.0A	29.1I	-0.3J	1.4D	1.7J
206.70	24.9D	12.9I	7.0H	0.0A	31.7H	-0.2J	1.6D	1.8J
	28.4D	9.8I	5.0I	0.0A	32.5I	-0.3J	1.2J	1.1I
200.00	28.7D	5.6I	3.2D	0.0A	31.8D	-0.2J	1.0J	0.9I
	28.7D	5.6I	3.2D	0.0A	31.8D	-0.2J	1.0J	0.9I
183.34	29.4D	6.6C	3.6K	0.0A	32.9D	-0.2J	-0.3I	0.4J
	29.4D	6.6C	3.6K	0.0A	32.9D	-0.2J	0.3I	0.4J
180.00	29.6D	6.9C	4.0D	0.0A	33.6D	-0.1J	0.2I	0.3J
	29.6D	6.9C	4.0D	0.0A	33.6D	-0.1J	-0.2I	0.3J
171.70	30.0D	6.6C	4.3D	0.0A	34.3D	-0.1J	-0.2C	0.2D
	30.0D	6.6C	4.3D	0.0A	34.3D	-0.1J	-0.2C	0.2D
163.34	30.4D	4.9C	3.3D	0.0A	33.7D	-0.1J	0.5D	0.5D
	30.4D	4.9C	3.3D	0.0A	33.7D	0.0J	0.5D	0.5D
160.00	30.5D	3.8K	2.5D	0.0A	33.0D	0.0J	0.6D	0.6D
	30.5D	3.8K	2.5D	0.0A	33.0D	0.0C	0.6D	0.6D
143.34	31.3D	5.9A	5.5B	0.0A	36.5B	-0.1H	1.2D	1.2D
	31.3D	5.9A	5.5B	0.0A	36.5B	-0.1H	1.2D	1.1D
136.70	31.6D	9.8E	9.7C	0.0A	40.9B	-0.1H	1.4D	1.4D
	33.9D	8.0I	7.9B	0.0A	41.4B	-0.1H	1.3J	1.4J
120.00	34.6D	1.1B	1.6D	0.0A	36.3D	-0.1D	0.7J	0.8J
	34.6D	1.1B	1.6D	0.0A	36.3D	-0.2D	0.7J	0.8J
101.70	35.5D	4.1K	5.7I	0.0A	40.8D	-0.2D	-0.1I	0.3H
	35.5D	4.1K	5.7I	0.0A	40.8D	-0.2D	-0.1I	0.3H
83.33	36.3D	1.9I	3.7I	0.0A	39.2J	-0.3D	0.6D	0.6D
	36.3D	1.9I	3.7I	0.0A	39.2J	-0.3D	0.6D	0.6D
80.00	36.5D	1.6D	2.7I	0.0A	38.2J	-0.3D	0.7D	0.7D
	36.5D	1.6D	2.7I	0.0A	38.2J	-0.3D	0.7D	0.7D
74.21	36.8D	1.7D	2.6C	0.0A	39.1D	-0.3D	0.9D	0.8D
	36.8D	1.7D	2.6C	0.0A	39.1D	-0.3D	0.9D	0.8D
66.70	37.1D	4.5D	6.6C	0.0A	43.3D	-0.4D	1.1D	1.0D
	38.3D	3.8D	5.8C	0.0A	43.7D	-0.3D	-1.1D	1.5D
63.33	38.4D	1.9D	3.8C	0.0A	42.0D	-0.3D	-1.0D	1.4D
	38.4D	1.9D	3.8C	0.0A	42.0D	-0.4D	-1.0D	1.4D
60.00	38.6D	1.6D	2.0C	0.0A	40.4D	-0.4D	-0.9D	1.3D
	38.6D	1.6D	2.0C	0.0A	40.4D	-0.4D	-0.9D	1.3D
43.33	39.3D	4.4K	6.5E	0.0A	44.7I	-0.4D	-0.4D	0.8D
	39.3D	4.4K	6.5E	0.0A	44.7I	-0.4D	-0.4D	0.8D
40.00	39.5D	5.1K	7.1E	0.0A	45.4I	-0.4D	-0.3D	0.7D
	39.5D	5.1K	7.1E	0.0A	45.4I	-0.5D	-0.3D	0.7D

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33.35	39.8D	6.0K	7.6E	0.0A	46.3D	-0.5D	-0.1C	0.6D
	39.8D	6.0K	7.6E	0.0A	46.3D	-0.5D	-0.1C	0.6D
23.33	40.3D	5.9K	7.1E	0.0A	46.4D	-0.5D	0.2E	0.6D
	40.3D	5.9K	7.1E	0.0A	46.4D	-0.5D	0.2E	0.6D
20.00	40.4D	5.5K	6.5E	0.0A	46.2D	-0.5D	0.3L	0.7D
	40.4D	5.5K	6.5E	0.0A	46.2D	-0.5D	0.3L	0.7D
6.67	41.1D	2.4K	2.8E	0.0A	43.6D	-0.6D	-0.6J	0.9D
	41.1D	3.6K	4.2E	0.0A	44.8D	-0.9D	-0.6J	1.2D
0.00	41.4D	0.0G	0.0H	0.0A	41.4D	-0.9D	-0.7J	1.3D

CAPACITY RATIO TABLE

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MAST ELEV FT	LEG LOAD			FACE SHEAR		
	MAX COMP	COMP CAP	COMP/ CAP RATIO	MAX FACE SHEAR	FACE SHEAR CAP	COMP/ CAP RATIO
306.00	0.00	35.70	0.00	0.00	3.44	0.00
	0.11	35.70	0.00	0.03	3.44	0.01
301.35	0.11	35.70	0.00	0.03	3.44	0.01
	0.17	35.70	0.00	0.04	3.44	0.01
300.00	0.17	90.09	0.00	0.04	13.78	0.00
	0.34	90.09	0.00	0.07	13.78	0.00
296.70	14.77	90.09	0.16	3.45	13.78	0.25
	30.38	90.09	0.34	1.51	13.78	0.11
283.00	31.71	90.09	0.35	0.40	13.78	0.03
	31.40	90.09	0.35	0.41	13.78	0.03
280.00	31.40	90.09	0.35	0.41	13.78	0.03
	31.06	90.09	0.34	0.42	13.78	0.03
276.70	31.06	90.09	0.34	0.40	13.78	0.03
	29.91	90.09	0.33	0.56	13.78	0.04
271.00	31.24	90.09	0.35	1.99	13.78	0.14
	24.47	90.09	0.27	2.17	13.78	0.16
264.95	24.47	90.09	0.27	2.15	13.78	0.16
	21.53	90.09	0.24	3.17	13.78	0.23
260.00	21.53	90.09	0.24	3.17	13.78	0.23
	19.57	90.09	0.22	3.85	13.78	0.28
256.70	28.13	90.09	0.31	0.72	13.78	0.05
	29.43	90.09	0.33	0.55	13.78	0.04
243.34	29.43	90.09	0.33	0.54	13.78	0.04
	29.32	90.09	0.33	0.67	13.78	0.05
240.00	29.32	90.09	0.33	0.65	6.05	0.11
	28.57	90.09	0.32	0.96	6.05	0.16
231.70	28.57	90.09	0.32	0.93	6.05	0.15
	27.87	90.09	0.31	1.25	6.05	0.21
223.34	27.87	90.09	0.31	1.24	6.05	0.20
	27.98	90.09	0.31	1.36	6.05	0.22
220.00	27.97	125.33	0.22	1.34	6.14	0.22
	29.10	125.33	0.23	1.67	6.14	0.27
211.04	29.10	125.33	0.23	1.66	6.14	0.27
	31.71	125.33	0.25	1.82	6.14	0.30
206.70						

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	32.52	125.33	0.26	1.07	6.14	0.17		
	31.83	125.33	0.25	0.87	6.14	0.14		
200.00	31.83	125.33	0.25	0.86	3.60	0.24		
	32.91	125.33	0.26	0.41	3.60	0.11		
183.34	32.91	125.33	0.26	0.40	3.60	0.11		
	33.59	125.33	0.27	0.33	3.60	0.09		
180.00	33.59	125.33	0.27	0.31	3.60	0.08		
	34.32	125.33	0.27	0.23	3.60	0.07		
171.70	34.32	125.33	0.27	0.21	3.60	0.06		
	33.68	125.33	0.27	0.51	3.60	0.14		
163.34	33.68	125.33	0.27	0.50	3.60	0.14		
	33.04	125.33	0.26	0.62	3.60	0.17		
160.00	33.04	125.33	0.26	0.57	3.60	0.16		
	36.51	125.33	0.29	1.15	3.60	0.32		
143.34	36.51	125.33	0.29	1.14	3.60	0.32		
	38.74	125.33	0.31	1.25	3.60	0.35		
140.00	38.74	125.33	0.31	1.25	6.14	0.20		
	40.94	125.33	0.33	1.36	6.14	0.22		
136.70	41.38	125.33	0.33	1.37	6.14	0.22		
	36.27	125.33	0.29	0.80	6.14	0.13		
120.00	36.27	125.33	0.29	0.84	3.60	0.23		
	40.75	125.33	0.33	0.27	3.60	0.07		
101.70	40.75	125.33	0.33	0.31	3.60	0.09		
	40.61	125.33	0.32	0.33	3.60	0.09		
100.00	40.61	125.33	0.32	0.33	3.60	0.09		
	39.17	125.33	0.31	0.61	3.60	0.17		
83.33	39.17	125.33	0.31	0.62	3.60	0.17		
	38.25	125.33	0.31	0.68	3.60	0.19		
80.00	38.25	125.33	0.31	0.70	3.60	0.19		
	39.08	125.33	0.31	0.80	3.60	0.22		
74.21	39.08	125.33	0.31	0.82	3.60	0.23		
	43.34	125.33	0.35	0.96	3.60	0.27		
66.70	43.70	125.33	0.35	1.46	3.60	0.40		
	41.96	125.33	0.33	1.36	3.60	0.38		
63.33	41.96	125.33	0.33	1.36	3.60	0.38		
	40.40	125.33	0.32	1.27	3.60	0.35		
60.00	40.40	125.33	0.32	1.30	3.60	0.36		
	44.72	125.33	0.36	0.82	3.60	0.23		
43.33	44.72	125.33	0.36	0.83	3.60	0.23		
	45.44	125.33	0.36	0.74	3.60	0.20		
40.00	45.44	125.33	0.36	0.75	3.60	0.21		
	46.32	125.33	0.37	0.57	3.60	0.16		
33.35	46.32	125.33	0.37	0.59	3.60	0.16		
	46.44	125.33	0.37	0.62	3.60	0.17		
23.33	46.44	125.33	0.37	0.63	3.60	0.17		
	46.16	125.33	0.37	0.68	3.60	0.19		
20.00	46.16	165.56	0.28	0.70	3.65	0.19		
	43.55	165.56	0.26	0.88	3.65	0.24		
6.67	44.80	165.56	0.27	1.18	3.65	0.32		
	41.39	165.56	0.25	1.28	3.65	0.35		
0.00								

MAXIMUM MAST DEFORMATION CALCULATED

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MAST ELEV FT	DEFLECTIONS (FT)				ROTATIONS (DEG)			
	NORTH	EAST	TOTAL	DOWN	NORTH	EAST	TOTAL	TWIST
306.0	-0.61A	-0.63D	0.63B	0.03D	-0.25G	0.23C	0.27C	-0.27B
301.4	-0.61A	-0.64D	0.64B	0.03D	-0.25G	0.23C	0.27C	-0.27B
-----								
296.7	-0.62A	-0.65D	0.66D	0.03D	-0.25G	0.23C	0.27C	-0.27B
-----								
283.0	-0.62A	-0.69D	0.69D	0.03D	-0.17G	0.16C	0.20K	-0.29B
276.7	-0.62A	-0.70D	0.70D	0.03D	-0.12G	-0.12K	0.14K	-0.29B
271.0	-0.61A	-0.70D	0.71D	0.03D	-0.09A	-0.08K	0.10K	0.30D
265.0	0.61G	-0.70D	0.71D	0.03D	-0.12A	-0.10E	0.12A	0.30D
-----								
256.7	0.61G	-0.70D	0.70D	0.03D	-0.14A	-0.11E	0.14A	0.31D
-----								
243.3	0.61G	-0.68D	0.69D	0.03D	-0.16A	-0.13E	0.16A	0.35D
240.0	0.60G	-0.67D	0.68D	0.03D	-0.16A	-0.13E	0.16A	0.35D
231.7	0.59G	-0.66D	0.67D	0.03D	-0.17A	-0.14E	0.17A	0.38D
223.3	0.57G	-0.64D	0.65C	0.03D	-0.18A	-0.14E	0.18A	0.41D
220.0	0.57G	-0.63D	0.64C	0.03D	-0.17A	-0.14D	0.17A	0.42D
211.0	0.55G	-0.61D	0.62C	0.03D	-0.16A	-0.14D	0.16B	0.44D
-----								
206.7	0.54G	-0.60D	0.61C	0.02D	-0.14A	-0.13D	0.14B	0.45D
-----								
200.0	0.52G	-0.58D	0.60C	0.02D	-0.12A	-0.12D	0.14B	0.47D
183.3	0.49G	-0.55D	0.56C	0.02D	0.13G	-0.13D	0.14B	0.51D
180.0	0.48G	-0.54D	0.55C	0.02D	0.14G	-0.14D	0.15C	0.51D
171.7	0.46G	-0.52D	0.53C	0.02D	0.15G	-0.15D	0.16C	0.53D
163.3	0.44G	-0.50D	0.51C	0.02D	0.16G	-0.16D	0.18C	0.53D
160.0	0.43G	-0.49D	0.49C	0.02D	0.16G	-0.17D	0.18C	0.53D
143.3	0.38G	-0.44D	0.44D	0.02D	0.16G	-0.17D	0.18C	0.53D
-----								
136.7	0.36G	-0.42D	0.42D	0.02D	0.14G	-0.15D	0.17C	0.53D
-----								
120.0	0.33G	-0.38D	0.38D	0.02D	0.13G	-0.13D	0.15C	0.53D
101.7	0.28G	-0.33D	0.34D	0.01D	0.14G	-0.15D	0.17C	0.49D
83.3	0.24G	-0.28D	0.28D	0.01D	0.15G	-0.18D	0.18C	0.44D
80.0	0.23G	-0.27D	0.27D	0.01D	0.15G	-0.18D	0.18C	0.43D
74.2	0.21G	-0.25D	0.25D	0.01D	0.15G	-0.18D	0.18D	0.41D
-----								
66.7	0.19G	-0.23D	0.23D	0.01D	0.14G	-0.17D	0.17D	0.38D
-----								
63.3	0.18G	-0.22D	0.22D	0.01D	0.14G	-0.16D	0.17D	0.44D
60.0	0.18G	-0.21D	0.21D	0.01D	0.14G	-0.16D	0.16D	0.43D
43.3	0.14G	-0.16D	0.16D	0.01D	0.15G	-0.17D	0.18D	0.35D
40.0	0.13G	-0.15D	0.15D	0.01D	0.15G	-0.18D	0.18D	0.34D
33.3	0.11G	-0.13D	0.13D	0.00D	0.16G	-0.19D	0.19D	0.30D
23.3	0.08G	-0.09D	0.09D	0.00D	0.18G	-0.21D	0.21D	0.25D
20.0	0.07G	-0.08D	0.08D	0.00D	0.18G	-0.22D	0.22D	0.23D
6.7	0.02G	-0.03D	0.03D	0.00D	0.20G	-0.23D	0.23D	0.14D
0.0	0.00A	0.00A	0.00A	0.00A	0.20G	-0.24D	0.24D	0.00A

MAXIMUM ANTENNA ROTATIONS

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ELEV FT	ORIENTATION		BEAM DEFLECTIONS (DEG)			
	AZI DEG	ELEV DEG	ROLL	YAW	PITCH	TOTAL
296.7	0.0	0.0	-0.231 C	0.271 B	0.250 G	0.301 H
295.0	0.0	0.0	-0.222 C	0.273 B	0.240 G	0.299 H
283.0	0.0	0.0	-0.164 C	0.286 B	0.174 G	0.292 H

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271.0	0.0	0.0	0.078 K	0.296 D	0.092 A	0.303 D
259.0	0.0	0.0	0.108 E	0.309 D	0.133 A	0.313 D
256.7	0.0	0.0	0.111 E	0.311 D	0.137 A	0.315 D

MAXIMUM INTERNAL MAST FORCES

MAST ELEV FT	TOTAL AXIAL KIP	.....SHEAR.....		.....MOMENT.....		TORSION FT-KIP
		N - S KIP	E - W KIP	N - S FT-KIP	E - W FT-KIP	
306.0	0.00 D	0.00 B	0.00 I	0.00 H	0.00 F	0.00 A
301.4	0.19 D	-0.05 A	-0.04 D	0.11 A	-0.11 J	0.01 H
	0.19 D	-0.05 A	0.04 J	0.11 A	-0.11 J	0.01 H
	0.47 D	-0.11 A	0.11 J	0.47 A	-0.46 J	0.02 H
296.7	24.33 H	-5.90 G	-5.74 J	18.97 G	-17.00 D	0.81 J
	25.33 H	-5.70 G	-5.52 J	-16.58 A	-16.53 D	0.76 J
283.0	32.40 H	-2.43 G	-2.20 J	57.62 G	-55.27 D	0.71 J
	36.40 H	-0.26 A	-0.23 K	57.62 G	-55.27 D	0.68 J
276.7	37.03 H	-0.49 A	-0.45 E	58.59 G	-54.63 D	0.64 J
	37.03 H	-0.49 A	-0.45 E	58.59 G	-54.63 D	0.61 J
271.0	37.61 H	-0.70 A	-0.65 E	58.02 G	-52.38 D	0.58 J
	41.61 H	-2.86 A	-2.67 D	58.02 G	-52.38 D	0.54 J
265.0	42.32 H	-3.10 A	-2.97 D	42.78 G	-37.97 C	0.50 J
	42.32 H	-3.10 A	-2.97 D	42.78 G	-37.97 C	0.44 J
	47.36 H	-5.60 A	-5.55 D	14.39 G	-12.92 C	0.38 J
256.7	20.09 D	6.22 A	6.43 D	-16.43 A	-16.83 D	1.00 B
	67.89 D	0.44 L	-0.66 J	29.30 G	-26.29 C	1.26 J
243.3	69.72 D	-0.32 A	-0.23 C	30.62 G	-28.44 C	1.16 J
	69.72 D	-0.32 A	-0.23 C	30.62 G	-28.44 C	1.14 J
240.0	70.18 D	-0.49 A	-0.38 C	29.40 G	-27.53 C	1.12 J
	70.18 D	-0.49 A	-0.38 C	29.40 G	-27.53 C	1.06 J
231.7	71.29 D	-0.90 A	-0.86 D	23.69 G	-22.77 C	1.00 J
	71.29 D	-0.90 A	-0.86 D	23.69 G	-22.77 C	0.94 J
223.3	72.39 D	-1.32 A	-1.36 D	14.20 G	-14.47 C	0.88 J
	72.39 D	-1.32 A	-1.36 D	14.20 G	-14.47 C	0.86 J
220.0	72.84 D	-1.48 A	-1.56 D	-9.60 D	-10.20 C	0.83 J
	72.84 D	-1.48 A	-1.56 D	-9.60 D	-10.20 C	0.77 J
211.0	74.08 D	-1.93 A	-2.10 D	23.92 A	-21.35 I	0.71 J
	74.08 D	-1.93 A	-2.10 D	23.92 A	-21.35 I	0.68 J
	74.69 D	-2.14 A	-2.35 D	32.65 A	-29.15 I	0.65 J

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206.7	10.52 C	3.77 A	-4.25 J	-7.99 A	-8.70 D	-0.09 D
	85.05 D	1.66 A	-1.85 J	24.50 A	-22.23 I	0.69 J
200.0	86.01 D	1.33 A	-1.45 J	14.57 A	-12.86 I	0.65 J
	86.01 D	1.33 A	-1.45 J	14.57 A	-12.86 I	0.53 J
183.3	88.31 D	0.53 A	-0.51 I	13.11 G	-14.34 C	0.42 J
	88.31 D	0.53 A	-0.51 I	13.11 G	-14.34 C	0.39 J
180.0	88.77 D	0.37 A	-0.36 I	13.88 G	-15.17 D	0.37 J
	88.77 D	0.37 A	-0.36 I	13.88 G	-15.17 D	0.32 J
171.7	89.91 D	0.25 G	-0.25 C	13.38 G	-15.50 D	0.26 J
	89.91 D	0.25 G	-0.25 C	13.38 G	-15.50 D	0.20 J
163.3	91.07 D	0.65 G	-0.68 D	9.43 G	-11.67 D	0.15 J
	91.07 D	0.65 G	-0.68 D	9.43 G	-11.67 D	0.13 J
160.0	91.53 D	0.80 G	-0.87 D	6.90 G	-8.99 D	0.10 J
	91.53 D	0.80 G	-0.87 D	6.90 G	-8.99 D	-0.04 C
143.3	93.83 D	1.57 G	-1.80 D	15.39 A	-13.96 J	0.14 H
	93.83 D	1.57 G	-1.80 D	15.39 A	-13.96 J	0.17 H
	94.76 D	1.87 G	-2.16 D	25.14 A	-27.11 J	0.21 H
136.7	* 6.96 C	+ -3.52 G	+ 4.13 D	& -4.69 A	& -5.50 D	@ 0.12 J
	101.60 D	1.70 A	-1.94 J	-20.42 G	-21.81 J	0.20 H
120.0	103.94 D	0.95 A	-1.03 J	-2.67 L	-3.61 D	0.30 D
	103.94 D	0.95 A	-1.03 J	-2.67 L	-3.61 D	0.41 D
101.7	106.47 D	0.15 A	-0.14 I	-12.96 A	14.16 J	0.52 D
	106.47 D	0.15 A	-0.14 I	-12.96 A	14.16 J	0.64 D
83.3	109.01 D	0.70 G	-0.88 D	-8.40 A	8.34 I	0.75 D
	109.01 D	0.70 G	-0.88 D	-8.40 A	8.34 I	0.77 D
80.0	109.47 D	0.83 G	-1.04 D	-5.98 A	6.04 I	0.78 D
	109.47 D	0.83 G	-1.04 D	-5.98 A	6.04 I	0.82 D
74.2	110.27 D	1.07 G	-1.33 D	-4.83 G	5.80 C	0.85 D
	110.27 D	1.07 G	-1.33 D	-4.83 G	5.80 C	0.90 D
	111.30 D	1.37 G	-1.69 D	-14.19 G	16.06 D	0.94 D
66.7	* 3.50 C	+ -2.87 G	+ 3.47 D	& -2.01 A	& -2.27 D	@ 0.09 J
	114.77 D	-1.43 G	1.68 D	-12.42 G	13.79 D	0.87 D
63.3	115.23 D	-1.30 G	1.52 D	-7.69 G	8.58 C	0.89 D
	115.23 D	-1.30 G	1.52 D	-7.69 G	8.58 C	0.91 D
60.0	115.69 D	-1.17 G	1.36 D	4.08 D	4.54 C	0.93 D
	115.69 D	-1.17 G	1.36 D	4.08 D	4.54 C	1.02 D
43.3	118.00 D	-0.53 G	0.59 D	-15.83 A	-14.74 E	1.11 D
	118.00 D	-0.53 G	0.59 D	-15.83 A	-14.74 E	1.13 D
40.0	118.46 D	-0.40 G	0.44 D	-17.17 A	16.32 J	1.15 D

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	118.46 D	-0.40 G	0.44 D	-17.17 A	16.32 J	1.18 D
33.3	119.37 D	-0.16 G	0.16 C	-18.49 A	18.40 J	1.21 D
	119.37 D	-0.16 G	0.17 C	-18.49 A	18.40 J	1.26 D
23.3	120.76 D	-0.30 A	-0.27 E	-17.13 A	17.71 J	1.31 D
	120.76 D	-0.30 A	-0.27 E	-17.13 A	17.71 J	1.33 D
20.0	121.23 D	-0.41 A	0.38 J	-15.80 A	16.50 J	1.34 D
	121.23 D	-0.41 A	0.38 J	-15.80 A	16.50 J	1.40 D
6.7	123.19 D	-0.82 A	0.87 J	-6.70 A	7.22 J	1.46 D
	123.19 D	-0.82 A	0.87 J	-6.70 A	7.22 J	1.48 D
	124.17 D	-1.03 A	1.12 J	0.00 H	0.00 J	1.51 D
base reaction	124.17 D	0.74 A	-0.75 J	0.00 F	0.00 J	-1.51 D

\* VERTICAL GUY LOAD                      & GUY ECCENTRIC MOMENT  
+ HORIZONTAL REACTION                    @ TORSIONAL RESISTANCE

MAXIMUM GUY FORCES AT MAST

GUY LEVEL FT	GUY AZI	.....COMPONENTS AT MAST.....				EFL/FR * RATIO	...GUY ANGLES...	
		N KIP	E KIP	DOWN KIP	TOTAL KIP		VERT DEG	HORIZ DEG
296.7	0.0	4.3A	-0.1D	7.4A	8.5A	0.3A	-59.8C	3.8H
	120.0	-2.2E	3.7E	7.3E	8.5E	0.3E	-59.5G	-3.8J
	120.0	-2.2E	3.8E	7.3E	8.5E	0.3E	-59.5C	4.0L
	240.0	-2.2I	-3.8I	7.3I	8.5I	0.3I	-59.1K	-4.1B
	240.0	-2.2I	-3.8I	7.2I	8.5I	0.3I	-59.2G	3.9D
	0.0	4.3A	0.1J	7.4A	8.5A	0.3A	-59.8K	-3.9F
256.7	0.0	4.3A	-0.1D	6.3A	7.6A	0.3A	-57.6G	5.1H
	120.0	-2.2D	3.8E	6.4E	7.8E	0.3E	-57.4K	-5.3J
	120.0	-2.2E	3.7E	6.3E	7.6E	0.3E	-57.4K	-5.1J
	240.0	-2.2I	-3.7I	6.2I	7.6I	0.3I	-57.2C	5.1D
	240.0	-2.2I	-3.8I	6.3I	7.7I	0.3I	-57.2C	5.3D
	0.0	4.2A	0.1J	6.3A	7.6A	0.3A	-57.6G	-5.1F
206.7	0.0	5.1B	0.1J	6.1B	8.0B	0.3B	-52.5G	-3.5F
	120.0	-2.7D	4.7D	6.4D	8.4D	0.3D	-52.3K	-3.7J
	240.0	-2.8J	-4.7J	6.2J	8.3J	0.3J	-51.9C	3.7D
136.7	0.0	5.0L	0.0J	3.9L	6.3L	0.4L	-40.5G	-1.5F
	120.0	-2.7D	4.6D	4.1D	6.7D	0.4D	-40.2K	-1.8J
	240.0	-2.7J	-4.6J	4.0J	6.6J	0.4J	-39.5C	1.8D
66.7	0.0	4.8A	0.0J	1.9A	5.2A	0.4A	-22.8G	-0.6E
	120.0	-2.5D	4.3D	1.9D	5.3D	0.4D	-22.0K	-0.6I
	240.0	-2.5J	-4.3J	1.8J	5.3J	0.4J	-21.0C	0.6E

\* EFL/FR = EFFECTS OF FACTORED LOADS DIVIDED BY THE FACTORED RESISTANCE

MAXIMUM GUY FORCES AT ANCHOR

GUY LEVEL FT	GUY AZI	.....COMPONENTS AT ANCHOR.....				EFL/FR * RATIO
		RAD KIP	LAT KIP	VERT KIP	TOTAL KIP	
296.7	0.0	4.4A	-0.1J	7.0A	8.3A	0.3A

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120.0	4.4E	0.1H	6.9E	8.2E	0.3E	
120.0	4.5E	-0.1B	7.0E	8.3E	0.3E	
240.0	4.5I	0.1L	6.9I	8.3I	0.3I	
240.0	4.5I	-0.1F	6.9I	8.2I	0.3I	
0.0	4.4A	0.1D	7.0A	8.3A	0.3A	
256.7	0.0	4.4A	-0.1K	6.0A	7.4A	0.3A
120.0	4.5E	0.1G	6.1E	7.6E	0.3E	
120.0	4.4E	-0.1C	6.0E	7.4E	0.3E	
240.0	4.4I	0.1K	5.9I	7.4I	0.3I	
240.0	4.5I	-0.1G	6.0I	7.5I	0.3I	
0.0	4.3A	0.1C	6.0A	7.4A	0.3A	
206.7	0.0	5.2B	0.1D	5.8B	7.8B	0.3B
120.0	5.5D	-0.1B	6.1D	8.2D	0.3D	
240.0	5.5J	0.1L	6.0J	8.1J	0.3J	
136.7	0.0	5.0L	0.0D	3.8L	6.3L	0.4L
120.0	5.3D	0.0B	3.9D	6.6D	0.4D	
240.0	5.3J	0.0L	3.8J	6.6J	0.4J	
66.7	0.0	4.8A	0.0D	1.8A	5.1A	0.4A
120.0	5.0D	0.0H	1.8D	5.3D	0.4D	
240.0	5.0J	0.0F	1.7J	5.3J	0.4J	

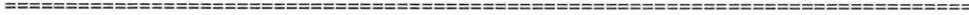
MAXIMUM ANCHOR LOADS  
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AZI DEG	RADIUS FT	GUY TO ELEV FT	....ANCHOR LOADS.....			.....SHAFT FORCES.....			ANGLE DEG
			HORIZ KIP	VERT KIP	LATERAL KIP	AXIAL KIP	...LATERAL... VERT PLANE KIP	HORIZ PLANE KIP	
0.0	183.6	296.7	4.4A	7.0A	0.1D	8.2A	1.3A	0.1D	
		296.7	4.4A	7.0A	-0.1J	8.2A	1.3A	-0.1J	
		256.7	4.3A	6.0A	-0.1J	7.4A	0.7L	-0.1J	
		256.7	4.4A	6.0A	0.1D	7.4A	0.7B	0.1D	
		206.7	5.2B	5.8B	0.1D	7.8B	-0.1A	0.1D	
		136.7	5.0L	3.8L	0.0D	6.1L	-1.3A	0.0D	
		66.7	4.8A	1.8A	0.0D	4.5A	-2.4A	0.0D	
			32.4A	37.3A	0.5D	49.4A	0.0C	0.5D	49.0A
120.0	183.6	296.7	4.5E	7.0E	0.1H	8.2E	1.3E	0.1H	
		296.7	4.4E	6.9E	0.1H	8.1E	1.3E	0.1H	
		256.7	4.4E	6.0E	-0.1B	7.4E	0.7D	-0.1B	
		256.7	4.5E	6.1E	-0.1B	7.5E	0.7D	-0.1B	
		206.7	5.5D	6.1D	-0.1B	8.2D	-0.1E	-0.1B	
		136.7	5.3D	3.9D	0.0B	6.5D	-1.3D	0.0B	
		66.7	5.0D	1.8D	0.0H	4.7D	-2.5E	0.0H	
			33.2E	37.4E	-0.5B	50.0E	0.0F	-0.5B	48.4E
240.0	183.6	296.7	4.5I	6.9I	0.1L	8.1I	1.3I	0.1L	
		296.7	4.5I	6.9I	-0.1F	8.2I	1.3I	-0.1F	
		256.7	4.5I	6.0I	0.1L	7.5I	0.7J	0.1L	
		256.7	4.4I	5.9I	0.1L	7.3I	0.7J	0.1L	
		206.7	5.5J	6.0J	0.1L	8.1J	-0.1I	0.1L	
		136.7	5.3J	3.8J	0.0L	6.4J	-1.4J	0.0L	
		66.7	5.0J	1.7J	0.0F	4.6J	-2.6I	0.0F	
			33.4I	36.9I	0.5L	49.8I	0.0H	0.5L	47.8I

MAXIMUM LOADS ON TOWER PIER  
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AXIAL kip	.....SHEAR.....			.....MOMENT.....			
	NORTH kip	EAST kip	TOTAL kip	NORTH ft-kip	EAST ft-kip	TOTAL ft-kip	TORSIONAL ft-kip
124.1670	0.7362	-0.7480	0.7955	0.0000	0.0000	0.0000	-1.5141

D A J I F 18-2794-TJH-R1 J F D



**GUYED TOWER SPREAD FOOTING DESIGN BY SABRE TOWERS & POLES**

306' 3600 TILLMAN INFRASTRUCTURE, LLC Benton, KY (18-2794-TJH-R1) 10-31-17 NM

Factored Axial Load (kips)	376.91
Factored Shear (kips)	1.29
Ultimate Bearing Pressure	6.5
Bearing $\Phi_s$	0.6
Bearing Design Strength (ksf)	3.9
Diameter of Pier (ft)	2.5
Ht. of Pier Above Ground (ft)	0.5
Depth to Bottom of Slab (ft)	6
Ht. of Pier Below Ground (ft)	4.5
Water Table Below Grade (ft)	999
Width of Pad (ft)	11
Thickness of Pad (ft)	1.5
Quantity of Bars in Pad	12
Bar Diameter in Pad (in)	0.875
Area of Bars in Pad (in <sup>2</sup> )	7.22
Spacing of Bars in Pad (in)	11.38
Quantity of Bars Pier	6
Bar Diameter in Pier (in)	0.875
Area of Bars in Pier (in <sup>2</sup> )	3.61
Spacing of Bars in Pier (in)	11.72
f'c (ksi)	4.5
fy (ksi)	60
Unit Wt. of Soil (kcf)	0.117
Unit Wt. of Concrete (kcf)	0.15
Volume of Concrete (yd <sup>3</sup> )	7.63

**Two-Way Shear Action:**

Average d (in)	14.13
$\phi V_c$ (kips)	446.6
$\phi V_c = \phi(2 + 4/\beta_c)f'_c{}^{1/2}b_o d$	669.9
$\phi V_c = \phi(\alpha_s d/b_o + 2)f'_c{}^{1/2}b_o d$	678.3
$\phi V_c = \phi 4f'_c{}^{1/2}b_o d$	446.6
Shear perimeter, $b_o$ (in)	138.62
$\beta_c$	1

**One-Way Shear:**

$\phi V_c$ (kips)	212.6
-------------------	-------

**Flexure:**

$\phi M_n$ (ft-kips)	444.7
a (in)	0.86
Steel Ratio	0.00387
$\beta_1$	0.83
Maximum Steel Ratio	0.0197
Minimum Steel Ratio	0.0018
Rebar Development in Pad (in)	49.71

Allowable Bearing Pressure (ksf)	6.50
Safety Factor	1.00
Maximum Factored Net Soil Bearing Pressure (ksf)	3.25
Equivalent Square b (ft)	2.22

Recommended Spacing (in)	6 to 12
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Minimum Pier Area of Steel (in <sup>2</sup> )	3.53
Recommended Spacing (in)	6 to 12

$V_u$ (kips)	345.0
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$V_u$ (kips)	111.9
--------------	-------

$M_u$ (ft-kips)	335.9
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Required Development in Pad (in)	17.57
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Condition	1 is OK, 0 Fails
Two-Way Shear Action	1
One-way Shear	1
Flexure	1
Steel Ratio	1
Pier Area of Steel	1
Maximum Soil Bearing Pressure	1
Length of Development in Pad	1

**GUY ANCHOR BLOCK DESIGN BY SABRE TOWERS & POLES**

306' 3600 TILLMAN INFRASTRUCTURE, LLC Benton, KY (18-2794-TJH-R1) 10-31-17 NM

<b>Anchor Block Dimensions:</b>			
Length (ft)	17	Length/Height Ratio	5.7
Height (ft)	3	Length/Width Ratio	5.7
Width (ft)	3	Height/Width Ratio	1.00
Longitudinal Bar Diameter (in)	1	Width/Height Ratio	1.00
Quantity of Bars in Top	4	Vertical Flexure Ratio	0.53
Area of Bars in Top (in <sup>2</sup> )	3.14	Horizontal Flexure Ratio	0.44
Spacing of Bars in Top (in)	9.33	Horizontal Force Ratio	0.71
Quantity of Bars Front	4	Vertical Force Ratio	0.96
Area of Bars in Front (in <sup>2</sup> )	3.14		
Spacing of Bars in Front (in)	9.33		
Quantity of Bars in Bottom	1	Recommended Spacing (in)	6 to 30
Spacing of Bars in Bottom (in)	29.00	Recommended Spacing (in)	6 to 30
Quantity of Bars in Back	1		
Spacing of Bars in Back (in)	29.00	Angle from Horizontal (deg)	50
Quantity of Ties	18		
Tie Bar Diameter (in)	0.5		
Factored Uplift (kips)	109.52		
Factored Horizontal Force (kips)	91.25		
Ultimate Passive Pressure	3.369		
Horizontal $\Phi_s$	0.75		
Horizontal Design Strength (ksf)	2.52675		
Angle of Internal Friction (deg.)	30		
Unit Wt. of Soil (kcf)	0.116		
Water Table Below Grade (ft)	999		
Depth to Bottom of Block (ft)	10		
f'c (ksi)	4.5		
fy (ksi)	60		
Unit Wt. of Concrete (kcf)	0.15		
Volume of Concrete (yd <sup>3</sup> )	5.67		
<b>Horizontal Force:</b>			
Factored Horizontal Force (kips)	91.3	Horizontal Design Strength (kips)	128.9
<b>Uplift:</b>			
Wc, Weight of Concrete (kips)	23.0		
WR, Soil Resistance (kips)	124.7		
Uplift $\Phi_s$ (kips)	0.75		
( $\Phi_s$ )(WR+Wc) (kips)	114.2		
Factored Uplift (kips)	109.5	Uplift Design Strength (kips)	114.2
<b>Vertical Shear:</b>			
Vu (kips)	54.8	$\phi V_n$ (kips)	186.5
Vc = 2 f'c <sup>1/2</sup> bwd (kips)	154.6		
Vs (kips)	64.9	*** Vs max = 4 f'c <sup>1/2</sup> bwd (kips)	309.1
Spacing of Ties (in)	11.62		
Max. Spacing (in)	13.09	(Only if Shear Ties are Required)	

\*\*\* Ref. To Spacing Requirements ACI 11.5.4.3

**GUY ANCHOR BLOCK DESIGN BY SABRE TOWERS & POLES (CONTINUED)**

306' 3600 TILLMAN INFRASTRUCTURE, LLC Benton, KY (18-2794-TJH-R1) 10-31-17 NM

**Horizontal Shear**

$V_u$ (kips)	45.6	$\phi V_n$ (kips)	186.5
$V_c = 2 f'_c{}^{1/2} b_w d$ (kips)	154.6		
$V_s$ (kips)	64.9	*** $V_s \text{ max} = 4 f'_c{}^{1/2} b_w d$ (kips)	309.1
Spacing of Ties (in)	11.62		
Max. Spacing (in)	13.09	(Only if Shear Ties are Required)	
$(V_u/\phi V_n)_v + (V_u/\phi V_n)_H$	0.54		<1 OK

\*\*\* Ref. To Spacing Requirements ACI 11.5.4.3

**Vertical Flexure:**

$M_u$ (ft-kips)	232.7	$\phi M_n$ (ft-kips)	442.7
a (in)	1.37		
Steel Ratio	0.0027		
$\beta_1$	0.83		
Maximum Steel Ratio	0.0233		
Minimum Steel Ratio	0.0018		
Rebar Development (in)	99.00	Required Rebar Development (in)	10.87

**Horizontal Flexure:**

$M_u$ (ft-kips)	193.9	$\phi M_n$ (ft-kips)	442.7
a (in)	1.37		
Steel Ratio	0.0027		
Maximum Steel Ratio	0.023		
Minimum Steel Ratio	0.0018		
Rebar Development (in)	99.00	Required Rebar Development (in)	9.06
$(M_u/\phi M_n)_v + (M_u/\phi M_n)_H$	0.96	$(M_u/\phi M_n)_v + (M_u/\phi M_n)_H$	<1 OK

Condition	1 is OK, 0 Fails
Uplift Force	1
Horizontal Force	1
Flexure	1
Shear	1
Length of Development in Block	1
Steel Ratio	1

Calculated Strength > Factored Load O.K.



**Applicant's identifying information**

- **Patrick Sullivan**  
**Tillman Infrastructure**  
770-468-7475  
[psullivan@tillmaninfrastructure.com](mailto:psullivan@tillmaninfrastructure.com)

**EXHIBIT D**  
**COMPETING UTILITIES, CORPORATIONS, OR PERSONS LIST**

## KY Public Service Commission

### Master Utility Search

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

Utility ID	Utility Name	Address/City/Contact	Utility Type	Status
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Active ▾
<input type="button" value="Search"/>				

	Utility ID	Utility Name	Utility Type	Class	City	State
<input type="button" value="View"/>	4107900	365 Wireless, LLC	Cellular	D	Atlanta	GA
<input type="button" value="View"/>	4109300	Access Point, Inc.	Cellular	D	Cary	NC
<input type="button" value="View"/>	4108300	Air Voice Wireless, LLC	Cellular	A	Bloomfield Hill	MI
<input type="button" value="View"/>	4110650	Alliant Technologies of KY, L.L.C.	Cellular	C	Morristown	NJ
<input type="button" value="View"/>	44451184	Alltel Communications, LLC	Cellular	A	Basking Ridge	NJ
<input type="button" value="View"/>	4107800	American Broadband and Telecommunications Company	Cellular	C	Toledo	OH
<input type="button" value="View"/>	4108650	AmeriMex Communications Corp.	Cellular	D	Dunedin	FL
<input type="button" value="View"/>	4105100	AmeriVision Communications, Inc. d/b/a Affinity 4	Cellular	D	Virginia Beach	VA
<input type="button" value="View"/>	4110700	Andrew David Balholm dba Norcell	Cellular	C	Clayton	WA
<input type="button" value="View"/>	4107400	Bandwidth.com, Inc.	Cellular	A	Raleigh	NC
<input type="button" value="View"/>	4108600	BCN Telecom, Inc.	Cellular	D	Morristown	NJ
<input type="button" value="View"/>	4110550	Blue Casa Mobile, LLC	Cellular	D	Santa Barbara	CA
<input type="button" value="View"/>	4108750	Blue Jay Wireless, LLC	Cellular	C	Carrollton	TX
<input type="button" value="View"/>	4202300	Bluegrass Wireless, LLC	Cellular	A	Elizabethtown	KY
<input type="button" value="View"/>	4107600	Boomerang Wireless, LLC	Cellular	B	Hiawatha	IA
<input type="button" value="View"/>	4105500	BullsEye Telecom, Inc.	Cellular	D	Southfield	MI
<input type="button" value="View"/>	4110050	CampusSims, Inc.	Cellular	D	Boston	MA

<a href="#">View</a>	4100700	Cellco Partnership dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	4106600	Cintex Wireless, LLC	Cellular	D	Rockville	MD
<a href="#">View</a>	4101900	Consumer Cellular, Incorporated	Cellular	A	Portland	OR
<a href="#">View</a>	4106400	Credo Mobile, Inc.	Cellular	A	San Francisco	CA
<a href="#">View</a>	4108850	Cricket Wireless, LLC	Cellular	A	San Antonio	TX
<a href="#">View</a>	4001900	CTC Communications Corp. d/b/a EarthLink Business I	Cellular	D	Grand Rapids	MI
<a href="#">View</a>	10640	Cumberland Cellular Partnership	Cellular	A	Elizabethtown	KY
<a href="#">View</a>	4101000	East Kentucky Network, LLC dba Appalachian Wireless	Cellular	A	Ivel	KY
<a href="#">View</a>	4002300	Easy Telephone Service Company dba Easy Wireless	Cellular	D	Ocala	FL
<a href="#">View</a>	4109500	Enhanced Communications Group, LLC	Cellular	D	Bartlesville	OK
<a href="#">View</a>	4110450	Excellus Communications, LLC	Cellular	D	Chattanooga	TN
<a href="#">View</a>	4105900	Flash Wireless, LLC	Cellular	C	Concord	NC
<a href="#">View</a>	4104800	France Telecom Corporate Solutions L.L.C.	Cellular	D	Oak Hill	VA
<a href="#">View</a>	4109350	Global Connection Inc. of America	Cellular	D	Norcross	GA
<a href="#">View</a>	4102200	Globalstar USA, LLC	Cellular	B	Covington	LA
<a href="#">View</a>	4109600	Google North America Inc.	Cellular	B	Mountain View	CA
<a href="#">View</a>	33350363	Granite Telecommunications, LLC	Cellular	D	Quincy	MA
<a href="#">View</a>	4106000	GreatCall, Inc. d/b/a Jitterbug	Cellular	A	San Diego	CA
<a href="#">View</a>	10630	GTE Wireless of the Midwest dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	4110600	Horizon River Technologies, LLC	Cellular	C	Atlanta	GA
<a href="#">View</a>	4103100	i-Wireless, LLC	Cellular	A	Newport	KY
<a href="#">View</a>	4109800	IM Telecom, LLC d/b/a Infiniti Mobile	Cellular	D	Tulsa	OK
<a href="#">View</a>	22215360	KDDI America, Inc.	Cellular	D	New York	NY
<a href="#">View</a>	10872	Kentucky RSA #1 Partnership	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	10680	Kentucky RSA #3 Cellular General	Cellular	A	Elizabethtown	KY
<a href="#">View</a>	10681	Kentucky RSA #4 Cellular General	Cellular	A	Elizabethtown	KY
<a href="#">View</a>	4109750	Konatel, Inc. dba telecom.mobi	Cellular	D	Johnstown	PA
<a href="#">View</a>	4107300	Lycamobile USA, Inc.	Cellular	D	Newark	NJ
<a href="#">View</a>	4108800	MetroPCS Michigan, LLC	Cellular	A	Bellevue	WA
<a href="#">View</a>	4109650	Mitel Cloud Services, Inc.	Cellular	D	Mesa	AZ
<a href="#">View</a>	4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular	A	San Antonio	TX

<a href="#">View</a>	10900	New Par dba Verizon Wireless	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	4000800	Nextel West Corporation	Cellular	D	Overland Park	KS
<a href="#">View</a>	4001300	NPCR, Inc. dba Nextel Partners	Cellular	D	Overland Park	KS
<a href="#">View</a>	4001800	OnStar, LLC	Cellular	A	Detroit	MI
<a href="#">View</a>	4110750	Onvoy Spectrum, LLC	Cellular	C	Plymouth	MN
<a href="#">View</a>	4109050	Patriot Mobile LLC	Cellular	D	Southlake	TX
<a href="#">View</a>	4110250	Plintron Technologies USA LLC	Cellular	D	Bellevue	WA
<a href="#">View</a>	33351182	PNG Telecommunications, Inc. dba PowerNet Global Communications	Cellular	D	Cincinnati	OH
<a href="#">View</a>	4202100	Powertel/Memphis, Inc. dba T-Mobile	Cellular	A	Bellevue	WA
<a href="#">View</a>	4107700	Puretalk Holdings, LLC	Cellular	A	Covington	GA
<a href="#">View</a>	4106700	Q Link Wireless, LLC	Cellular	A	Dania	FL
<a href="#">View</a>	4108700	Ready Wireless, LLC	Cellular	B	Hiawatha	IA
<a href="#">View</a>	4110350	Regional Strategic Partners LLC	Cellular	D	Buford	GA
<a href="#">View</a>	4110500	Republic Wireless, Inc.	Cellular	D	Raleigh	NC
<a href="#">View</a>	4106200	Rural Cellular Corporation	Cellular	A	Basking Ridge	NJ
<a href="#">View</a>	4108550	Sage Telecom Communications, LLC dba TruConnect	Cellular	D	Los Angeles	CA
<a href="#">View</a>	4109150	SelecTel, Inc. d/b/a SelecTel Wireless	Cellular	D	Freemont	NE
<a href="#">View</a>	4106300	SI Wireless, LLC	Cellular	A	Carbondale	IL
<a href="#">View</a>	4110150	Spectrotel, Inc. d/b/a Touch Base Communications	Cellular	D	Neptune	NJ
<a href="#">View</a>	4200100	Sprint Spectrum, L.P.	Cellular	A	Atlanta	GA
<a href="#">View</a>	4200500	SprintCom, Inc.	Cellular	A	Atlanta	GA
<a href="#">View</a>	4109550	Stream Communications, LLC	Cellular	D	Dallas	TX
<a href="#">View</a>	4110200	T C Telephone LLC d/b/a Horizon Cellular	Cellular	D	Red Bluff	CA
<a href="#">View</a>	4202200	T-Mobile Central, LLC dba T-Mobile	Cellular	A	Bellevue	WA
<a href="#">View</a>	4002500	TAG Mobile, LLC	Cellular	D	Carrollton	TX
<a href="#">View</a>	4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular	D	South Portland	ME
<a href="#">View</a>	4107200	Telefonica USA, Inc.	Cellular	D	Miami	FL
<a href="#">View</a>	4108900	Telrite Corporation dba Life Wireless	Cellular	D	Covington	GA
<a href="#">View</a>	4108450	Tempo Telecom, LLC	Cellular	D	Kansas City	MO
<a href="#">View</a>	4109950	The People's Operator USA, LLC	Cellular	D	New York	NY
<a href="#">View</a>	4109000	Ting, Inc.	Cellular	A	Toronto	ON
<a href="#">View</a>	4110400	Torch Wireless Corp.	Cellular	D	Jacksonville	FL
<a href="#">View</a>	4103300	Touchtone Communications, Inc.	Cellular	D	Whippany	NJ

<a href="#">View</a>	4104200	TracFone Wireless, Inc.	Cellular	D	Miami	FL
<a href="#">View</a>	4002000	Truphone, Inc.	Cellular	D	Durham	NC
<a href="#">View</a>	4110300	UVNV, Inc.	Cellular	D	Costa Mesa	CA
<a href="#">View</a>	4105700	Virgin Mobile USA, L.P.	Cellular	A	Atlanta	GA
<a href="#">View</a>	4110800	Visible Service LLC	Cellular	C	Lone Tree	CO
<a href="#">View</a>	4200600	West Virginia PCS Alliance, L.C.	Cellular	A	Waynesboro	VA
<a href="#">View</a>	4106500	WiMacTel, Inc.	Cellular	D	Palo Alto	CA
<a href="#">View</a>	4110100	Windward Wireless LLC	Cellular	D	Suwanee	GA
<a href="#">View</a>	4109900	Wireless Telecom Cooperative, Inc. dba theWirelessFreeway	Cellular	D	Louisville	KY

**EXHIBIT E**  
**FAA**



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

Aeronautical Study No.  
 2017-ASO-18097-OE

Issued Date: 09/13/2017

Donna-Marie Stipo  
 Tillman Infrastructure, LLC  
 152 West 57th Street  
 8th Floor  
 New York, NY 10019

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

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

Structure: Tower Lee Burd Rd, KY - 14220570  
 Location: Benton, KY  
 Latitude: 36-49-24.34N NAD 83  
 Longitude: 88-28-25.58W  
 Heights: 482 feet site elevation (SE)  
 325 feet above ground level (AGL)  
 807 feet above mean sea level (AMSL)

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

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

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

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

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

This determination expires on 03/13/2019 unless:

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

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

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

This determination does not constitute authority to transmit on the frequency(ies) identified in this study. The proponent is required to obtain a formal frequency transmit license from the Federal Communications Commission (FCC) or National Telecommunications and Information Administration (NTIA), prior to on-air operations of these frequency(ies).

This determination of No Hazard is granted provided the following conditional statement is included in the proponent's construction permit or license to radiate:

Upon receipt of notification from the Federal Communications Commission that harmful interference is being caused by the licensee's (permittee's) transmitter, the licensee (permittee) shall either immediately reduce the power to the point of no interference, cease operation, or take such immediate corrective action as is necessary to eliminate the harmful interference. This condition expires after 1 year of interference-free operation.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

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

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

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

If we can be of further assistance, please contact our office at (202) 267-0105, or [j.garver@faa.gov](mailto:j.garver@faa.gov). On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-ASO-18097-OE.

**Signature Control No: 342706686-343685919**

( DNE )

Jay Garver  
Specialist

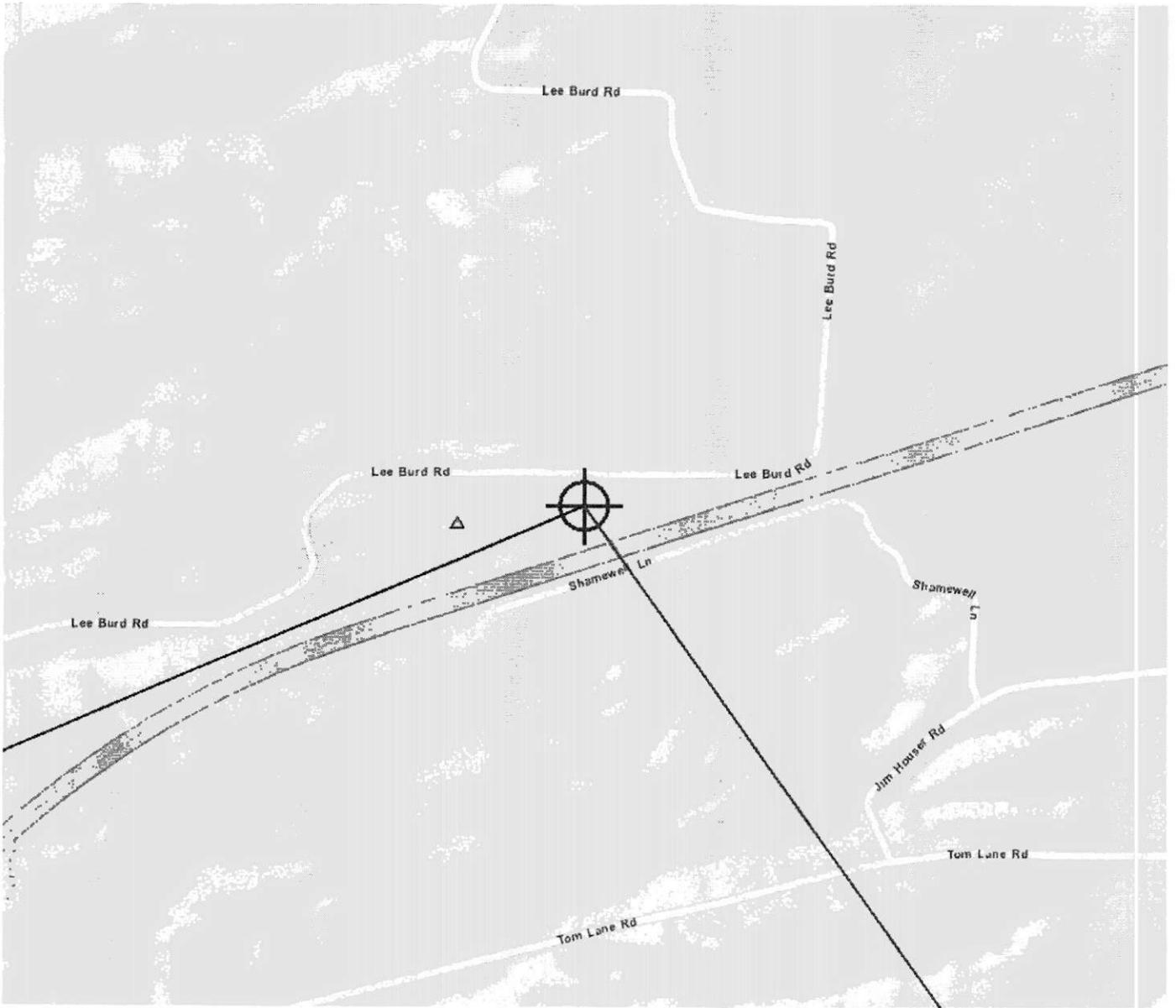
Attachment(s)  
Frequency Data  
Map(s)

cc: FCC

Frequency Data for ASN 2017-ASO-18097-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	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
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W

Verified Map for ASN 2017-ASO-18097-OE



**EXHIBIT F**  
**KENTUCKY AIRPORT ZONING COMMISSION**

September 29, 2017

Mr. John Houlihan  
Kentucky Airport Zoning Commission  
421 Buttermilk Pike  
Covington, KY 41017

RE: Application For A Permit to Construct A Communications Tower

Dear Mr. Houlihan;

Tillman Infrastructure, LLC ("Tillman") seeks approval and permit from the Kentucky Airport Zoning Commission to construct a communications tower and related ground appurtenances (Proposed Facility) within the property envelope referred to as 1641 Lee Burd Road, Chester, Kentucky, within Marshall County, Kentucky (Subject Parcel).

The Proposed Facility would consist of a Guyed Tower centered within a 100 x 100 fenced compound that would support all ground based associated equipment. Tillman filed with the FAA for at an Overall Structure Height of 325' ALG. A Determination of No Hazzard to Air Navigation (ASN 2017-ASO-18097-OE) was received and provided with this application.

As indicated by the FAA, the Proposed Facility would be lighted accordingly.

There are two (2) airports within the proximity to the Proposed Facility:

- J & C Antique Airfield
- Mayfair Graves County Airport

We are respectfully submitting the following materials for review:

- Application TC55-2
- FAA Application 7460-1
- USGS Topo Map
- USGS Topo Imagery Map
- Two (2) Aerial Maps
- FAA Determination of No Hazzard

Kindly do not hesitate to contact me should you have any questions or require any additional information. I appreciate your time with respect to this matter.

Sincerely,



Donna-Marie Stipo  
Director – Regulatory Compliance  
Direct: 914-714-9065  
dmstipo@tillmaninfrastructure.com



KENTUCKY TRANSPORTATION CABINET  
 KENTUCKY AIRPORT ZONING COMMISSION

TC 55-2  
 Rev. 05/2017  
 Page 2 of 2

**APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE**

APPLICANT (name) Tillman Infrastructure, LLC		PHONE 212-706-1677	FAX	KY AERONAUTICAL STUDY #	
ADDRESS (street) 157 West 57th Street, 8th Floor		CITY New York		STATE NY	ZIP 10019
APPLICANT'S REPRESENTATIVE (name)		PHONE	FAX		
ADDRESS (street)		CITY		STATE	ZIP
APPLICATION FOR <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing				WORK SCHEDULE	
DURATION <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary (months days )				Start 2/1/18 End 5/1/18	
TYPE <input type="checkbox"/> Crane <input type="checkbox"/> Building		MARKING/PAINTING/LIGHTING PREFERRED			
<input checked="" type="checkbox"/> Antenna Tower		<input type="checkbox"/> Red Lights & Paint <input type="checkbox"/> White- medium intensity <input type="checkbox"/> White- high intensity			
<input type="checkbox"/> Power Line <input type="checkbox"/> Water Tank		<input checked="" type="checkbox"/> Dual- red & medium intensity white <input type="checkbox"/> Dual- red & high intensity white			
<input type="checkbox"/> Landfill <input type="checkbox"/> Other		<input type="checkbox"/> Other			
LATITUDE 36 ° 49 ' 24 .348 "		LONGITUDE 88 ° 28 ' 25 .575 "		DATUM <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27	
<input type="checkbox"/> Other					
NEAREST KENTUCKY City Benton County Marshall		NEAREST KENTUCKY PUBLIC USE OR MILITARY AIRPORT J&C Antique Airfield & Mayfair Graves County Airport			
SITE ELEVATION (AMSL, feet) 482' AMSL		TOTAL STRUCTURE HEIGHT (AGL, feet) 325'		CURRENT (FAA aeronautical study #) 2017-ASO-18097-OE	
OVERALL HEIGHT (site elevation plus total structure height, feet) 807" AMSL				PREVIOUS (FAA aeronautical study #)	
DISTANCE (from nearest Kentucky public use or Military airport to structure) 6.72 miles (map attached)				PREVIOUS (KY aeronautical study #)	
DIRECTION (from nearest Kentucky public use or Military airport to structure) Tower lies northeast of the airport - map attached.					
DESCRIPTION OF LOCATION (Attach USGS 7.5 minute quadrangle map or an airport layout drawing with the precise site marked and any certified survey.)					
DESCRIPTION OF PROPOSAL Communications Structure - 325' Guyed Tower with a 100 x 100 compound. Lighting as per FAA					
FAA Form 7460-1 (Has the "Notice of Construction or Alteration" been filed with the Federal Aviation Administration?) <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes, when?					
CERTIFICATION (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of my knowledge and belief.)					
PENALTIES (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)					
NAME Donna-Marie Stipo	TITLE Director - Regulatory	SIGNATURE 		DATE 9-29-2017	
COMMISSION ACTION		<input type="checkbox"/> Chairperson, KAZC			
		<input type="checkbox"/> Administrator, KAZC			
<input type="checkbox"/> Approved	SIGNATURE			DATE	
<input type="checkbox"/> Disapproved					



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

Aeronautical Study No.  
 2017-ASO-18097-OE

Issued Date: 09/13/2017

Donna-Marie Stipo  
 Tillman Infrastructure, LLC  
 152 West 57th Street  
 8th Floor  
 New York, NY 10019

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

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

Structure: Tower Lee Burd Rd, KY - 14220570  
 Location: Benton, KY  
 Latitude: 36-49-24.34N NAD 83  
 Longitude: 88-28-25.58W  
 Heights: 482 feet site elevation (SE)  
 325 feet above ground level (AGL)  
 807 feet above mean sea level (AMSL)

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

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

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

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

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

This determination expires on 03/13/2019 unless:

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

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

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

This determination does not constitute authority to transmit on the frequency(ies) identified in this study. The proponent is required to obtain a formal frequency transmit license from the Federal Communications Commission (FCC) or National Telecommunications and Information Administration (NTIA), prior to on-air operations of these frequency(ies).

This determination of No Hazard is granted provided the following conditional statement is included in the proponent's construction permit or license to radiate:

Upon receipt of notification from the Federal Communications Commission that harmful interference is being caused by the licensee's (permittee's) transmitter, the licensee (permittee) shall either immediately reduce the power to the point of no interference, cease operation, or take such immediate corrective action as is necessary to eliminate the harmful interference. This condition expires after 1 year of interference-free operation.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

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

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

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

If we can be of further assistance, please contact our office at (202) 267-0105, or [j.garver@faa.gov](mailto:j.garver@faa.gov). On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-ASO-18097-OE.

**Signature Control No: 342706686-343685919**

( DNE )

Jay Garver  
Specialist

Attachment(s)  
Frequency Data  
Map(s)

cc: FCC

Frequency Data for ASN 2017-ASO-18097-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	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
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W

Verified Map for ASN 2017-ASO-18097-OE





Federal Aviation Administration

« OE/AAA

Notice of Proposed Construction or Alteration - Off Airport

Add a new Case Off Airport - Desk Reference Guide V\_2017.3.0

Add a New Case Off Airport for Wind Turbines - Met Towers - Desk Reference Guide V\_2017.3.0

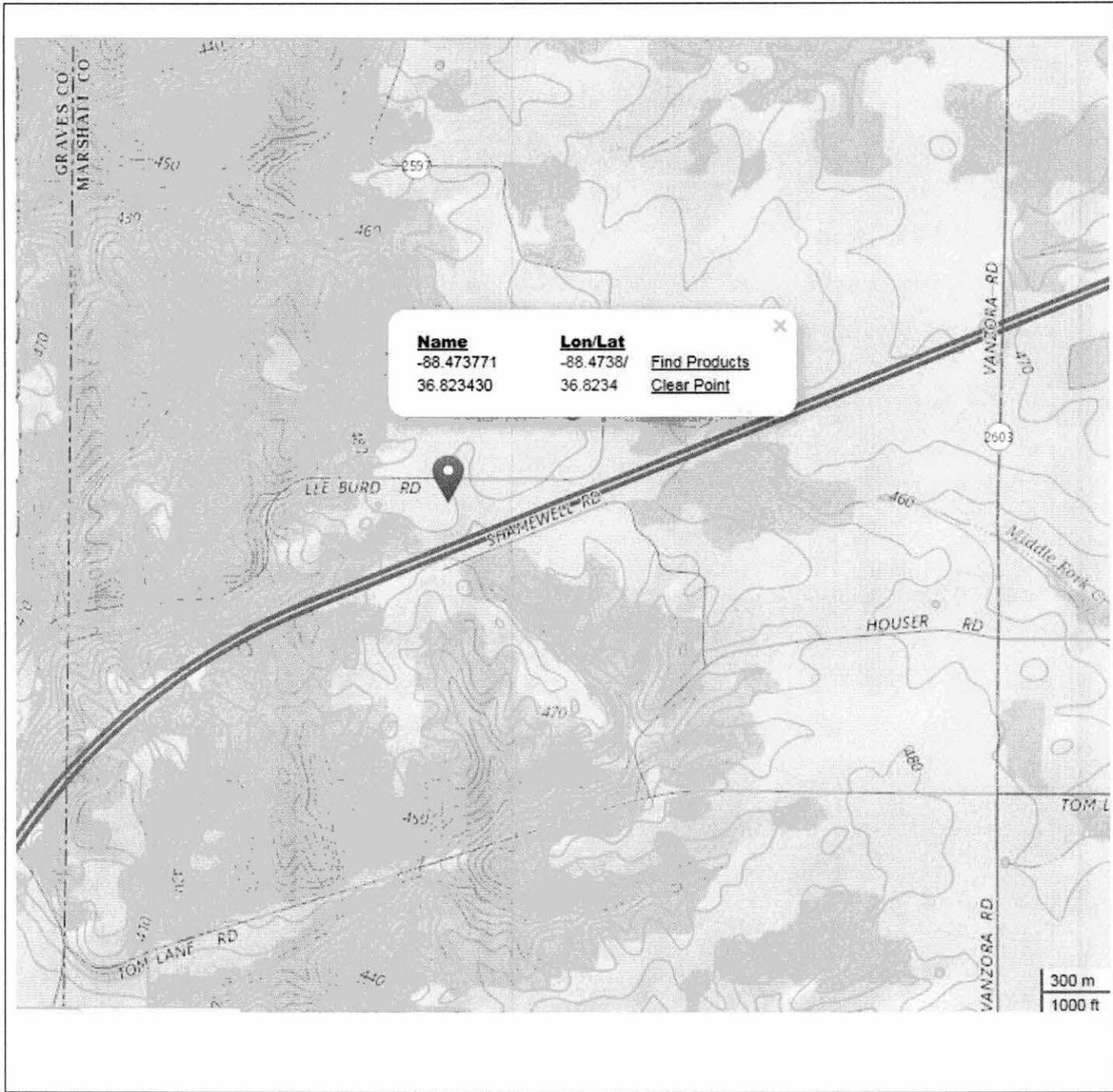
Project Name: TILLM-000431522-17

Sponsor: Tillman Infrastructure, LLC

Details for Case : Lee Burd Rd, KY - 14220570

Show Project Summary

Case Status				
ASN:	2017-ASO-18097-OE			
Status:	Determined			
	7460-2 (PART 2) required within 5 days after the construction reaches its greatest height.			
	Add Supplemental Notice (7460-2)			
Public Comments:	None			
Date Accepted:	08/31/2017			
Date Determined:	09/13/2017			
Letters:	09/13/2017  DNE			
Documents:	08/31/2017  Y:\Tillman Projec...			
	Project Documents: None			
Construction / Alteration Information				
Notice Of:	Construction			
Duration:	Permanent			
	<b>if Temporary :</b> Months: Days:			
Work Schedule - Start:	11/01/2017			
Work Schedule - End:	02/28/2018			
*For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.				
State Filing:				
Structure Details				
Latitude:	36° 49' 24.34" N			
Longitude:	88° 28' 25.58" W			
Horizontal Datum:	NAD83			
Site Elevation (SE):	482 (nearest foot)			
Structure Height (AGL):	325 (nearest foot)			
Current Height (AGL):	(nearest foot)			
* For notice of alteration or existing provide the current AGL height of the existing structure. Include details in the Description of Proposal				
Minimum Operating Height (AGL):	(nearest foot)			
* For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.				
Requested Marking/Lighting:	Dual-red and medium intensity			
	<b>Other :</b>			
Recommended Marking/Lighting:	Dual-red and medium intensity			
Current Marking/Lighting:	N/A Proposed Structure			
	<b>Other :</b> <input type="text"/>			
Nearest City:	Benton			
Nearest State:	Kentucky			
Description of Location:	1641 Lee Burd Road, Benton, KY 42025			
Description of Proposal:	Installation of a new Guyed tower, north of Julian Carroll Purchase Pkwy for communication services.			
Structure Summary				
Structure Type:	Tower			
Structure Name:	Lee Burd Rd, KY - 14220570			
FDC NOTAM:				
NOTAM Number:				
FCC Number:				
Prior ASN:				
Proposed Frequency Bands				
Select any combination of the applicable frequencies/powers identified in the Color Void Clause Coalition, Antenna System Co-Location, Voluntary Best Practices, effective 21 Nov 2007, to be evaluated by the FAA with your filing. If not within one of the frequency bands listed below, manually input your proposed frequency (ies) and power using the Add Specific Frequency link.				
Add Specific Frequency				
Low Freq	High Freq	Freq Unit	ERP	ERP Unit
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	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
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W



**USGS Topo Map  
Oak Level Quadrangle**

<p><i><u>Project Number:</u></i> 14220570</p>		<p><i><u>Project Address:</u></i> 1641 Lee Burd Road Benton, KY 42025</p>	
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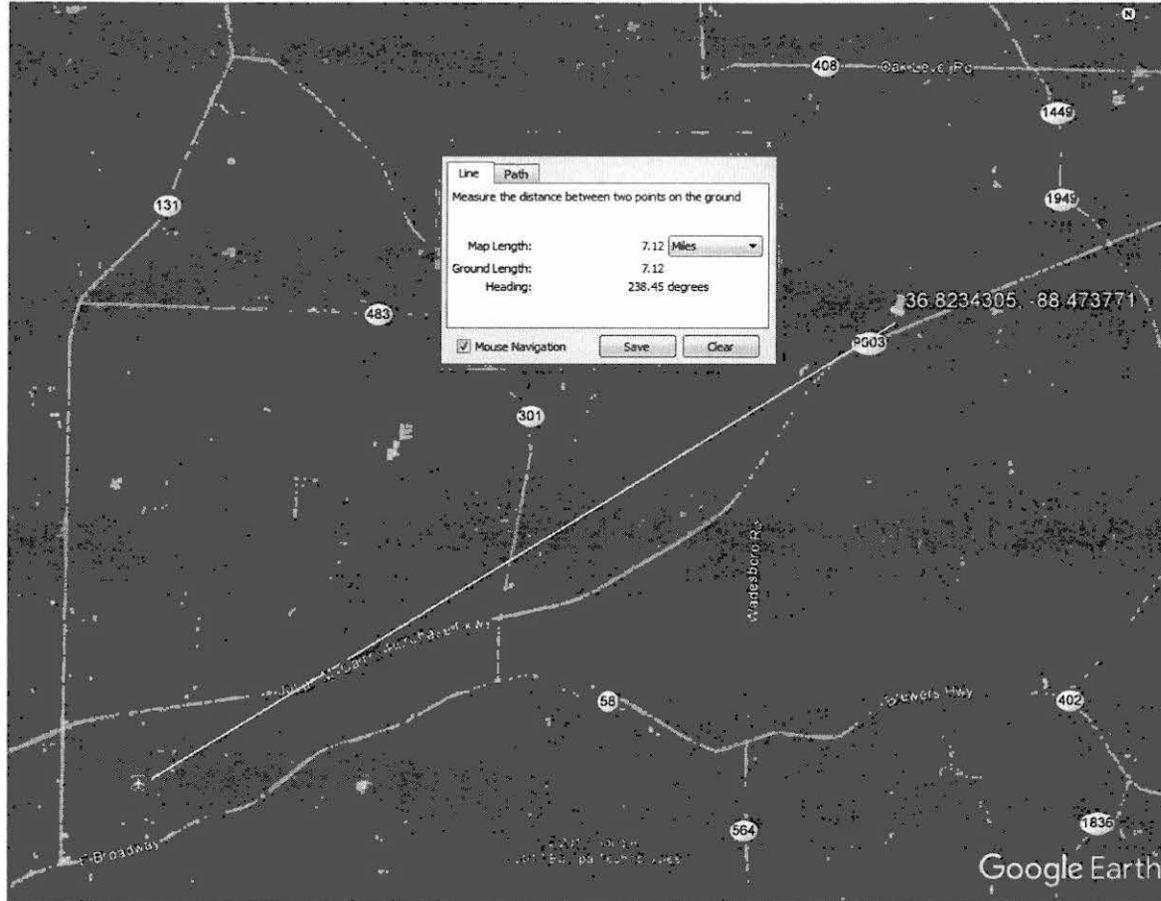


**USGS Imagery Topo Map  
Oak Level Quadrangle**

Project Number:  
14220570



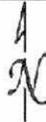
Project Address:  
1641 Lee Burd Road  
Benton, KY 42025



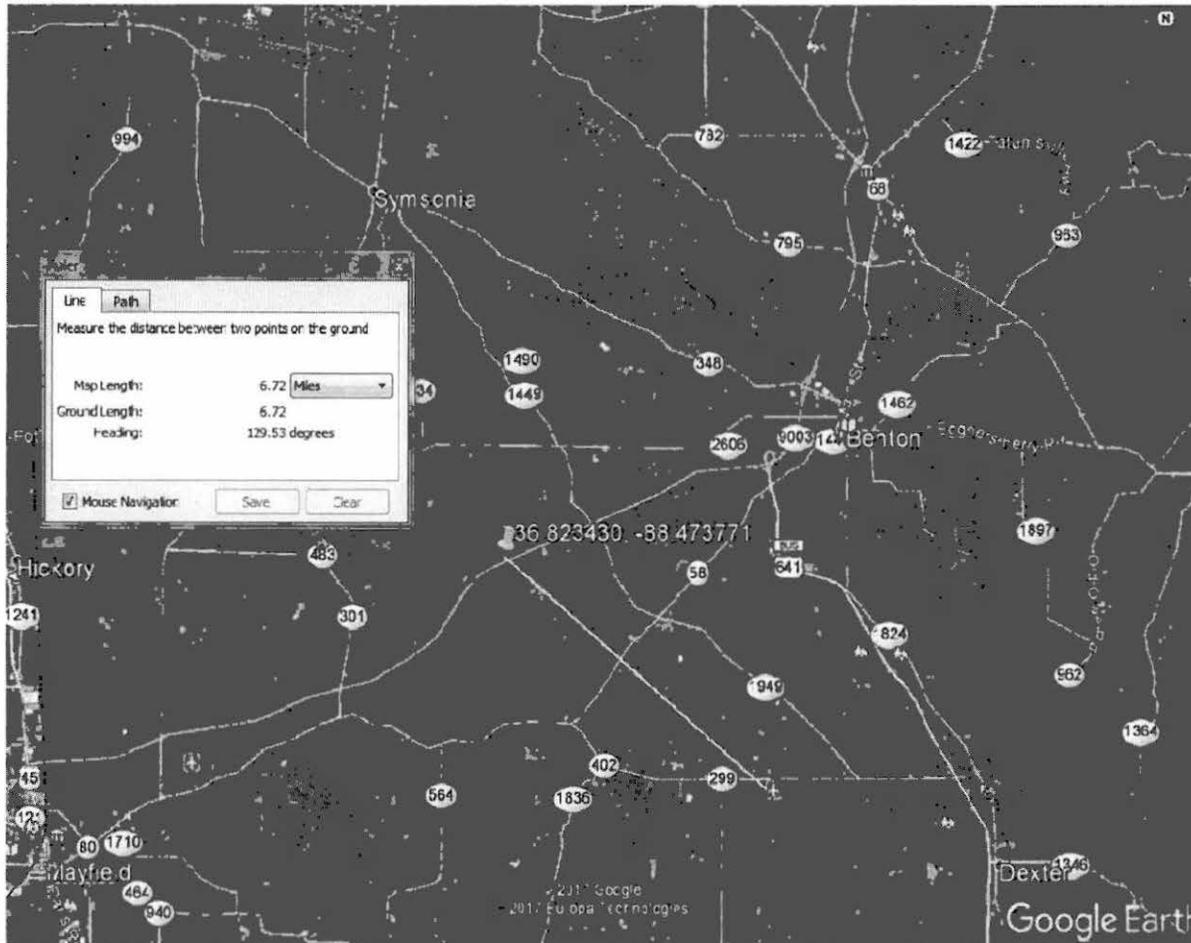
**Airport Location Map**

Mayfair Graves County Airport

***Project Number:***  
14220570



***Project Address:***  
1641 Lee Burd Road  
Benton, KY 42025



**Airport Location Map**

J&C Antique Airfield

***Project Number:***  
14220570

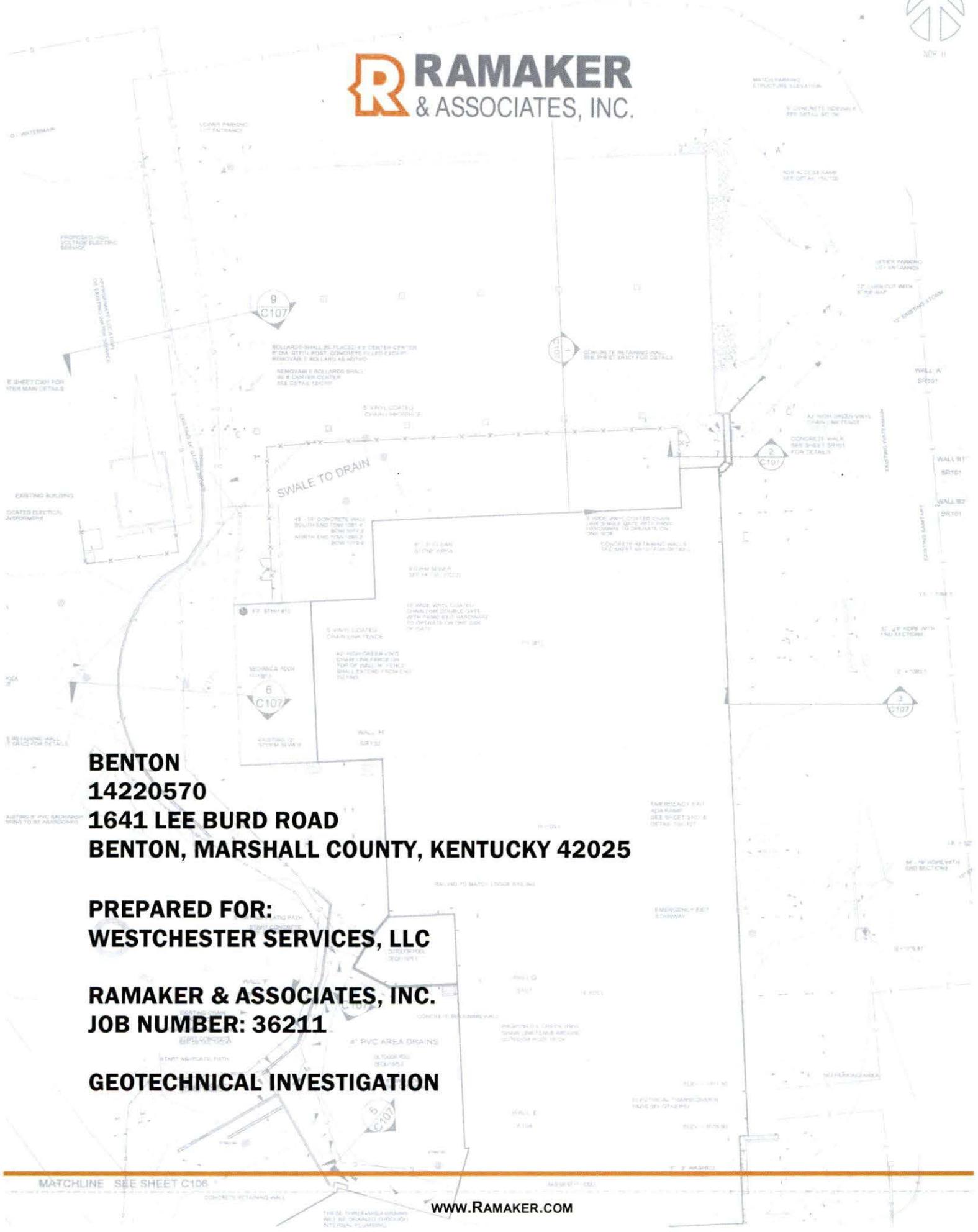
A  
N

***Project Address:***  
1641 Lee Burd Road  
Benton, KY 42025

**EXHIBIT G**  
**GEOTECHNICAL REPORT**



# RAMAKER & ASSOCIATES, INC.



**BENTON  
14220570  
1641 LEE BURD ROAD  
BENTON, MARSHALL COUNTY, KENTUCKY 42025**

**PREPARED FOR:  
WESTCHESTER SERVICES, LLC**

**RAMAKER & ASSOCIATES, INC.  
JOB NUMBER: 36211**

**GEOTECHNICAL INVESTIGATION**

MATCHLINE SEE SHEET C106

**GEOTECHNICAL INVESTIGATION**

**PROJECT:** Benton  
1641 Lee Burd Road  
Benton, Marshall County, Kentucky 42025

**CLIENT SITE NUMBER:** 14220570

**PREPARED FOR:** Westchester Services, LLC  
604 Fox Glen  
Barrington, Illinois 60010

**PREPARED BY:** Ramaker & Associates, Inc.  
855 Community Drive  
Sauk City, Wisconsin 53583  
Phone: (608) 643-4100  
Fax: (608) 643-7999

**RAMAKER JOB NUMBER:** 36211

**DATE OF ISSUANCE:** September 6, 2017



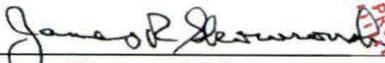
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BreAnne Kahnk  
Environmental Specialist



---

Michael L. Pinske  
Vice President



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James L. Skowronski, P.E.  
President & CEO



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## **SECTION 1 INTRODUCTION**

### **1.1 PROJECT INFORMATION**

Ramaker & Associates, Inc. (RAMAKER) was retained by Westchester Services, LLC (Westchester) to complete a geotechnical investigation for the proposed lease site summarized below.

<b>PROPERTY INFORMATION</b>	
Address:	1641 Lee Burd Road in Benton, Marshall County, Kentucky
Elevation at Tower Base:	Approximately 481.5 feet above mean sea level
Topography:	Topography at the site slopes to the northeast
Proposed Development:	Guyed tower

### **1.2 PURPOSE AND OBJECTIVES**

The purpose of this investigation was to obtain and provide Westchester with engineering parameters, soil characteristics, foundation design recommendations, and geotechnical recommendations with respect to the proposed tower.

### **1.3 SCOPE OF SERVICES**

RAMAKER completed the geotechnical investigation following generally accepted industry standards and in general accordance with *Annex G: Geotechnical Investigations of Telecommunications Industries Association, Structural Standard for Antenna Supporting Structures and Antennas, TIA Standard ANSI/TIA-222-G-2009*, Washington, D.C. The scope of work included the following:

- One boring was advanced to 30 feet below ground surface (BGS) near the tower base. In addition, one boring was advanced to 30 feet BGS at each of the three proposed guy anchor locations. Drilling was completed on August 28, 2017 using hollow stem augers. The boring was advanced using a truck-mounted, rotary drill rig.
- Representative soil samples were obtained using a standard 2-inch diameter split spoon sampler in general accordance with ASTM D 1586, "Penetration Testing and Split-Barrel Sampling of Soils." Sample intervals are recorded on the boring log(s) in Figure 3.
- Soil samples collected from each interval were classified using the Unified Soil Classification System (USCS) in general accordance with ASTM D 2487 and ASTM D 2488. No laboratory testing was conducted for this site.
- RAMAKER analyzed boring logs and assessed the engineering characteristics of the in situ soils. The boring log(s) include a general subsurface profile, USCS classifications, and Standard Penetration Test values for each soil layer.
- RAMAKER reviewed available physical and chemical setting sources for pertinent soil data (e.g. local soil types, geology, corrosive properties, pH, and frost depth).

### 1.4 LIMITATIONS

The scope of services for this report did not include any environmental assessment or investigation for the presence of hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the subject site. Any statements in this report or on the test boring log regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of Westchester.

Data was obtained from sample locations identified in Figure 2; no other areas were investigated. The report summarizes subsurface conditions, only at specific locations and times, and only to depths penetrated. All recommendations contained herein are valid only for the described boring location(s) at the site investigated. This report was prepared on the assumption that soil conditions do not deviate from those investigated. Variations can occur between boring locations, the nature and extent of which may not become evident until after construction commences. These variations may not be represented by this report.

The recommendations contained within this report were developed based on the identified sample locations, general project information provided by the owner, reference information, field observations, and laboratory testing data, as applicable. RAMAKER reserves the right to modify our recommendations should alterations to the proposed development occur. No other warranty, expressed or implied, is made.

Soil samples obtained during field activities will be kept by RAMAKER at our Sauk City, Wisconsin office for a period of 60 days from report issuance. The soil samples will be available for examination during this time, if needed. RAMAKER will discard the soil samples after 60 days unless requested in writing by Westchester to retain the soil samples for a specified period of time.

*Study Limitations & Restrictions* that apply to this geotechnical investigation are further detailed in Section 5.

## **SECTION 2**

### **EXPLORATION PROGRAM RESULTS**

#### **2.1 SUBSURFACE CONDITIONS**

A general subsurface profile describing subsurface conditions is included as Figure 3.

Bedrock was not encountered during drilling operations. According to geologic references, bedrock is mapped as Loess.

#### **2.2 GROUNDWATER**

Groundwater was not encountered during drilling operations. Seasonal fluctuations in groundwater table elevation are expected, however these fluctuations are not expected affect the recommended tower foundation at this site.

#### **2.3 FROST DEPTH**

According to TIA Standard ANSI/TIA-222-G-2005, the frost depth design criteria for Marshall County is 20 inches (approximately 1.67 feet) BGS.

#### **2.4 PH VALUES AND CORROSIVE NATURE**

RAMAKER reviewed the USDA National Cooperative Web Soil Survey. Soil at the tower and northeastern guy anchor is classified as Calloway silt loam. The pH of this soil type ranges from 4.5 to 7.3 and has a weighted average value of 5.2. This soil is rated with a high risk of corrosion to concrete and a high risk of corrosion to steel.

Soil at the western and southeastern guy anchor is classified as Grenada silt loam. The pH of this soil type ranges from 4.5 to 7.0 and has a weighted average value of 5.3. This soil is rated with a high risk of corrosion to concrete and a high risk of corrosion to steel.

#### **2.5 ELECTROLYTIC CORROSION**

Underground pipelines, electrical substations and buried concentric neutral power wires may affect electrolytic corrosion.

RAMAKER reviewed the National Pipeline Mapping System (NPMS) for underground pipelines near the site. The NPMS Public Map Viewer includes gas transmission pipelines and hazardous liquid trunk lines. Gathering and distribution pipelines are not available from this source. No transmission pipelines were shown within 1,000 feet of the proposed site.

RAMAKER reviewed a recent aerial photograph (Google Earth) for the area surrounding the site to identify potential electrical substations and buried concentric neutral power wires. No electrical substations were visible within 1,000 feet of the proposed site. An existing tower compound, which may contain buried concentric neutral power wires, is located approximately 700 feet west-southwest of the proposed tower location.

## SECTION 3 RECOMMENDATIONS

### 3.1 SHALLOW TOWER FOUNDATION SYSTEM

RAMAKER recommends the tower foundation system consist of a spread footing at the tower base and deadman anchors at each of the guy anchor locations.

#### Tower Base Foundation

The tower foundation should be placed a minimum of 6 feet BGS. The material at 6 feet BGS at the proposed tower location is expected to provide an **ultimate net bearing capacity of 6,500 psf**. Other foundation design parameters for a shallow foundation system are provided below.

<b>B1 (Tower Base)</b>					
Depth (ft)		USCS Soil Type	Effective Unit Weight (pcf)	Cohesion (psf)	Friction Angle (degrees)
Top	Bottom				
0.0	6.0	CL	117	1300	—
6.0	8.5	CL	118	1600	—
8.5	11.0	CL	118	1700	—
11.0	12.5	SP-SC	120	—	36
12.5	30.0	SP	120	—	36

#### Northeastern and Southeastern Guy Anchor Foundations

The deadman anchors should be placed a minimum of 6 feet BGS. The material at 6 feet BGS at the proposed guy anchor locations is expected to provide an **ultimate net bearing capacity of 8,000 psf**. Other foundation design parameters for a shallow foundation system are provided below.

<b>B2 (Northeastern Guy Anchor)</b>					
Depth (ft)		USCS Soil Type	Effective Unit Weight (pcf)	Cohesion (psf)	Friction Angle (degrees)
Top	Bottom				
0.0	3.5	CL	114	500	—
3.5	6.0	CL	117	1200	—
6.0	8.5	CL	120	2100	—
8.5	9.5	CL	122	6200	—
9.5	10.5	SM	120	—	36
10.5	30.0	SP	120	—	36

## BENTON (14220570)

B4 (Southeastern Guy Anchor)					
Depth (ft)		USCS Soil Type	Effective Unit Weight (pcf)	Cohesion (psf)	Friction Angle (degrees)
Top	Bottom				
0.0	3.5	CL	118	1700	—
3.5	5.0	CL	118	1800	—
5.0	8.5	CL	118	1700	—
8.5	11.0	CL	122	6200	—
11.0	12.5	SC	120	—	35
12.5	18.5	SP-SM	120	—	35
18.5	30.0	SP	120	—	36

### Western Guy Anchor Foundation

The deadman anchor should be placed a minimum of 6 feet BGS. The material at 6 feet BGS at the proposed guy anchor locations is expected to provide an **ultimate net bearing capacity of 5,000 psf**. Other foundation design parameters for a shallow foundation system are provided below.

B3 (Western Guy Anchor)					
Depth (ft)		USCS Soil Type	Effective Unit Weight (pcf)	Cohesion (psf)	Friction Angle (degrees)
Top	Bottom				
0.0	7.5	CL	118	1600	—
7.5	11.0	CL	117	1100	—
11.0	13.5	CL	122	6200	—
13.5	18.5	SP-SM	120	—	36
18.5	30.0	SP	120	—	36

### **3.2 DEEP TOWER FOUNDATION SYSTEM**

A deep foundation system is not recommended at this site.

### **3.3 OTHER PERTINENT DESIGN DATA AND RECOMMENDATIONS**

Several cobbles and boulders were encountered from approximately 12.5 to 30 feet BGS in boring B1 (Tower Base), 10.5 to 30 feet BGS in boring B2 (Northeastern Guy Anchor), 13.5 to 30 feet BGS in boring B3 (Western Guy Anchor), and 11 to 30 feet BGS in boring B4 (Southeastern Guy Anchor). These cobbles and boulders may cause potential complications during the foundation construction. The contractor should make all necessary provisions to accommodate cobbles and boulders encountered during the tower foundation construction.

The boring locations for the proposed guy anchor locations were based on preliminary construction drawings prepared by SMW Engineering Group, Inc. dated July 25, 2017. If the final guy anchor locations are different from the proposed guy anchor locations, then additional borings should be conducted at the final guy anchor locations.

**SECTION 4**  
**REFERENCES**

1. *Oak Level, Kentucky 7.5 - Minute Series United States Geological Survey Quadrangle.*
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## **SECTION 5**

### **STUDY LIMITATIONS AND RESTRICTIONS**

In preparing this Report, Ramaker & Associates, Inc.'s professional services were provided in a manner consistent with that level of skill, care and judgment ordinarily exercised by similar professionals providing services in this locality under similar conditions, all as measured as of the time Ramaker & Associates, Inc. services were rendered. The findings, opinions, conclusions, analysis and recommendations presented herein constitute the professional opinions of Ramaker & Associates, Inc. These opinions are based upon the prevailing and accepted hydrogeologic, scientific, engineering and environmental consulting professional practices in this locality, all as measured as of the time Ramaker & Associates, Inc.'s services were rendered. No other warranty or guarantee, express or implied, is made as to Ramaker & Associates, Inc.'s findings, opinions, conclusions and recommendations included in this assessment.

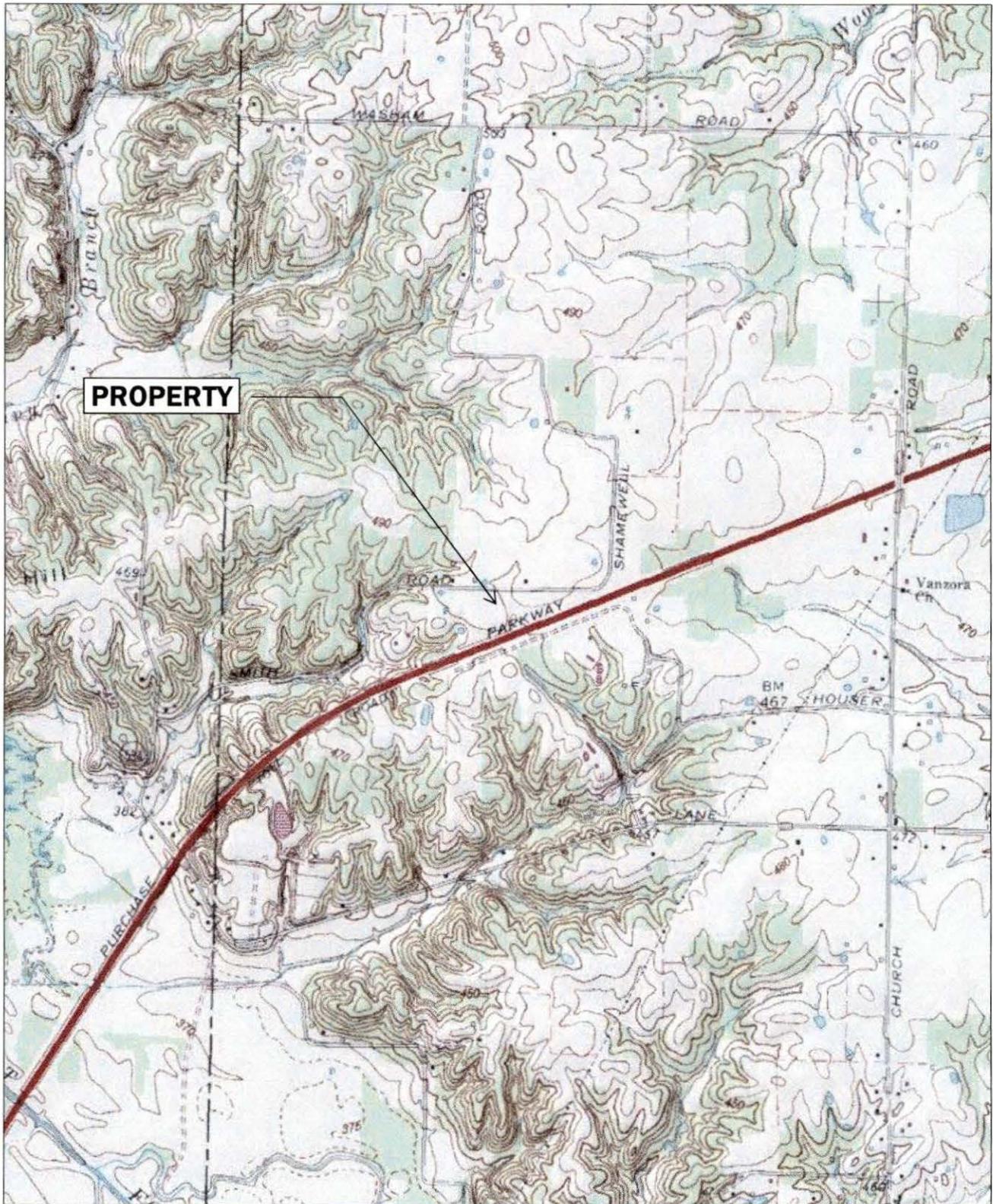
Information provided to Ramaker & Associates, Inc. by individuals familiar and/or associated with the subject property and/or facility or adjacent land parcels and/or facilities has been accepted by Ramaker & Associates, Inc. in good faith and is assumed to be accurate. Similarly, information provided to Ramaker & Associates, Inc. by database search services or governmental or regulatory records, or databases, has been accepted by Ramaker & Associates, Inc. in good faith and is assumed to be accurate. Client has neither requested nor paid Ramaker & Associates, Inc. to independently verify the truthfulness, accuracy or completeness of the information provided to Ramaker & Associates, Inc. by database search services, governmental or regulatory records or databases, or by individuals. Ramaker & Associates, Inc. assumes no responsibility for and provides no certification, warranty or guarantee of the truthfulness, validity, accuracy or completeness of governmental or regulatory records or databases, database search services, or information provided by others to Ramaker & Associates, Inc.

The information reported herein may trigger for the Client certain obligations pursuant to local, state or federal ordinances, laws, rules or regulations to report the discovery of environmental releases or conditions to local, state or federal regulatory or governmental authorities or to take other action. Client has not requested and Ramaker & Associates, Inc. has not provided herein any advice, recommendation or conclusion regarding the reportable nature of any of the findings or observations described herein. The determination of Client's reporting requirements or obligations, if any, under law is a legal conclusion for which Ramaker & Associates, Inc. assumes no responsibility and about which Ramaker & Associates, Inc. provides no opinion, conclusion, finding or certification. Client is advised to seek the advice of legal counsel to determine Client's obligations should environmental releases or conditions be noted herein.

The scope of work reflected in this Report was approved by Client and has inherent limitations regarding the amount of data or evidence collected. Because professional judgments incorporated into this Report are based on limited evidence, there is inherent uncertainty in the conclusions drawn and reported herein. The Client has, after consultation, approved the level of effort for Ramaker & Associates, Inc. to undertake and, therefore, has determined the corresponding degree of uncertainty as acceptable for Client's purposes.

This report was prepared for the exclusive use of Client and not for use or reliance by any third party. Any third party necessarily has different interests, purposes, concerns, and motives than the Client with regard to this report or assessment. Therefore, use of this report by any third party is expressly prohibited without the joint written authorization of the Client and Ramaker & Associates, Inc., which shall necessarily include the precondition that the third-party agree to accept Ramaker & Associates, Inc.'s "Terms and Conditions of Agreement," including the limitation of liability and indemnification protections.

This Report is intended to be presented and reproduced only in its entirety, complete with all supporting data, assumptions, limitations, and, if applicable, recommendations. This report shall not be used by Client or any party in any form other than its entirety, and all abridged or altered versions are prohibited.

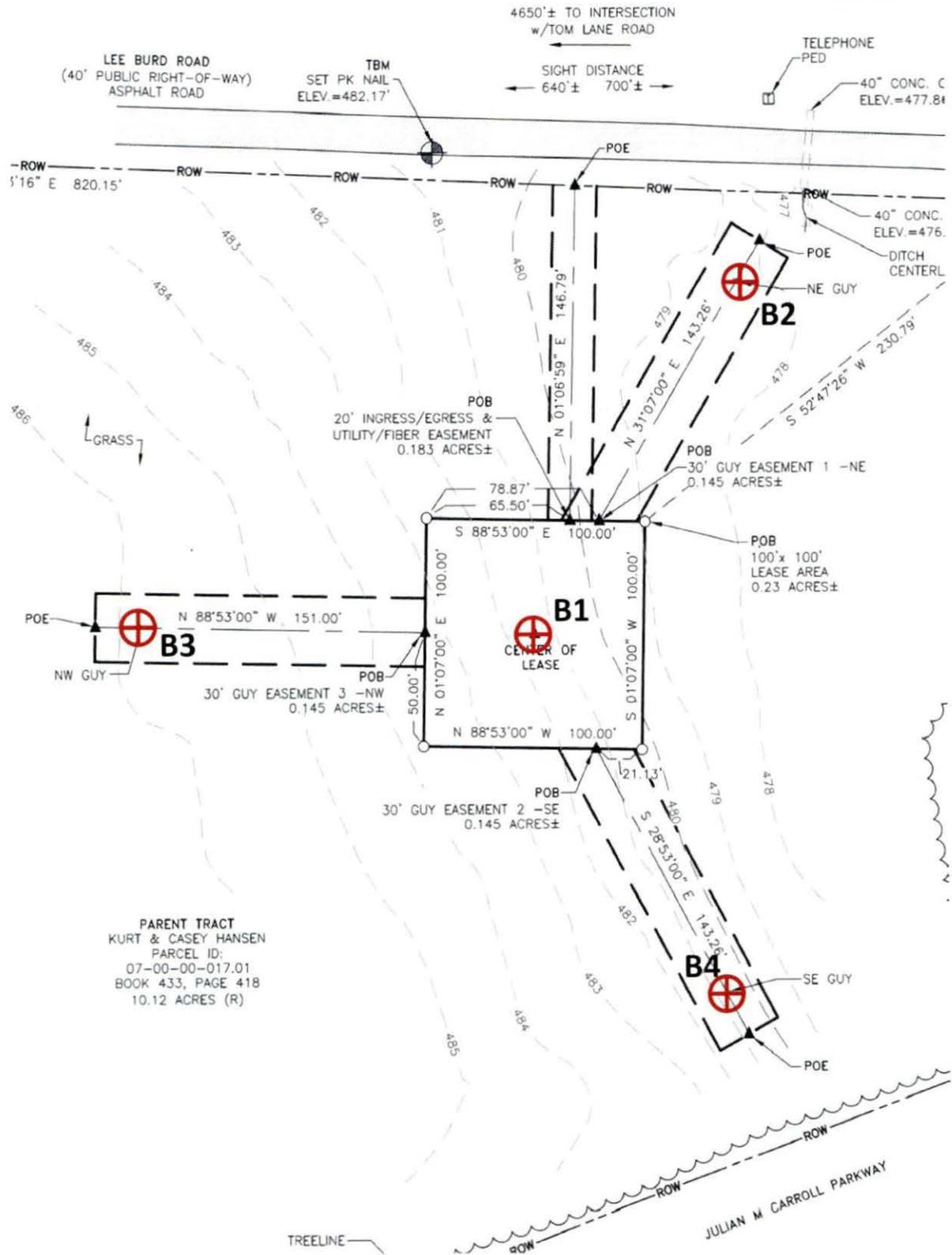


**OAK LEVEL, KENTUCKY 7.5' QUADRANGLE**

1641 LEE BURD ROAD  
BENTON, KENTUCKY 42025  
MARSHALL COUNTY



# BENTON (14220570)



**SITE PLAN**  
 1641 LEE BURD ROAD  
 BENTON, KENTUCKY 42025  
 MARSHALL COUNTY

\*DRAWING N.T.S.  
 \*Boring Location(s) approximate



Project Number: 36211  
 Project Name: Benton  
 Address: 1641 Lee Burd Road  
 City, State: Benton, Kentucky  
 County: Marshall  
 Sample Method: Split Spoon  
 Elevation (ft AMSL): 481.5 (per Survey)

Boring Number: B1 (Tower Base)  
 Drill Start Date: 08/28/17  
 Drill End Date: 08/28/17  
 Boring Depth (ft BGS): 30  
 GW Depth During (ft BGS): Not Encountered  
 GW Depth After (ft BGS): Not Encountered  
 Depth of Collapse (ft BGS): Not Reported

▼ = Water Level

Sample Number	Sample From (ft)	Sample To (ft)	Recovery (in)	Moisture	Blow Counts			N-Value	USCS Classification	Water	Depth (ft) BGS	Description
												Brown silty clay
1	1	2.5	---	M	3	5	6	11	CL			
2	3.5	5	---	M	5	5	6	11				
3	6	7.5	---	M	6	6	7	13				
4	8.5	10	---	M	4	6	8	14				Brown and grey silty clay with occasional lenses of fine to coarse sand
5	11	12.5	---	D	21	50/ 3"	---	50+	SP-SC			Reddish brown fine to coarse sand with some fine to coarse gravel, little silty clay, and trace silt
6	13.5	15	---	D	16	50/ 5"	---	50+	SP			Reddish brown fine to coarse sand and fine to coarse gravel with trace silt and occasional cobbles and boulders
7	18.5	20	---	D	13	50/ 2"	---	89+				

Project Number: 36211  
 Project Name: Benton  
 Address: 1641 Lee Burd Road  
 City, State: Benton, Kentucky  
 County: Marshall  
 Sample Method: Split Spoon  
 Elevation (ft AMSL): 481.5 (per Survey)

Boring Number: B1 (Tower Base)  
 Drill Start Date: 08/28/17  
 Drill End Date: 08/28/17  
 Boring Depth (ft BGS): 30  
 GW Depth During (ft BGS): Not Encountered  
 GW Depth After (ft BGS): Not Encountered  
 Depth of Collapse (ft BGS): Not Reported

▼ = Water Level

Sample Number	Sample From (ft)	Sample To (ft)	Recovery (in)	Moisture	Blow Counts		N-Value	USCS Classification	Water	Depth (ft) BGS	Description
										20	Dark brown fine to coarse sand and fine to coarse gravel with trace silt and occasional cobbles and boulders
										21	
										22	
										23	
										24	
8	23.5	25	---	D	39	50/ 2"	---	50+		25	
								SP		26	Brown fine to coarse sand with some fine to coarse gravel, trace silt, and occasional cobbles and boulders
										27	
										28	
										29	
9	28.5	30	---	D	33	50/ 5"	---	50+		30	
										31	
										32	
										33	
										34	
										35	
										36	
										37	
										38	
										39	
										40	

Project Number: 36211  
 Project Name: Benton  
 Address: 1641 Lee Burd Road  
 City, State: Benton, Kentucky  
 County: Marshall  
 Sample Method: Split Spoon  
 Elevation (ft AMSL): 478.5 (per Survey)

Boring Number: B2 (Northeastern Guy Anchor)  
 Drill Start Date: 08/28/17  
 Drill End Date: 08/28/17  
 Boring Depth (ft BGS): 30  
 GW Depth During (ft BGS): Not Encountered  
 GW Depth After (ft BGS): Not Encountered  
 Depth of Collapse (ft BGS): Not Reported

▼ = Water Level

Sample Number	Sample From (ft)	Sample To (ft)	Recovery (in)	Moisture	Blow Counts			N-Value	USCS Classification	Water	Depth (ft) BGS	Description
1	1	2.5	---	M	3	2	2	4	CL		Brown silty clay with trace fine to coarse sand and trace plant debris	
2	3.5	5	---	M	2	4	6	10				Brown silty clay with trace fine to coarse sand
3	6	7.5	---	M	3	3	14	17	SM		Brown and grey silty clay with some fine to coarse sand and little fine to coarse gravel	
4	8.5	10	---	D	15	36	50/2"	86+			Brown fine to coarse sand and fine to coarse gravel with some clayey silt	
5	11	12.5	---	D	50/5"	---	---	50+	SP		Reddish brown fine to coarse sand and fine to coarse gravel with trace silt and occasional cobbles and boulders	
6	13.5	15	---	D	50/5"	---	---	50+				
7	18.5	20	---	D	50/4"	---	---	50+				



Project Number: 36211  
 Project Name: Benton  
 Address: 1641 Lee Burd Road  
 City, State: Benton, Kentucky  
 County: Marshall  
 Sample Method: Split Spoon  
 Elevation (ft AMSL): 478.5 (per Survey)

Boring Number: B2 (Northeastern Guy Anchor)  
 Drill Start Date: 08/28/17  
 Drill End Date: 08/28/17  
 Boring Depth (ft BGS): 30  
 GW Depth During (ft BGS): Not Encountered  
 GW Depth After (ft BGS): Not Encountered  
 Depth of Collapse (ft BGS): Not Reported

▼ = Water Level

Sample Number	Sample From (ft)	Sample To (ft)	Recovery (in)	Moisture	Blow Counts			N-Value	USCS Classification	Water	Depth (ft) BGS	Description
										20	Reddish brown fine to coarse sand and fine to coarse gravel with trace silt and occasional cobbles and boulders (continued)	
										21		
										22	Reddish brown fine to coarse sand and fine to coarse gravel with trace silt and occasional cobbles and boulders (continued)	
										23		
8	23.5	25	---	D	15	30	50/ 1"	80+	SP	24	Reddish brown fine to coarse sand and fine to coarse gravel with trace silt and occasional cobbles and boulders (continued)	
										25		
										26	Reddish brown fine to coarse sand and fine to coarse gravel with trace silt and occasional cobbles and boulders (continued)	
										27		
										28	Reddish brown fine to coarse sand and fine to coarse gravel with trace silt and occasional cobbles and boulders (continued)	
										29		
9	28.5	30	---	D	21	33	50/ 2"	83+		30	Reddish brown fine to coarse sand with some fine to coarse gravel, trace silt, and occasional cobbles and boulders	
										31		
										32		
										33		
										34		
										35		
										36		
										37		
										38		
										39		
										40		

Project Number: 36211  
 Project Name: Benton  
 Address: 1641 Lee Burd Road  
 City, State: Benton, Kentucky  
 County: Marshall  
 Sample Method: Split Spoon  
 Elevation (ft AMSL): 486 (per Survey)

Boring Number: 83 (Western Guy Anchor)  
 Drill Start Date: 08/28/17  
 Drill End Date: 08/28/17  
 Boring Depth (ft BGS): 30  
 GW Depth During (ft BGS): Not Encountered  
 GW Depth After (ft BGS): Not Encountered  
 Depth of Collapse (ft BGS): Not Reported

▼ = Water Level

Sample Number	Sample From (ft)	Sample To (ft)	Recovery (in)	Moisture	Blow Counts			N-Value	USCS Classification	Water	Depth (ft) BGS	Description	
1	1	2.5	---	M	6	6	7	13	CL			Brown silty clay	
2	3.5	5	---	M	4	6	7	13					
3	6	7.5	---	M	3	6	7	13					
4	8.5	10	---	M	2	3	6	9					
5	11	12.5	---	M	50/ 3"	---	---	50+				Brown silty clay with some fine to coarse sand and little fine to coarse gravel	
6	13.5	15	---	D	45	50/ 1"	---	50+	SP- SM			Reddish brown fine to coarse sand and fine to coarse gravel with little silt and occasional cobbles and boulders	
7	18.5	20	---	D	50/ 5"	---	---	50+	SP			Reddish brown fine to coarse sand and fine to coarse gravel with trace silt and occasional cobbles and boulders	

**Project Number:** 36211  
**Project Name:** Benton  
**Address:** 1641 Lee Burd Road  
**City, State:** Benton, Kentucky  
**County:** Marshall  
**Sample Method:** Split Spoon  
**Elevation (ft AMSL):** 486 (per Survey)

**Boring Number:** B3 (Western Guy Anchor)  
**Drill Start Date:** 08/28/17  
**Drill End Date:** 08/28/17  
**Boring Depth (ft BGS):** 30  
**GW Depth During (ft BGS):** Not Encountered  
**GW Depth After (ft BGS):** Not Encountered  
**Depth of Collapse (ft BGS):** Not Reported

▼ = Water Level

Sample Number	Sample From (ft)	Sample To (ft)	Recovery (in)	Moisture	Blow Counts		N-Value	USCS Classification	Water	Depth (ft) BGS	Description
								SP		20	Reddish brown fine to coarse sand and fine to coarse gravel with trace silt and occasional cobbles and boulders (continued)
										21	
										22	
										23	
8	23.5	25	---	D	50/ 4"	---	---	50+		24	
										25	
										26	
										27	
										28	
9	28.5	30	---	D	50/ 3"	---	---	50+		29	Dark brown fine to coarse sand with some fine to coarse gravel, trace silt, and occasional cobbles and boulders
										30	
										31	
										32	
										33	
										34	
										35	
										36	
										37	
										38	
										39	
										40	

Project Number: 36211  
 Project Name: Benton  
 Address: 1641 Lee Burd Road  
 City, State: Benton, Kentucky  
 County: Marshall  
 Sample Method: Split Spoon  
 Elevation (ft AMSL): 481 (per Survey)

Boring Number: B4 (Southeastern Guy Anchor)  
 Drill Start Date: 08/28/17  
 Drill End Date: 08/28/17  
 Boring Depth (ft BGS): 30  
 GW Depth During (ft BGS): Not Encountered  
 GW Depth After (ft BGS): Not Encountered  
 Depth of Collapse (ft BGS): Not Reported

▼ = Water Level

Sample Number	Sample From (ft)	Sample To (ft)	Recovery (in)	Moisture	Blow Counts			N-Value	USCS Classification	Water	Depth (ft) BGS	Description
												Brown silty clay
1	1	2.5	---	M	7	7	7	14	CL			
2	3.5	5	---	M	5	7	8	15				
3	6	7.5	---	M	6	7	7	14				
4	8.5	10	---	M	16	50/4"	---	50+				
									SC			Brown silty clay with trace fine to coarse sand
5	11	12.5	---	D	25	50/4"	---	50+				
									SP-SM			Brown silty clay and fine to coarse sand with some fine to coarse gravel
6	13.5	15	---	D	16	50/1"	---	50+				
									SP			Reddish brown fine to coarse sand with some fine to coarse gravel, little silt, and occasional cobbles and boulders
7	18.5	20	---	D	50/4"	---	---	50+				

Project Number: 36211  
 Project Name: Benton  
 Address: 1641 Lee Burd Road  
 City, State: Benton, Kentucky  
 County: Marshall  
 Sample Method: Split Spoon  
 Elevation (ft AMSL): 481 (per Survey)

Boring Number: B4 (Southeastern Guy Anchor)  
 Drill Start Date: 08/28/17  
 Drill End Date: 08/28/17  
 Boring Depth (ft BGS): 30  
 GW Depth During (ft BGS): Not Encountered  
 GW Depth After (ft BGS): Not Encountered  
 Depth of Collapse (ft BGS): Not Reported

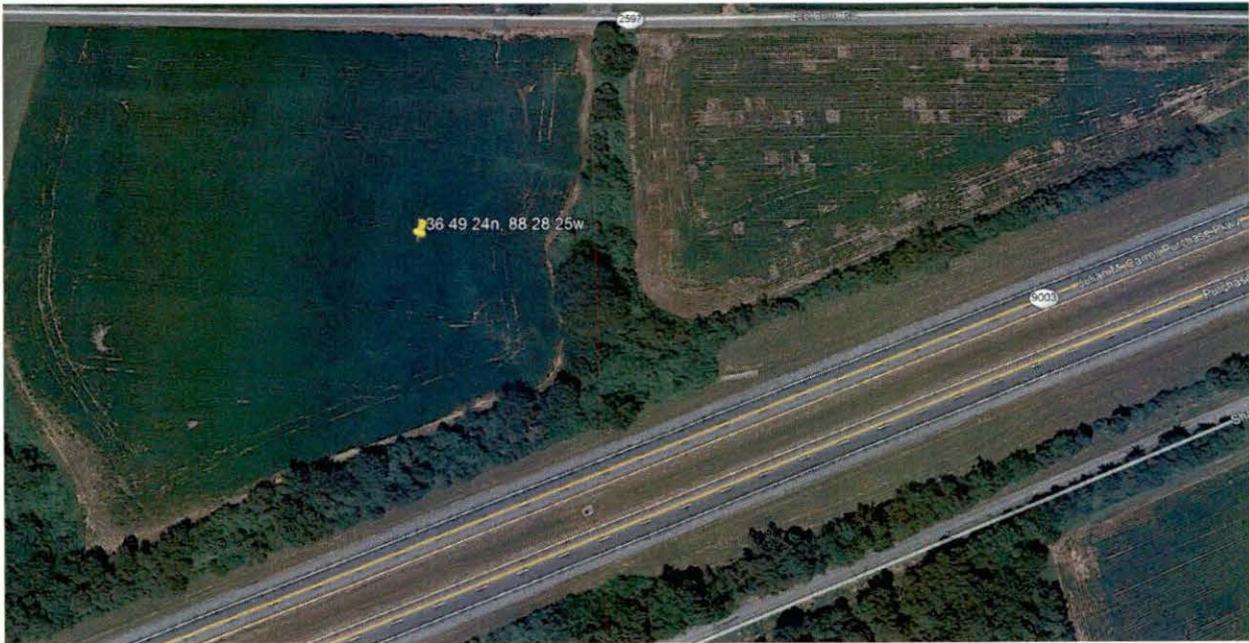
▼ = Water Level

Sample Number	Sample From (ft)	Sample To (ft)	Recovery (in)	Moisture	Blow Counts			N-Value	USCS Classification	Water	Depth (ft) BGS	Description
										20	Reddish brown fine to coarse sand with some fine to coarse gravel, trace silt, and occasional cobbles and boulders (continued)	
										21		
										22	Reddish brown fine to coarse sand with trace fine to coarse gravel, trace silt, and occasional cobbles and boulders	
										23		
8	23.5	25	---	D	28	50/ 2"	---	50+	SP	24		
										25		
										26		
										27		
										28		
9	28.5	30	---	D	12	22	36	58		29		
										30		
										31		
										32		
										33		
										34		
										35		
										36		
										37		
										38		
										39		
										40		

**EXHIBIT H**  
**DIRECTIONS TO WCF SITE**

**Site Name: Hansen**  
**Driving Directions to Proposed Tower Site**

1. Beginning at the offices of the Marshall County Judge Executive located at 1101 Main Street, Benton, KY 42025 start out going south on Main St/US-641 S/KY-408/KY-58 toward E 12th St.
2. Take the 1st right onto W 12th St/KY-58.
3. Turn slight left onto Mayfield Hwy/KY-58.
4. Turn right onto Houser Rd.
5. Turn right onto Wadesboro Rd N/KY-1949.
6. Turn left onto Woodall Cut Off Rd. which becomes Vann Pitt Rd.
7. Turn left onto Lee Burd Rd.
8. Arrive at 1641 Lee Burd Rd, Benton, KY 42025-5287.
9. The site coordinates are 36°49'24.34" North latitude, 88°28'25.57" West longitude.



Prepared by:  
Robert W. Grant  
Pike Legal Group PLLC  
1578 Highway 44 East, Suite 6  
P.O. Box 369  
Shepherdsville, KY 40165-3069  
Telephone: 502-955-4400 or 800-516-4293

**EXHIBIT I**  
**COPY OF REAL ESTATE AGREEMENT**

Market: ALMSLA  
Cell Site Number: \_\_\_\_\_  
Cell Site Name: \_\_\_\_\_  
Search Ring Name: \_\_\_\_\_  
Fixed Asset Number: 14220570

## OPTION AND LEASE AGREEMENT

THIS OPTION AND LEASE AGREEMENT ("**Agreement**"), dated as of the latter of the signature dates below (the "**Effective Date**"), is entered into by Kurt Hansen and Casey Hansen, a husband and wife, having a mailing address of 1641 Lee Burd Road, Benton, KY 42025 ("**Landlord**") and Tillman Infrastructure LLC, a Delaware limited liability company, having an address at 152 West 57<sup>th</sup> Street, New York, New York 10019 ("**Tenant**").

### BACKGROUND

Landlord owns or controls that certain plot, parcel or tract of land, as described on **Exhibit 1**, together with all rights and privileges arising in connection therewith, located at 1641 Lee Burd Road, in the County of Marshall, State of Kentucky (collectively, the "**Property**"). Landlord desires to grant to Tenant the right to use a portion of the Property in accordance with this Agreement.

The parties agree as follows:

#### 1. OPTION TO LEASE.

(a) Landlord grants to Tenant an exclusive option (the "**Option**") to lease a certain portion of the Property consisting of a 100' x 100' parcel of property including the air space above such ground space together with easements for guy wires and anchors, as described on attached **Exhibit 1**, (the "**Premises**"), for the placement of a Communication Facility in accordance with the terms of this Agreement.

(b) During the Option Term, and during the Term, Tenant and its agents, engineers, surveyors and other representatives will have the right to enter upon the Property to inspect, examine, conduct soil borings, drainage testing, material sampling, radio frequency testing and other geological or engineering tests or studies of the Property (collectively, the "**Tests**"), to apply for and obtain licenses, permits, approvals, or other relief required of or deemed necessary or appropriate at Tenant's sole discretion for its use of the Premises and include, without limitation, applications for zoning variances, zoning ordinances, amendments, special use permits, registrations with the Federal Communications Commissions and construction permits (collectively, the "**Government Approvals**"), initiate the ordering and/or scheduling of necessary utilities, and otherwise to do those things on or off the Property that, in the opinion of Tenant, are necessary in Tenant's sole discretion to determine the physical condition of the Property, the environmental history of the Property, Landlord's title to the Property and the feasibility or suitability of the Property for Tenant's Permitted Use, all at Tenant's expense. Tenant will not be liable to Landlord or any third party on account of any pre-existing defect or condition on or with respect to the Property, whether or not such defect or condition is disclosed by Tenant's inspection. Tenant will restore the Property to its condition as it existed at the commencement of the Option Term, reasonable wear and tear and loss by casualty or other causes beyond Tenant's control excepted.

(c) In consideration of Landlord granting Tenant the Option, Tenant agrees to pay Landlord the sum of [REDACTED] within thirty (30) business days after the Effective Date. The Option may be exercised during an initial term of one (1) year commencing on the Effective Date (the "**Initial Option Term**") which term may be renewed by Tenant for an additional one (1) year (the "**Renewal Option Term**") upon written notification to Landlord and the payment of an additional [REDACTED] no later than five (5) days prior to the expiration date of the Initial Option Term. The Initial Option Term and any Renewal Option Term are collectively referred to as the "**Option Term.**"

(d) The Option may be sold, assigned or transferred at any time by Tenant without the written consent of Landlord. Upon notification to Landlord of such sale, assignment or transfer, Tenant shall

Initials:  
Landlord: KA  
Tenant: \_\_\_\_\_

immediately be released from any and all liability under this Agreement, including the payment of any rental or other sums due, without any further action.

(e) During the Option Term, Tenant may exercise the Option by notifying Landlord in writing. If Tenant exercises the Option, then Landlord leases the Premises to Tenant subject to the terms and conditions of this Agreement. If Tenant does not exercise the Option during the Initial Option Term or any extension thereof, then this Agreement will terminate and the parties will have no further liability to each other.

(f) If during the Option Term, or during the Term if the Option is exercised, Landlord decides to subdivide, sell, or change the status of the zoning of the Premises, the Property or any of Landlord's contiguous, adjoining or surrounding property (the "**Surrounding Property**"), or in the event of a threatened foreclosure on any of the foregoing, Landlord shall immediately notify Tenant in writing. Landlord agrees that during the Option Term, or during the Term if the Option is exercised, Landlord shall not initiate or consent to any change in the zoning of the Premises, the Property or the Surrounding Property or impose or consent to any other use or restriction that would prevent or limit Tenant from using the Premises for the Permitted Use. Any and all terms and conditions of this Agreement that by their sense and context are intended to be applicable during the Option Term shall be so applicable.

**2. PERMITTED USE.** Tenant may use the Premises for the transmission and reception of communications signals and related activities, and the installation, construction, maintenance, operation, repair, replacement and upgrade of communications fixtures and related equipment, cables, accessories and improvements, which may include a suitable tower and support structure ("**Structure**"), associated antennas, equipment shelters or cabinets and fencing and any other items necessary to the successful and secure use of the Premises (collectively the "**Communication Facility**"), as well as the right to test, survey and review title on the Property; Tenant further has the right but not the obligation to add, modify and/or replace equipment in order to be in compliance with any current or future federal, state or local mandated application, including, but not limited to, emergency 911 communication services, at no additional cost to Tenant or Landlord (collectively, the "**Permitted Use**"). Landlord and Tenant agree that any portion of the Communication Facility that may be conceptually described on **Exhibit 1** will not be deemed to limit Tenant's Permitted Use. If **Exhibit 1** includes drawings of the initial installation of the Communication Facility, Landlord's execution of this Agreement will signify Landlord's approval of **Exhibit 1**. For a period of one hundred twenty (120) days following the start of construction, Landlord grants Tenant, its subtenants, licensees and sublicensees, the right to use such portions of the Surrounding Property as may reasonably be required during construction and installation of the Communication Facility. Tenant has the right to install and operate transmission cables from the equipment shelters or cabinets to the antennas, electric lines from the main feed to the equipment shelters or cabinets and communication lines from the Property's main entry point to the equipment shelters or cabinets, install a generator(s) and to make other improvements, additions, alterations, upgrades or additions appropriate for Tenant's Permitted Use, including the right to construct a fence around the Premises or equipment, install warning signs to make individuals aware of risks, install protective barriers, install any other control measures reasonably required by Tenant's safety procedures or applicable law, and undertake any other appropriate means to secure the Premises or equipment at Tenant's expense. Tenant has the right to modify, supplement, replace, upgrade, expand the Communication Facility (including, for example, increasing the number of antennas or adding microwave dishes to the Structure or relocate the Communication Facility or add additional cabinets within the Premises at any time during the Term. Tenant will be allowed to make such alterations to the Property in order to ensure that the Communication Facility complies with all applicable federal, state or local laws, rules or regulations. In the event Tenant desires to modify or upgrade the Communication Facility, in a manner that requires an additional portion of the Property (the "**Additional Premises**") for such modification or upgrade, Landlord agrees to lease to Tenant the Additional Premises, upon the same terms and conditions set forth herein, except that the Rent shall increase, in conjunction with the lease of the Additional Premises by the amount equivalent to the then-current per square foot rental rate charged by Landlord to Tenant times the square footage of the Additional Premises. Landlord agrees to take such actions and enter into and deliver to Tenant such documents as Tenant reasonably requests in order to effect and memorialize the lease of the Additional Premises to Tenant.

Initials:             
Landlord:             
Tenant:

3. **TERM.**

(a) The initial lease term will be ten (10) years (the "**Initial Term**"), commencing on the effective date of written notification by Tenant to Landlord of Tenant's exercise of the Option (the "**Term Commencement Date**"). The Initial Term will terminate on the tenth (10th) anniversary of the Term Commencement Date.

(b) This Agreement will automatically renew for sixteen (16) additional five (5) year term(s) (each additional five (5) year term shall be defined as an "**Extension Term**"), upon the same terms and conditions set forth herein unless Tenant notifies Landlord in writing of Tenant's intention not to renew this Agreement at least sixty (60) days prior to the expiration of the Initial Term or the then-existing Extension Term.

(c) Unless (i) Landlord or Tenant notifies the other in writing of its intention to terminate this Agreement at least six (6) months prior to the expiration of the final Extension Term, or (ii) the Agreement is terminated as otherwise permitted by this Agreement prior to the end of the final Extension Term, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of one (1) year, and for annual terms thereafter ("**Annual Term**") until terminated by either party hereto by giving to the other party hereto written notice of its intention to so terminate at least six (6) months prior to the end of any such Annual Term. Monthly rent during such Annual Terms shall be equal to the Rent paid for the last month of the final Extension Term. If Tenant remains in possession of the Premises after the termination of this Agreement, then Tenant will be deemed to be occupying the Premises on a month-to-month basis (the "**Holdover Term**"), subject to the terms and conditions of this Agreement.

(d) The Initial Term, any Extension Terms, any Annual Terms and any Holdover Term are collectively referred to as the "**Term**."

4. **RENT.**

(a) Commencing on the first day of the calendar month following the date that Tenant commences construction (the "**Rent Commencement Date**"), Tenant will pay Landlord on or before the tenth (10<sup>th</sup>) day of each calendar month in advance, [REDACTED] at the address set forth above. In any partial month occurring after the Rent Commencement Date, the Rent will be prorated. The initial Rent payment will be forwarded by Tenant to Landlord within forty-five (45) days after the Rent Commencement Date.

(b) Upon the commencement of each Extension Term, the monthly Rent will increase by [REDACTED] Rent paid during the previous term.

(c) All charges payable under this Agreement such as utilities and taxes shall be billed by Landlord within one (1) year from the end of the calendar year in which the charges were incurred; any charges beyond such period shall not be billed by Landlord, and shall not be payable by Tenant. The foregoing shall not apply to monthly Rent which is due and payable without a requirement that it be billed by Landlord. The provisions of this subsection shall survive the termination or expiration of this Agreement.

5. **APPROVALS.**

(a) Landlord agrees that Tenant's ability to use the Premises is contingent upon the suitability of the Premises and Property for the Permitted Use and Tenant's ability to obtain and maintain all Government Approvals. Landlord authorizes Tenant to prepare, execute and file all required applications to obtain Government Approvals for the Permitted Use and agrees to reasonably assist Tenant with such applications and with obtaining and maintaining the Government Approvals.

(b) Tenant has the right to obtain a title report or commitment for a leasehold title policy from a title insurance company of its choice and to have the Property surveyed by a surveyor of its choice.

(c) Tenant may also perform and obtain, at Tenant's sole cost and expense, soil borings, percolation tests, engineering procedures, environmental investigation or other tests or reports on, over, and under the Property, necessary to determine if Tenant's use of the Premises will be compatible with Tenant's engineering specifications, system, design, operations or Government Approvals.

6. **TERMINATION.** This Agreement may be terminated, without penalty or further liability, as follows:

Initials:  
Landlord: MA  
Tenant: \_\_\_\_\_

(a) by either party on thirty (30) days prior written notice, if the other party remains in default under Section 15 of this Agreement after the applicable cure periods;

(b) by Tenant upon written notice to Landlord, if Tenant is unable to obtain, or maintain, any required approval(s) or the issuance of a license or permit by any agency, board, court or other governmental authority necessary for the construction or operation of the Communication Facility as now or hereafter intended by Tenant; or if Tenant determines, in its sole discretion that the cost of or delay in obtaining or retaining the same is commercially unreasonable;

(c) by Tenant, upon written notice to Landlord, if Tenant determines, in its sole discretion, due to the title report results or survey results, that the condition of the Premises is unsatisfactory for its intended uses;

(d) by Tenant upon written notice to Landlord for any reason or no reason, at any time prior to commencement of construction by Tenant; or

(e) by Tenant upon sixty (60) days' prior written notice to Landlord for any reason or no reason, so long as Tenant pays Landlord a termination fee equal to three (3) months' Rent, at the then-current rate, provided, however, that no such termination fee will be payable on account of the termination of this Agreement by Tenant under any termination provision contained in any other Section of this Agreement, including the following: Section 5 Approvals, Section 6(a) Termination, Section 6(b) Termination, Section 6(c) Termination, Section 6(d) Termination, Section 11(d) Environmental, Section 18 Condemnation or Section 19 Casualty.

7. **INSURANCE.** During the Option Term and throughout the Term, Tenant will purchase and maintain in full force and effect such general liability policy as Tenant may deem necessary. Said policy of general liability insurance will at a minimum provide a combined single limit of [REDACTED]. Notwithstanding the foregoing, Tenant shall have the right to self-insure such general liability coverage or by adding this site as an endorsement on a pre-existing master policy which contains the above limit.

8. **INTERFERENCE.**

(a) Prior to or concurrent with the execution of this Agreement, Landlord has provided or will provide Tenant with a list of radio frequency user(s) and frequencies used on the Property as of the Effective Date. Tenant warrants that its use of the Premises will not interfere with those existing radio frequency uses on the Property, as long as the existing radio frequency user(s) operate and continue to operate within their respective frequencies and in accordance with all applicable laws and regulations.

(b) Landlord will not grant, after the Effective Date, a lease, license or any other right to any third party, if the exercise of such grant may in any way adversely affect or interfere with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will notify Tenant in writing prior to granting any third party the right to install and operate communications equipment on the Property.

(c) Landlord will not, nor will Landlord permit its employees, tenants, licensees, invitees, agents or independent contractors to interfere in any way with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will cause such interference to cease within twenty-four (24) hours after receipt of notice of interference from Tenant. In the event any such interference does not cease within the aforementioned cure period, Landlord shall cease all operations which are suspected of causing interference (except for intermittent testing to determine the cause of such interference) until the interference has been corrected.

(d) For the purposes of this Agreement, "interference" may include, but is not limited to, any use on the Property or Surrounding Property that causes electronic or physical obstruction with, or degradation of, the communications signals from the Communication Facility.

Initials:  
Landlord:       
Tenant:     

*[Handwritten signature]*

9. **INDEMNIFICATION.**

(a) Tenant agrees to indemnify, defend and hold Landlord harmless from and against any and all injury, loss, damage or liability, costs or expenses in connection with a third party claim (including reasonable attorneys' fees and court costs) arising directly from the installation, use, maintenance, repair or removal of the Communication Facility or Tenant's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Landlord, its employees, invitees, agents or independent contractors.

(b) Landlord agrees to indemnify, defend and hold Tenant harmless from and against any and all injury, loss, damage or liability, costs or expenses in connection with a third party claim (including reasonable attorneys' fees and court costs) arising directly from the actions or failure to act of Landlord, its employees, invitees, agents or independent contractors, or Landlord's breach of any provision of this Agreement, except to the extent attributable to the negligent or intentional act or omission of Tenant, its employees, agents or independent contractors.

(c) The indemnified party: (i) shall promptly provide the indemnifying party with written notice of any claim, demand, lawsuit, or the like for which it seeks indemnification pursuant to this Section 9 and provide the indemnifying party with copies of any demands, notices, summonses, or legal papers received in connection with such claim, demand, lawsuit, or the like; (ii) shall not settle any such claim, demand, lawsuit, or the like without the prior written consent of the indemnifying party; and (iii) shall fully cooperate with the indemnifying party in the defense of the claim, demand, lawsuit, or the like. A delay in notice shall not relieve the indemnifying party of its indemnity obligation, except (1) to the extent the indemnifying party can show it was prejudiced by the delay; and (2) the indemnifying party shall not be liable for any settlement or litigation expenses incurred before the time when notice is given.

10. **WARRANTIES.**

(a) Each of Tenant and Landlord (to the extent not a natural person) each acknowledge and represent that it is duly organized, validly existing and in good standing and has the right, power, and authority or capacity, as applicable, to enter into this Agreement and bind itself hereto through the party or individual set forth as signatory for the party below.

(b) Landlord represents, warrants and agrees that: (i) Landlord solely owns the Property as a legal lot in fee simple, or controls the Property by lease or license; (ii) the Property is not and will not be encumbered by any liens, restrictions, mortgages, covenants, conditions, easements, leases, or any other agreements of record or not of record, which would adversely affect Tenant's Permitted Use and enjoyment of the Premises under this Agreement; (iii) Landlord grants to Tenant sole, actual, quiet and peaceful use, enjoyment and possession of the Premises in accordance with the terms of this Agreement without hindrance or objection by any persons lawfully claiming under Landlord; (iv) Landlord's execution and performance of this Agreement will not violate any laws, ordinances, covenants or the provisions of any mortgage, lease or other agreement binding on Landlord; and (v) if the Property is or becomes encumbered by a deed to secure a debt, mortgage or other security interest, then Landlord will provide promptly to Tenant a mutually agreeable subordination, non-disturbance and attornment agreement executed by Landlord and the holder of such security interest in the form attached hereto as Exhibit 2.

11. **ENVIRONMENTAL.**

(a) Landlord represents and warrants, except as may be identified in **Exhibit 3** attached to this Agreement, (i) the Property, as of the Effective Date, is free of hazardous substances, including asbestos-containing materials and lead paint, and (ii) the Property has never been subject to any contamination or hazardous conditions resulting in any environmental investigation, inquiry or remediation. Landlord and Tenant agree that each will be responsible for compliance with any and all applicable governmental laws, rules, statutes, regulations, codes, ordinances, or principles of common law regulating or imposing standards of liability or standards of conduct with regard to protection of the environment or worker health and safety, as may now or at any time hereafter be in effect, to the extent such apply to that party's activity conducted in or on the Property.

(b) Landlord and Tenant agree to hold harmless and indemnify the other from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of the indemnifying party for, payment of

Initials:  
Landlord:                       
Tenant:

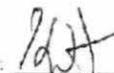
penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding ("Claims"), to the extent arising from that party's breach of its obligations or representations under Section 11(a). Landlord agrees to hold harmless and indemnify Tenant from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Landlord for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from subsurface or other contamination of the Property with hazardous substances prior to the Effective Date or from such contamination caused by the acts or omissions of Landlord during the Term. Tenant agrees to hold harmless and indemnify Landlord from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Tenant for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from hazardous substances brought onto the Property by Tenant.

(c) The indemnification provisions contained in this Section 11 specifically include reasonable costs, expenses and fees incurred in connection with any investigation of Property conditions or any clean-up, remediation, removal or restoration work required by any governmental authority. The provisions of this Section 11 will survive the expiration or termination of this Agreement.

(d) In the event Tenant becomes aware of any hazardous materials on the Property, or any environmental, health or safety condition or matter relating to the Property, that, in Tenant's sole determination, renders the condition of the Premises or Property unsuitable for Tenant's use, or if Tenant believes that the leasing or continued leasing of the Premises would expose Tenant to undue risks of liability to a government agency or other third party, then Tenant will have the right, in addition to any other rights it may have at law or in equity, to terminate this Agreement upon written notice to Landlord.

**12. ACCESS.** At all times throughout the Term of this Agreement, and at no additional charge to Tenant, Tenant and its employees, agents, and subcontractors, will have twenty-four (24) hour per day, seven (7) day per week pedestrian and vehicular access ("Access") to and over the Property, from an open and improved public road to the Premises, for the installation, maintenance and operation of the Communication Facility and any utilities serving the Premises. As may be described more fully in **Exhibit 1**, Landlord grants to Tenant, its subtenants, lessees assigns and licensees an easement for such Access and Landlord agrees to provide to Tenant such codes, keys and other instruments necessary for such Access at no additional cost to Tenant (the "Access Easement"). Upon Tenant's request, Landlord will execute a separate recordable easement evidencing this right. Landlord shall execute a letter granting Tenant Access to the Property substantially in the form attached as Exhibit 4, and upon Tenant's request, Landlord shall execute additional letters during the Term. Landlord acknowledges that in the event Tenant cannot obtain Access to the Premises, Tenant shall incur significant damage. If Landlord fails to provide the Access granted by this Section 12, such failure shall be a default under this Agreement. In connection with such default, in addition to any other rights or remedies available to Tenant under this Agreement or at law or equity, Landlord shall pay Tenant, as liquidated damages and not as a penalty, [REDACTED] in consideration of Tenant's damages until Landlord cures such default. Landlord and Tenant agree that Tenant's damages in the event of a denial of Access are difficult, if not impossible, to ascertain, and the liquidated damages set forth above are a reasonable approximation of such damages.

**13. REMOVAL/RESTORATION.** All portions of the Communication Facility brought onto the Property by Tenant will be and remain Tenant's personal property and, at Tenant's option, may be removed by Tenant at any time during or after the Term. Landlord covenants and agrees that no part of the Communication Facility constructed, erected or placed on the Premises by Tenant will become, or be considered as being affixed to or a part of, the Property, it being the specific intention of Landlord that all improvements of every kind and nature constructed, erected or placed by Tenant on the Premises will be and remain the property of Tenant and may be removed by Tenant at any time during or after the Term. Tenant will repair any damage to the Property resulting from Tenant's removal activities. Any portions of the Communication Facility that Tenant does not remove within one hundred twenty (120) days after the later of the end of the Term and cessation of Tenant's operations at the Premises shall be deemed abandoned and owned by Landlord. Notwithstanding the foregoing, Tenant will not be responsible for the replacement of any trees, shrubs or other vegetation.

Initials:   
Landlord: \_\_\_\_\_  
Tenant: \_\_\_\_\_

**14. MAINTENANCE/UTILITIES.**

(a) Tenant will keep and maintain the Premises in good condition, reasonable wear and tear and damage from the elements excepted. Landlord will maintain and repair the Property and access thereto and all areas of the Premises where Tenant does not have exclusive control, in good and tenantable condition, subject to reasonable wear and tear and damage from the elements. Landlord will be responsible for maintenance of landscaping on the Property, including any landscaping installed by Tenant as a condition of this Agreement or any required permit.

(b) Tenant will be responsible for paying on a monthly or quarterly basis all utilities charges for electricity, telephone service or any other utility used or consumed by Tenant on the Premises. In the event Tenant cannot secure its own metered electrical supply, Tenant will have the right, at its own cost and expense, to sub-meter from Landlord. When sub-metering is required under this Agreement, Landlord will read the meter and provide Tenant with an invoice and usage data on a monthly basis. Tenant shall reimburse Landlord for such utility usage at the same rate charged to Landlord by the utility service provider. Landlord further agrees to provide the usage data and invoice on forms provided by Tenant and to send such forms to such address and/or agent designated by Tenant. Tenant will remit payment within sixty (60) days of receipt of the usage data and required forms. Landlord shall maintain accurate and detailed records of all utility expenses, invoices and payments applicable to Tenant's reimbursement obligations hereunder. Within fifteen (15) days after a request from Tenant, Landlord shall provide copies of such utility billing records to the Tenant in the form of copies of invoices, contracts and cancelled checks. If the utility billing records reflect an overpayment by Tenant, Tenant shall have the right to deduct the amount of such overpayment from any monies due to Landlord from Tenant.

(c) As noted in Section 4(c) above, any utility fee recovery by Landlord is limited to a twelve (12) month period. If Tenant submeters electricity from Landlord, Landlord agrees to give Tenant at least twenty-four (24) hours advance notice of any planned interruptions of said electricity. Landlord acknowledges that Tenant provides a communication service which requires electrical power to operate and must operate twenty-four (24) hours per day, seven (7) days per week. If the interruption is for an extended period of time, in Tenant's reasonable determination, Landlord agrees to allow Tenant the right to bring in a temporary source of power for the duration of the interruption. Landlord will not be responsible for interference with, interruption of or failure, beyond the reasonable control of Landlord, of such services to be furnished or supplied by Landlord.

(d) Tenant will have the right to install utilities, at Tenant's expense, and to improve present utilities on the Property and the Premises. Landlord hereby grants to Tenant and any service company providing utility or similar services, including electric power and telecommunications, to Tenant an easement, in, on under and over the Property, from an open and improved public road to the Premises, and upon the Premises, for the purpose of maintaining and operating the Communication Facility and constructing, operating, upgrading and maintaining such lines, wires, circuits, and conduits, associated equipment cabinets and such appurtenances thereto, as Tenant and such service companies may from time to time require in order to provide such services to the Premises (the "Utility Easement"). Upon Tenant's or service company's request, Landlord will execute a separate recordable Utility Easement evidencing this grant, at no cost to Tenant or the service company.

**15. DEFAULT AND RIGHT TO CURE.**

(a) The following will be deemed a default by Tenant and a breach of this Agreement: (i) non-payment of Rent if such Rent remains unpaid for more than thirty (30) days after written notice from Landlord of such failure to pay; or (ii) Tenant's failure to perform any other term or condition under this Agreement within forty-five (45) days after written notice from Landlord specifying the failure. No such failure, however, will be deemed to exist if Tenant has commenced to cure such default within such period and provided that such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Tenant. If Tenant remains in default beyond any applicable cure period, then Landlord will have the right to exercise any and all rights and remedies available to it under law and equity.

(b) The following will be deemed a default by Landlord and a breach of this Agreement: (i) Landlord's failure to provide Access to the Premises as required by Section 12 within twenty-four (24) hours after written notice of such failure; (ii) Landlord's failure to cure an interference problem as required by Section 8 within twenty-four (24) hours after written notice of such failure; or (iii) Landlord's failure to perform any term, condition or breach of any warranty or covenant under this Agreement within forty-five (45) days after

Initials:  
Landlord:                       
Tenant:

written notice from Tenant specifying the failure. No such failure, however, will be deemed to exist if Landlord has commenced to cure the default within such period and provided such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Landlord. If Landlord remains in default beyond any applicable cure period, Tenant will have: (i) the right to cure Landlord's default and to deduct the costs of such cure from any monies due to Landlord from Tenant, and (ii) any and all other rights available to it under law and equity.

**16. ASSIGNMENT/SUBLEASE.**

(a) Tenant will have the right to assign this Agreement or sublease the Premises and its rights herein, in whole or in part, without Landlord's consent. Upon notification to Landlord of such assignment, Tenant will be relieved of all future performance, liabilities and obligations under this Agreement to the extent of such assignment

**17. NOTICES.** All notices, requests and demands hereunder will be given by first class certified or registered mail, return receipt requested, or by a nationally recognized overnight courier, postage prepaid, to be effective when properly sent and received, refused or returned undelivered. Notices will be addressed to the parties hereto as follows:

If to Tenant:           Tillman Infrastructure LLC  
152 West 57<sup>th</sup> Street 8<sup>th</sup> Floor  
New York, New York 10019  
Attn: Lease Administration

With a copy to:       Tillman Infrastructure LLC  
152 West 57<sup>th</sup> Street 8<sup>th</sup> Floor  
New York, New York 10019  
Attn: Suruchi Ahuja

If to Landlord:       Kurt and Casey Hansen  
1641 Lee Burd Road  
Benton, KY 42025

Either party hereto may change the place for the giving of notice to it by thirty (30) days' prior written notice to the other party hereto as provided herein.

**18. CONDEMNATION.** In the event Landlord receives notification of any condemnation proceedings affecting the Property, Landlord will provide notice of the proceeding to Tenant within twenty-four (24) hours. If a condemning authority takes all of the Property, or a portion sufficient, in Tenant's sole determination, to render the Premises unsuitable for Tenant, this Agreement will terminate as of the date the title vests in the condemning authority. The parties will each be entitled to pursue their own separate awards in the condemnation proceeds, which for Tenant will include, where applicable, the value of its Structure and Communication Facility, moving expenses, prepaid Rent, and business dislocation expenses. Tenant will be entitled to reimbursement for any prepaid Rent on a *pro rata* basis.

**19. CASUALTY.** Landlord will provide notice to Tenant of any casualty or other harm affecting the Property within twenty-four (24) hours of the casualty or other harm. If any part of the Communication Facility or the Property is damaged by casualty or other harm as to render the Premises unsuitable, in Tenant's sole determination, then Tenant may terminate this Agreement by providing written notice to Landlord, which termination will be effective as of the date of such casualty or other harm. Upon such termination, Tenant will be entitled to collect all insurance proceeds payable to Tenant on account thereof and to be reimbursed for any prepaid Rent on a *pro rata* basis. Landlord agrees to permit Tenant to place temporary transmission and reception

Initials:       
Landlord:       
Tenant:

facilities on the Property, but only until such time as Tenant is able to activate a replacement transmission facility at another location; notwithstanding the termination of this Agreement, such temporary facilities will be governed by all of the terms and conditions of this Agreement, including Rent. If Landlord or Tenant undertakes to rebuild or restore the Premises and/or the Communication Facility, as applicable, Landlord agrees to permit Tenant to place temporary transmission and reception facilities on the Property at no additional Rent until the reconstruction of the Premises and/or the Communication Facility is completed. If Landlord determines not to rebuild or restore the Property, Landlord will notify Tenant of such determination within thirty (30) days after the casualty or other harm. If Landlord does not so notify Tenant and Tenant decides not to terminate under this Section 19, then Landlord will promptly rebuild or restore any portion of the Property interfering with or required for Tenant's Permitted Use of the Premises to substantially the same condition as existed before the casualty or other harm. Landlord agrees that the Rent shall be abated until the Property and/or the Premises are rebuilt or restored, unless Tenant places temporary transmission and reception facilities on the Property.

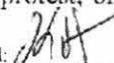
**20. WAIVER OF LANDLORD'S LIENS.** Landlord waives any and all lien rights it may have, statutory or otherwise, concerning the Communication Facility including the Structure or any portion thereof. The Communication Facility shall be deemed personal property for purposes of this Agreement, regardless of whether any portion is deemed real or personal property under applicable law; Landlord consents to Tenant's right to remove all or any portion of the Communication Facility from time to time in Tenant's sole discretion and without Landlord's consent.

**21. TAXES.**

(a) Landlord shall be responsible for (i) all taxes and assessments levied upon the lands, improvements and other property of Landlord including any such taxes that may be calculated by a taxing authority using any method, including the income method (ii) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with this Agreement and (iii) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with a sale of the Property or assignment of Rent payments by Landlord. Tenant shall be responsible for (i) any taxes and assessments attributable to and levied upon Tenant's leasehold improvements on the Premises if and as set forth in this Section 21 and (ii) all sales, use, license, value added, documentary, stamp, gross receipts, registration, real estate transfer, conveyance, excise, recording, and other similar taxes and fees imposed in connection with an assignment of this Agreement or sublease by Tenant. Nothing herein shall require Tenant to pay any inheritance, franchise, income, payroll, excise, privilege, rent, capital stock, stamp, documentary, estate or profit tax, or any tax of similar nature, that is or may be imposed upon Landlord.

(b) In the event Landlord receives a notice of assessment with respect to which taxes or assessments are imposed on Tenant's leasehold improvements on the Premises, Landlord shall provide Tenant with copies of each such notice immediately upon receipt, but in no event later than thirty (30) days after the date of such notice of assessment. If Landlord does not provide such notice or notices to Tenant in a timely manner and Tenant's rights with respect to such taxes are prejudiced by the delay, Landlord shall reimburse Tenant for any increased costs directly resulting from the delay and Landlord shall be responsible for payment of the tax or assessment set forth in the notice, and Landlord shall not have the right to reimbursement of such amount from Tenant. If Landlord provides a notice of assessment to Tenant within such time period and requests reimbursement from Tenant as set forth below, then Tenant shall reimburse Landlord for the tax or assessments identified on the notice of assessment on Tenant's leasehold improvements, which has been paid by Landlord. If Landlord seeks reimbursement from Tenant, Landlord shall, no later than thirty (30) days after Landlord's payment of the taxes or assessments for the assessed tax year, provide Tenant with written notice including evidence that Landlord has timely paid same, and Landlord shall provide to Tenant any other documentation reasonably requested by Tenant to allow Tenant to evaluate the payment and to reimburse Landlord.

(c) For any tax amount for which Tenant is responsible under this Agreement, Tenant shall have the right to contest, in good faith, the validity or the amount thereof using such administrative, appellate or other proceedings as may be appropriate in the jurisdiction, and may defer payment of such obligations, pay same under protest, or take such other steps as permitted by law. This right shall include the ability to institute any

Initials:   
Landlord: \_\_\_\_\_  
Tenant: \_\_\_\_\_

legal, regulatory or informal action in the name of Landlord, Tenant, or both, with respect to the valuation of the Premises. Landlord shall cooperate with respect to the commencement and prosecution of any such proceedings and will execute any documents required therefor. The expense of any such proceedings shall be borne by Tenant and any refunds or rebates secured as a result of Tenant's action shall belong to Tenant, to the extent the amounts were originally paid by Tenant. In the event Tenant notifies Landlord by the due date for assessment of Tenant's intent to contest the assessment, Landlord shall not pay the assessment pending conclusion of the contest, unless required by applicable law.

(d) Landlord shall not split or cause the tax parcel on which the Premises are located to be split, bifurcated, separated or divided without the prior written consent of Tenant.

(e) Tenant shall have the right but not the obligation to pay any taxes due by Landlord hereunder if Landlord fails to timely do so, in addition to any other rights or remedies of Tenant. In the event that Tenant exercises its rights under this Section 21(e) due to such Landlord default, Tenant shall have the right to deduct such tax amounts paid from any monies due to Landlord from Tenant as provided in Section 15(b), provided that Tenant may exercise such right without having provided to Landlord notice and the opportunity to cure per Section 15(b).

(f) Any tax-related notices shall be sent to Tenant in the manner set forth in Section 17 and, in addition, a copy of any such notices shall be sent to the below address. Promptly after the Effective Date of this Agreement, Landlord shall provide the following address to the taxing authority for the authority's use in the event the authority needs to communicate with Tenant. In the event that Tenant's tax address changes by notice to Landlord, Landlord shall be required to provide Tenant's new tax address to the taxing authority or authorities.

Tillman Infrastructure LLC  
152 W 57<sup>th</sup> Street  
New York, New York 10017  
Attn: Network Real Estate Administration--Taxes

(g) Notwithstanding anything to the contrary contained in this Section 21, Tenant shall have no obligation to reimburse any tax or assessment for which the Landlord is reimbursed or rebated by a third party.

## 22. SALE OF PROPERTY.

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

(b) If Landlord, at any time during the Term of this Agreement, decides to rezone or sell, subdivide or otherwise transfer all or any part of the Premises, or all or any part of the Property or the Surrounding Property, to a purchaser other than Tenant, Landlord shall promptly notify Tenant in writing, and such rezoning, sale, subdivision or transfer shall be subject to this Agreement and Tenant's rights hereunder. In the event of a change in ownership, transfer or sale of the Property, within ten (10) days of such transfer, Landlord or its successor shall send the documents listed below in this Section 22(b) to Tenant. Until Tenant receives all such documents, Tenant's failure to make payments under this Agreement shall not be an event of default and Tenant reserves the right to hold payments due under this Agreement.

- i. Old deed to Property
- ii. New deed to Property
- iii. Bill of Sale or Transfer
- iv. Copy of current Tax Bill
- v. New IRS Form W-9
- vi. Completed and Signed Tenant Payment Direction Form
- vii. Full contact information for new Landlord including phone number(s)

Initials:  
Landlord:     *JDH*      
Tenant: \_\_\_\_\_

(c) Landlord agrees not to sell, lease or use any areas of the Property or the Surrounding Property for the installation, operation or maintenance of other wireless communication facilities if such installation, operation or maintenance would interfere with Tenant's Permitted Use or communications equipment as determined by radio propagation tests performed by Tenant in its sole discretion. Landlord or Landlord's prospective purchaser shall reimburse Tenant for any costs and expenses of such testing. If the radio frequency propagation tests demonstrate levels of interference unacceptable to Tenant, Landlord shall be prohibited from selling, leasing or using any areas of the Property or the Surrounding Property for purposes of any installation, operation or maintenance of any other wireless communication facility or equipment.

(d) The provisions of this Section 22 shall in no way limit or impair the obligations of Landlord under this Agreement, including interference and access obligations.

23. **RIGHT OF FIRST REFUSAL.** Notwithstanding the provisions contained in Section 22, if at any time after the Effective Date, Landlord receives a bona fide written offer from a third party seeking any sale, conveyance, assignment or transfer, whether in whole or in part, of any property interest in or related to the Premises, including without limitation any offer seeking an assignment or transfer of the Rent payments associated with this Agreement or an offer to purchase an easement with respect to the Premises ("Offer"), Landlord shall immediately furnish Tenant with a copy of the Offer. Tenant shall have the right within ninety (90) days after it receives such copy to match the financial terms of the Offer and agree in writing to match such terms of the Offer. Such writing shall be in the form of a contract substantially similar to the Offer but Tenant may assign its rights to a third party. If Tenant chooses not to exercise this right or fails to provide written notice to Landlord within the ninety (90) day period, Landlord may sell, convey, assign or transfer such property interest in or related to the Premises pursuant to the Offer, subject to the terms of this Agreement. If Landlord attempts to sell, convey, assign or transfer such property interest in or related to the Premises without complying with this Section 23, the sale, conveyance, assignment or transfer shall be void. Tenant shall not be responsible for any failure to make payments under this Agreement and reserves the right to hold payments due under this Agreement until Landlord complies with this Section 23. Tenant's failure to exercise the right of first refusal shall not be deemed a waiver of the rights contained in this Section 23 with respect to any future proposed conveyances as described herein.

24. **MISCELLANEOUS.**

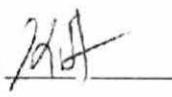
(a) **Amendment/Waiver.** This Agreement cannot be amended, modified or revised unless done in writing and signed by Landlord and Tenant. No provision may be waived except in a writing signed by both parties. The failure by a party to enforce any provision of this Agreement or to require performance by the other party will not be construed to be a waiver, or in any way affect the right of either party to enforce such provision thereafter.

(b) **Memorandum/Short Form Lease.** Contemporaneously with the execution of this Agreement, the parties will execute a recordable Memorandum of Lease substantially in the form attached as **Exhibit 5**. Either party may record this Memorandum of Lease at any time during the Term, in its absolute discretion. Thereafter during the Term, either party will, at any time upon fifteen (15) business days' prior written notice from the other, execute, acknowledge and deliver to the other a recordable Memorandum of Lease.

(c) **Limitation of Liability.** Except for the indemnity obligations set forth in this Agreement, and otherwise notwithstanding anything to the contrary in this Agreement, Tenant and Landlord each waives any claims that each may have against the other with respect to consequential, incidental or special damages, however caused, based on any theory of liability.

(d) **Compliance with Law.** Tenant agrees to comply with all federal, state and local laws, orders, rules and regulations ("Laws") applicable to Tenant's use of the Communication Facility on the Property. Landlord agrees to comply with all Laws relating to Landlord's ownership and use of the Property and any improvements on the Property.

Initials:  
Landlord:  
Tenant:



(e) **Bind and Benefit.** The terms and conditions contained in this Agreement will run with the Property and bind and inure to the benefit of the parties, their respective heirs, executors, administrators, successors and assigns.

(l) **Entire Agreement.** This Agreement and the exhibits attached hereto, all being a part hereof, constitute the entire agreement of the parties hereto and will supersede all prior offers, negotiations and agreements with respect to the subject matter of this Agreement. Exhibits are numbered to correspond to the Section wherein they are first referenced. Except as otherwise stated in this Agreement, each party shall bear its own fees and expenses (including the fees and expenses of its agents, brokers, representatives, attorneys, and accountants) incurred in connection with the negotiation, drafting, execution and performance of this Agreement and the transactions it contemplates.

(g) **Governing Law.** This Agreement will be governed by the laws of the state in which the Premises are located, without regard to conflicts of law.

(h) **Interpretation.** Unless otherwise specified, the following rules of construction and interpretation apply: (i) captions are for convenience and reference only and in no way define or limit the construction of the terms and conditions hereof; (ii) use of the term "including" will be interpreted to mean "including but not limited to"; (iii) whenever a party's consent is required under this Agreement, except as otherwise stated in the Agreement or as same may be duplicative, such consent will not be unreasonably withheld, conditioned or delayed; (iv) exhibits are an integral part of this Agreement and are incorporated by reference into this Agreement; (v) use of the terms "termination" or "expiration" are interchangeable; (vi) reference to a default will take into consideration any applicable notice, grace and cure periods; (vii) to the extent there is any issue with respect to any alleged, perceived or actual ambiguity in this Agreement, the ambiguity shall not be resolved on the basis of who drafted the Agreement; (viii) the singular use of words includes the plural where appropriate; and (ix) if any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions of this Agreement shall remain in full force if the overall purpose of the Agreement is not rendered impossible and the original purpose, intent or consideration is not materially impaired.

(i) **Affiliates.** All references to "Tenant" shall be deemed to include any Affiliate of Tillman Infrastructure LLC using the Premises for any Permitted Use or otherwise exercising the rights of Tenant pursuant to this Agreement. "Affiliate" means with respect to a party to this Agreement, any person or entity that (directly or indirectly) controls, is controlled by, or under common control with, that party. "Control" of a person or entity means the power (directly or indirectly) to direct the management or policies of that person or entity, whether through the ownership of voting securities, by contract, by agency or otherwise.

(j) **Survival.** Any provisions of this Agreement relating to indemnification shall survive the termination or expiration hereof. In addition, any terms and conditions contained in this Agreement that by their sense and context are intended to survive the termination or expiration of this Agreement shall so survive.

(k) **W-9.** As a condition precedent to payment, Landlord agrees to provide Tenant with a completed IRS Form W-9, or its equivalent, upon execution of this Agreement and at such other times as may be reasonably requested by Tenant, including any change in Landlord's name or address.

(l) **Execution/No Option.** The submission of this Agreement to any party for examination or consideration does not constitute an offer, reservation of or option for the Premises based on the terms set forth herein. This Agreement will become effective as a binding Agreement only upon the handwritten legal execution, acknowledgment and delivery hereof by Landlord and Tenant. This Agreement may be executed in two (2) or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties. All parties need not sign the same counterpart.

(m) **Attorneys' Fees.** In the event that any dispute between the parties related to this Agreement should result in litigation, the prevailing party in such litigation shall be entitled to recover from the other party all reasonable fees and expenses of enforcing any right of the prevailing party, including reasonable attorneys' fees and expenses. Prevailing party means the party determined by the court to have most nearly prevailed even if such party did not prevail in all matters. This provision will not be construed to entitle any party other than Landlord, Tenant and their respective Affiliates to recover their fees and expenses.

(n) **WAIVER OF JURY TRIAL. EACH PARTY, TO THE EXTENT PERMITTED BY LAW, KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES ITS RIGHT TO A TRIAL BY**

Initials:  
Landlord:  \_\_\_\_\_  
Tenant: \_\_\_\_\_

**JURY IN ANY ACTION OR PROCEEDING UNDER ANY THEORY OF LIABILITY ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR THE TRANSACTIONS IT CONTEMPLATES.**

(o) **Incidental Fees.** Unless specified in this Agreement, no unilateral fees or additional costs or expenses are to be applied by either party to the other party, including review of plans, structural analyses, consents, provision of documents or other communications between the parties.

(p) **Further Acts.** Upon request, Landlord will cause to be promptly and duly taken, executed, acknowledged and delivered all such further acts, documents, and assurances as Tenant may request from time to time in order to effectuate, carry out and perform all of the terms, provisions and conditions of this Agreement and all transactions and permitted use contemplated by this Agreement, including any Subordination, Non-Disturbance and Attornment Agreement.

(q) **Confidentiality.** The terms and conditions of this Agreement are confidential between the parties and Landlord shall not disclose the same to anyone else, except to Landlord's accountant, attorney and as agreed to by the Parties (except as to sublessees), or as is necessary to effectuate the terms of this Agreement. Any Disclosure in violation of this Section shall be deemed a material breach of this Agreement.

(r) **Estoppel.** Either party will, at any time upon twenty (20) business days prior written notice from the other, execute, acknowledge and deliver to the other a statement in writing (i) certifying that this Agreement is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying this Agreement, as so modified, is in full force and effect) and the date to which the Rent and other charges are paid in advance, if any, and (ii) acknowledging that there are not, to such party's knowledge, any uncured defaults on the part of the other party hereunder, or specifying such defaults if any are claimed.

(s) **Rules Against Perpetuities.** If this Agreement or any covenants or provisions herein would otherwise be unlawful, void or voidable for violation of the Rule against Perpetuities, then the same shall continue until 20 years and 6 months after the date of death of the last survivor of the descendants of the President of the United States, Donald J. Trump, living on the date of this Agreement.

(t) **Security Interest.** Tenant has the right to assign, mortgage or grant a security interest in all or a portion of Tenant's interest in and to this Agreement, Premises, the Structure, Communication Facility, equipment and Easements, and may assign such Tenant's interests to any such assignee, mortgagees, or holders of security interests, all without Landlord's consent ("Secured Party" or, collectively, "Secured Parties").

[SIGNATURE PAGES TO FOLLOW]

Initials:       
Landlord:       
Tenant:



IN WITNESS WHEREOF, the parties have caused this Agreement to be effective as of the Effective Date.

**"WITNESSES"**

*Traci Brennan*  
Name: Traci Brennan  
*Jacquelyn Reid*  
Name: Jacquelyn Reid

**"TENANT"**

**TILLMAN INFRASTRUCTURE LLC,**  
a Delaware limited liability company

By: *Suruchi Ahuja*  
Name: Suruchi Ahuja  
Its: Authorized Signatory  
Date: 7/12/17

STATE OF NEW YORK )  
 ) ss.  
COUNTY OF NEW YORK )

On the 12<sup>th</sup> day of July in the year of 2017, before me, the undersigned, a Notary Public in and for said state, personally appeared Suruchi Ahuja Authorized Signatory of Tillman Infrastructure LLC, a Delaware limited liability company, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the individual or the entity upon behalf of which the individual acted, executed the instrument.

WITNESS my hand and official seal.

Signature: *[Signature]*  
My Commission Expires: \_\_\_\_\_  
Commission Number: \_\_\_\_\_

Chris Mularadelis  
Notary Public, State of New York  
No. 02MU6128986  
Qualified in New York County  
Commission Expires September 3, 2017

**Exhibit 1**

**Description of the Premises & Access and Utility Easements:**

Page 1 of 3

to the Option and Lease Agreement dated July 12, 2017, by and between Kurt Hansen and Casey Hansen, a husband and wife, as Landlord, and Tillman Infrastructure LLC, a Delaware limited liability company, as Tenant.

The Property is legally described as follows:

**1641 Lee Burd Road**

Being a 10.12 acre parcel of land situated in the southwestern portion of Marshall County, Kentucky, approximately one mile East from the Graves County Line, lying on the south side of Lee Burd Road, North of the Jackson Purchase Parkway and said parcel of land being more particularly described as follows:

Unless stated otherwise, any monument referred to herein as a "pipe and cap" is a set 3/4" diameter schedule 40 steel pipe, 18" in length with an orange plastic cap stamped "J. E. S. L. S. #2236." All bearings stated herein are referred to as the magnetic north meridian observed February 13, 2004.

Beginning at the northeast corner of the herein described tract, said point being a 3/4" iron pipe set in the south right-of-way line of Lee Burd Road, 30 feet from its centerline and approximately 150 feet West of a 90 degree turn in said roadway, said iron pipe also being the northwest corner of the Billy Burnett property (Deed Book 205, page 370); thence, South 2 degrees 53' 49" East 373.81 feet along the fence line and west side of the Burnett property to a 3/4" iron pipe set in the north right-of-way line of Jackson Purchase Parkway, 115 feet North from its centerline; thence, South 64 degrees 54' 57" West, 879.66 feet along said north right-of-way line to a 3/4" iron pipe set at a common corner with Robert

Norman/Scott Norman property (Deed Book 273, page 461); thence, North 3 degrees 03' 25" West, 707.32 feet generally along an existing fence line to a 3/4" iron pipe set by a fence post and in the south right-of-way line of Lee Burd Road; thence, North 87 degrees 11' 18" East, 816.50 feet along said right-of-way line, back to the point of beginning.

The above described tract contains 10.12 acres according to a survey by James E. Stevenson Professional Licensed Land Surveyor 2236 with J. E. Stevenson and Associates on February 13, 2004

Being the same property conveyed to Kurt Hansen and Casey Hansen, by Deed dated 02/16/2015, of record in Deed Book 433, Page 418, in the Office of the Clerk of Marshall County, Kentucky.

Initials:  
Landlord:  
Tenant:

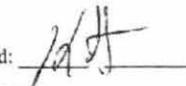
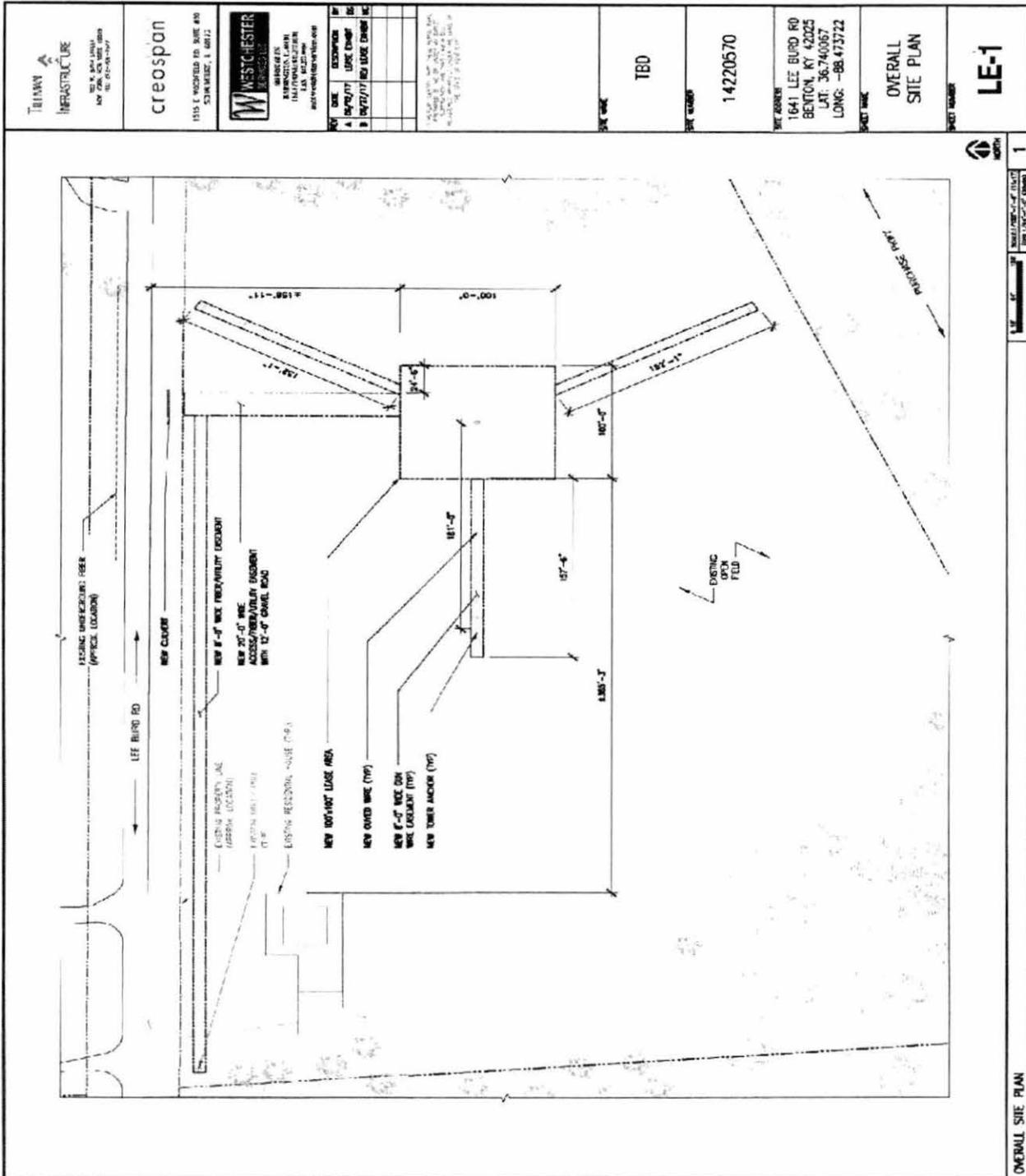


Exhibit 1

Description of the Premises & Access and Utility Easements:

Page 2 of 3

The Premises are described and/or depicted as follows:



Initials:  
 Landlord: *RA*  
 Tenant: \_\_\_\_\_



Notes:

1. THIS EXHIBIT MAY BE REPLACED BY A LAND SURVEY AND/OR CONSTRUCTION DRAWINGS OF THE PREMISES ONCE RECEIVED BY TENANT.
2. ANY SETBACK OF THE PREMISES FROM THE PROPERTY'S BOUNDARIES SHALL BE THE DISTANCE REQUIRED BY THE APPLICABLE GOVERNMENT AUTHORITIES.
3. WIDTH OF ACCESS ROAD SHALL BE THE WIDTH REQUIRED BY THE APPLICABLE GOVERNMENT AUTHORITIES, INCLUDING POLICE AND FIRE DEPARTMENTS.
4. THE TYPE, NUMBER AND MOUNTING POSITIONS AND LOCATIONS OF ANTENNAS AND TRANSMISSION LINES ARE ILLUSTRATIVE ONLY. ACTUAL TYPES, NUMBERS AND MOUNTING POSITIONS MAY VARY FROM WHAT IS SHOWN ABOVE.

Initials:      
Landlord:      
Tenant:

**EXHIBIT 2**

**ENVIRONMENTAL DISCLOSURE**

Landlord represents and warrants that the Property, as of the Effective Date, is free of hazardous substances except as follows:

NONE.

**EXHIBIT 3**

**STANDARD ACCESS LETTER**

**[FOLLOWS ON NEXT PAGE]**

DATE: 07/03/17

Building Staff / Security Staff  
Kurt and Casey Hansen  
1641 Lee Burd Road  
Benton, KY 42025

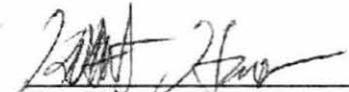
Re: Authorized Access granted to Tillman Infrastructure LLC

Dear Building and Security Staff,

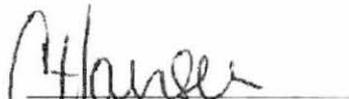
Please be advised that we have signed a lease with Tillman Infrastructure LLC permitting Tillman Infrastructure LLC to install, operate and maintain telecommunications equipment at the property. The terms of the lease grant Tillman Infrastructure LLC and its representatives, employees, agents and subcontractors ("representatives") 24 hour per day, 7 days per week access to the leased area.

To avoid impact on telephone service during the day, Tillman Infrastructure LLC representatives may be seeking access to the property outside of normal business hours. Tillman Infrastructure LLC representatives have been instructed to keep noise levels at a minimum during their visit.

Please grant the bearer of a copy of this letter access to the property and to leased area. Thank you for your assistance.

  
Kurt Hansen

7/1/17  
Date

  
Casey Hansen

7/3/17  
Date

Exhibit 4

**MEMORANDUM OF LEASE**

**[FOLLOWS ON NEXT PAGE]**

Prepared by and return to:

Chris Mularadellis  
Tillman Infrastructure LLC  
157 W 57<sup>th</sup> Street  
New York, New York 10019  
Site No.: \_\_\_\_\_

Fixed Asset No.: 14220570  
Market: ALMSLA  
Cell Site Number: \_\_\_\_\_  
Cell Site Name: \_\_\_\_\_

**MEMORANDUM  
OF  
LEASE**

This Memorandum of Lease is entered into on this 12<sup>th</sup> day of July, 2017, by and between Kurt Hansen and Casey Hansen, a husband and wife, having a mailing address of 1641 Lee Burd Road, Benton, KY 42025 (hereinafter referred to as "**Landlord**") and Tillman Infrastructure LLC, a Delaware limited liability company, having an address at 152 W. 57<sup>th</sup> Street, New York, New York 10019 (hereinafter referred to as "**Tenant**").

1. Landlord and Tenant entered into a certain Option and Lease Agreement ("**Agreement**") on the 12<sup>th</sup> day of July, 2017, for the purpose of installing, operating and maintaining a communication facility and other improvements. All of the foregoing is set forth in the **Agreement**, concerning real property located at 1641 Lee Burd Road, Benton, KY 42025 (the "**Real Property**"), and as is more particularly described on **Exhibit 1** hereto
2. Tenant exercised the option pursuant to the Option and Lease Agreement and the initial lease term will be Ten (10) years commencing on the effective date of written notification by Tenant to Landlord of Tenant's exercise of its option, with Sixteen (16) successive automatic Five (5) year options to renew.
3. The portion of the Property being leased to Tenant and associated access and utility easements are described in **Exhibit 2** annexed hereto.
4. The Agreement gives Tenant a right of first refusal in the event Landlord receives a bona fide written offer from a third party seeking any sale, conveyance, assignment or transfer, whether in whole or in part, of any property interest in or related to the Premises, including without limitation any offer seeking an assignment or transfer of the Rent payments associated with the Agreement or an offer to purchase an easement with respect to the Premises.
5. This Memorandum of Lease is not intended to amend or modify, and shall not be deemed or construed as amending or modifying, any of the terms, conditions or provisions of the Agreement, all of which are hereby ratified and affirmed. In the event of a conflict between

the provisions of this Memorandum of Lease and the provisions of the Agreement, the provisions of the Agreement shall control. The Agreement shall be binding upon and inure to the benefit of the parties and their respective heirs, successors, and assigns, subject to the provisions of the Agreement.

6. This Agreement may be signed executed in any number of Counterparts, each of which shall, when executed, be deemed to be an original and all of which shall be deemed to be one and the same instrument.

-SIGNATURE PAGE TO FOLLOW-

IN WITNESS WHEREOF, the parties have executed this Memorandum of Lease as of the day and year first above written.

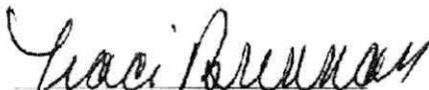
**“WITNESSES”**

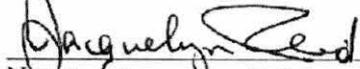
\_\_\_\_\_  
Name: \_\_\_\_\_

\_\_\_\_\_  
Name: \_\_\_\_\_

\_\_\_\_\_  
Name: \_\_\_\_\_

\_\_\_\_\_  
Name: \_\_\_\_\_

  
Name: Traci Brennan

  
Name: Jacquelyn Reid

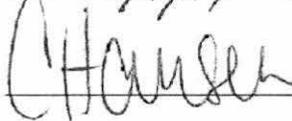
**“LANDLORD”**

  
\_\_\_\_\_

Print Name: Kurt Hansen

Its: Owner

Date: 7/1/17

  
\_\_\_\_\_

Print Name: Casey Hansen

Its: Owner

Date: 7/3/17

**TILLMAN INFRASTRUCTURE LLC,**  
a Delaware limited liability company

By:   
\_\_\_\_\_

Name: Suruchi Ahuja

Its: Authorized Signatory

Date: 7/12/17

[ACKNOWLEDGMENTS APPEAR ON NEXT PAGE]

**TENANT ACKNOWLEDGMENT**

STATE OF NEW YORK )  
 ) ss.  
COUNTY OF NEW YORK )

On the 12<sup>th</sup> day of July in the year of 2017, before me, the undersigned, a Notary Public in and for said state, personally appeared Suruchi Ahuja, Authorized Signatory of Tillman Infrastructure LLC, a Delaware limited liability company, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the individual or the entity upon behalf of which the individual acted, executed the instrument.

WITNESS my hand and official seal.

Signature: [Handwritten Signature]  
My Commission Expires: \_\_\_\_\_  
Commission Number: \_\_\_\_\_

Chris Mularadelis  
Notary Public, State of New York  
No. 02MU6128986  
Qualified in New York County  
Commission Expires September 3, 2017

**LANDLORD ACKNOWLEDGMENT**

STATE OF Kentucky )  
 ) ss:  
COUNTY OF Graves )

BE IT REMEMBERED, that on this 3 day of July, 2017 before me, the subscriber, a person authorized to take oaths in the State of Ky, personally appeared Kurt Hansen and Casey Hansen who, being duly sworn on their oath, deposed and made proof to my satisfaction that they are the persons named in the within instrument; and I, having first made known to them the contents thereof, they did acknowledge that they signed, sealed and delivered the same as their voluntary act and deed for the purposes therein contained.

71564971  
Notary Public: [Handwritten Signature]  
My Commission Expires: 9-14-20

## EXHIBIT 1

### Description of Real Property

1641 Lee Burd Road

Being a 10.12 acre parcel of land situated in the southwestern portion of Marshall County, Kentucky, approximately one mile East from the Graves County Line, lying on the south side of Lee Burd Road, North of the Jackson Purchase Parkway and said parcel of land being more particularly described as follows:

Unless stated otherwise, any monument referred to herein as a "pipe and cap" is a set 3/4" diameter schedule 40 steel pipe, 18" in length with an orange plastic cap stamped "J. E. S. L. S. #2236." All bearings stated herein are referred to as the magnetic north meridian observed February 13, 2004.

Beginning at the northeast corner of the herein described tract, said point being a 3/4" iron pipe set in the south right-of-way line of Lee Burd Road, 30 feet from its centerline and approximately 150 feet West of a 90 degree turn in said roadway, said iron pipe also being the northwest corner of the Billy Burnett property (Deed Book 205, page 370); thence, South 2 degrees 53' 49" East 373.81 feet along the fence line and west side of the Burnett property to a 3/4" iron pipe set in the north right-of-way line of Jackson Purchase Parkway, 115 feet North from its centerline; thence, South 64 degrees 54' 57" West, 879.66 feet along said north right-of-way line to a 3/4" iron pipe set at a common corner with Robert Norman/Scott Norman property (Deed Book 273, page 461); thence, North 3 degrees 03' 25" West, 707.32 feet generally along an existing fence line to a 3/4" iron pipe set by a fence post and in the south right-of-way line of Lee Burd Road; thence, North 87 degrees 11' 18" East, 816.50 feet along said right-of-way line, back to the point of beginning.

The above described tract contains 10.12 acres according to a survey by James E. Stevenson Professional Licensed Land Surveyor 2236 with J. E. Stevenson and Associates on February 13, 2004

Being the same property conveyed to Kurt Hansen and Casey Hansen, by Deed dated 02/16/2015, of record in Deed Book 433, Page 418, in the Office of the Clerk of Marshall County, Kentucky.

**Exhibit 2**

**DESCRIPTION OF PREMISES AND ACCESS AND UTILITY EASEMENT**

Page 1 of 3

to the Memorandum of Lease dated \_\_\_\_\_, 20\_\_\_\_, by and between Kurt Hansen and Casey Hansen, a husband and wife, as Landlord, and Tillman Infrastructure LLC, a Delaware limited liability company, as Tenant.

The Property is legally described as follows:

**1641 Lee Burd Road**

Being a 10.12 acre parcel of land situated in the southwestern portion of Marshall County, Kentucky, approximately one mile East from the Graves County Line, lying on the south side of Lee Burd Road, North of the Jackson Purchase Parkway and said parcel of land being more particularly described as follows:

Unless stated otherwise, any monument referred to herein as a "pipe and cap" is a set 3/4" diameter schedule 40 steel pipe, 18" in length with an orange plastic cap stamped "J. E. S. L. S. #2236." All bearings stated herein are referred to as the magnetic north meridian observed February 13, 2004.

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The above described tract contains 10.12 acres according to a survey by James E. Stevenson Professional Licensed Land Surveyor 2236 with J. E. Stevenson and Associates on February 13, 2004

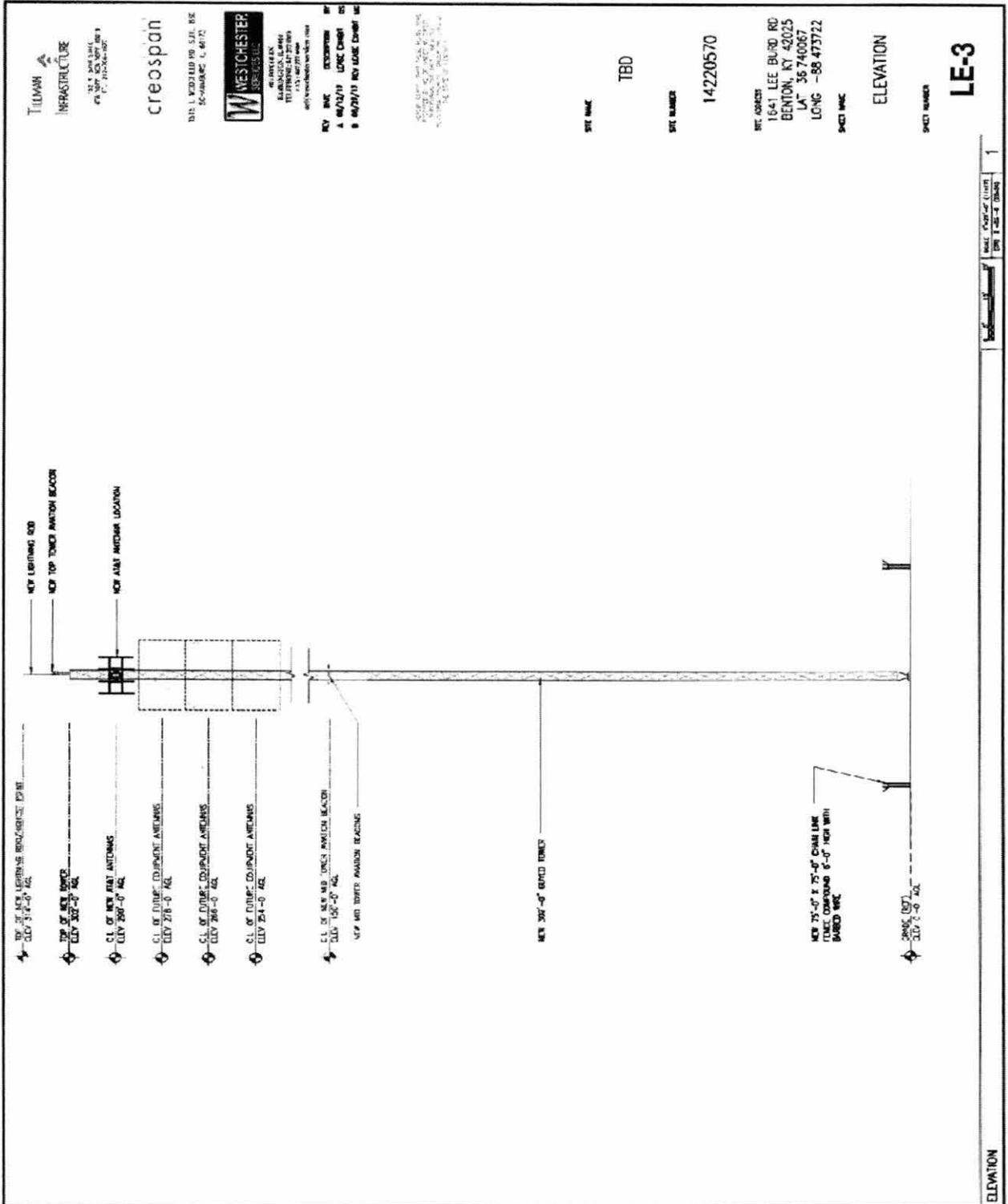
Being the same property conveyed to Kurt Hansen and Casey Hansen, by Deed dated 02/16/2015, of record in Deed Book 433, Page 418, in the Office of the Clerk of Marshall County, Kentucky.



Exhibit 2

DESCRIPTION OF PREMISES AND ACCESS AND UTILITY EASEMENT

Page 3 of 3



TULLMAN  
INFRASTRUCTURE

1000 20th Street, NW  
Canton, MD 21521

crospan

310 L KODJED RD S.W. 85E  
SCAMMOND, LA 70172

WESTCHESTER  
SOLUTIONS LLC

4110 WYCKEN  
MEMPHIS, TN 38117  
901.427.7700

REV DATE DESCRIPTION BY  
 A 06/23/19 LENS CHANGT DE  
 B 06/27/19 REV LENS CHANGT DE

PROJECT: 1000 20th Street, NW  
Canton, MD 21521  
1000 20th Street, NW  
Canton, MD 21521

SITE NAME  
TBD

SITE NUMBER  
14220570

REC ADDRESS  
1641 LEE BIRD RD  
BENTON, KY 42025  
LAT 36.740067  
LONG -88.473722

ELEVATION

SHEET NUMBER

LE-3

ELEVATION

**EXHIBIT J  
NOTIFICATION LISTING**

Hansen – Notice List

HANSEN KURT AND CASEY  
1641 LEE BURD RD  
BENTON, KY 42025

BURKEEN ELLEN AND KENNETH G  
3208 TOM LANE RD  
BENTON, KY 42025

BELLAMY RANDY AND TAMMY  
667 SHAMEWELL LN  
BENTON, KY 42025

AT&T TAX DPT  
PO BOX 7207  
BEDMINSTER, NJ 07921

NORMAN SCOTT DAVID  
1923 LEE BURD RD  
BENTON, KY 42025

SOUTHERN CONSERVATION CORP  
122 CHRIS LN  
MCMINNVILLE, TN 37110

IVEY HURSHAL LEE JR  
1642 LEE BURD RD  
BENTON, KY 42025

MCKENTY BRANDY SCOTT  
1486 LEE BURD RD  
BENTON, KY 42025

SMITH RONALD  
834 VANZORA RD  
BENTON, KY 42025

**EXHIBIT K**  
**COPY OF PROPERTY OWNER NOTIFICATION**



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

**Notice of Proposed Construction of  
Wireless Communications Facility  
Site Name: Hansen**

Dear Landowner:

Tillman Infrastructure LLC, a Delaware limited liability company, and New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 1641 Lee Burd Road, Benton, Kentucky (36°49'24.34" North latitude, 88°28'25.57" West longitude). The proposed facility will include a 302-foot tall tower, with an approximately 12-foot tall lightning arrester attached at the top, and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

This notice is being sent to you because the Marshall County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site or contiguous to the property on which the tower is to be constructed. You have a right to submit testimony to the Kentucky Public Service Commission ("PSC"), either in writing or to request intervention in the PSC's proceedings on the application. You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2017-00435 in any correspondence sent in connection with this matter.

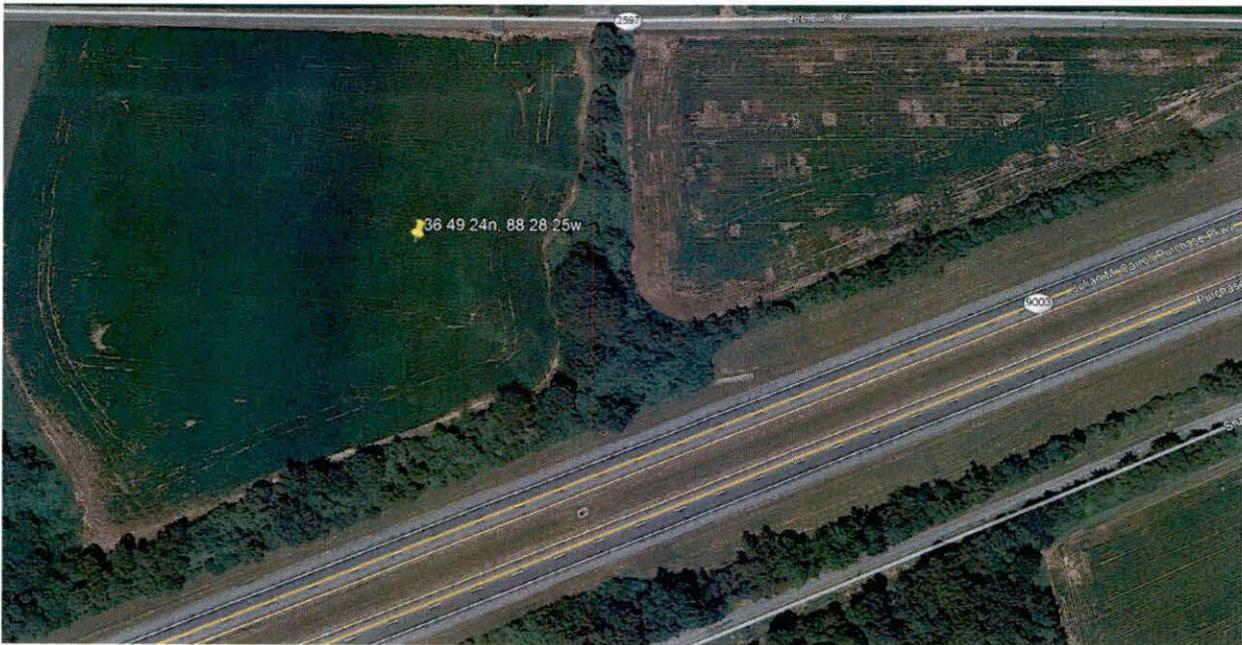
We have attached a map showing the site location for the proposed tower. AT&T Mobility's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the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

Sincerely,  
David A. Pike  
Attorney for Applicants

enclosure

**Site Name: Hansen**  
**Driving Directions to Proposed Tower Site**

1. Beginning at the offices of the Marshall County Judge Executive located at 1101 Main Street, Benton, KY 42025 start out going south on Main St/US-641 S/KY-408/KY-58 toward E 12th St.
2. Take the 1st right onto W 12th St/KY-58.
3. Turn slight left onto Mayfield Hwy/KY-58.
4. Turn right onto Houser Rd.
5. Turn right onto Wadesboro Rd N/KY-1949.
6. Turn left onto Woodall Cut Off Rd. which becomes Vann Pitt Rd.
7. Turn left onto Lee Burd Rd.
8. Arrive at 1641 Lee Burd Rd, Benton, KY 42025-5287.
9. The site coordinates are 36°49'24.34" North latitude, 88°28'25.57" West longitude.



Prepared by:  
Robert W. Grant  
Pike Legal Group PLLC  
1578 Highway 44 East, Suite 6  
P.O. Box 369  
Shepherdsville, KY 40165-3069  
Telephone: 502-955-4400 or 800-516-4293

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

- (A1) PARCEL ID: 07-00-00-017.01  
HANSEN KURT AND CASEY  
1541 LEE BURD RD  
BENTON, KY 42025
- (B1) PARCEL ID: 07-00-00-018.  
BURKEEN ELLEN AND KENNETH G  
320B TOM LANE RD  
BENTON, KY 42025
- (C1) PARCEL ID: 07-00-00-017.  
BELLAMY RANDY AND TAMMY  
667 SHAMEWELL LN  
BENTON, KY 42025
- (D1) PARCEL ID: 07-00-00-017.02  
AT AND T TAX DEPT  
PO BOX 7207  
BEDMINSTER, NJ 07921
- (E1) PARCEL ID: 07-00-00-016.  
NORMAN SCOTT DAVID  
1923 LEE BURD RD  
BENTON, KY 42025
- (F1) PARCEL ID: 07-00-00-015.  
NORMAN SCOTT DAVID  
1923 LEE BURD RD  
BENTON, KY 42025
- (G1) PARCEL ID: 07-00-00-015.01  
NORMAN SCOTT DAVID  
1923 LEE BURD RD  
BENTON, KY 42025
- (H1) PARCEL ID: 07-00-00-006.  
SOUTHERN CONSERVATION CORP.  
122 CHRIS LN  
MCMINNVILLE, TN 37110
- (I1) PARCEL ID: 07-00-00-011.  
VEY HURSHAL LEE JR  
1642 LEE BURD RD  
BENTON, KY 42025
- (J1) PARCEL ID: 07-00-00-010.  
MCKENTY BRANDY SCOTT  
1486 LEE BURD RD  
BENTON, KY 42025
- (K1) PARCEL ID: 07-00-00-009.  
SMITH RONALD  
834 VANZORA RD  
BENTON, KY 42025



R = RESIDENCE  
M = MOBILE HOME  
G = GARAGE  
S = STORAGE  
F = FARM



**ADJOINERS PLAN**

250' 0 100' 200' SCALE: 1" = 200'-0" (24x36)  
(OR) 1/2" = 200'-0" (11x17) **1**

APPLICANT	 152 W. 57TH STREET NEW YORK, NEW YORK 10019 TEL: 212-706-1877																
APPLICANT	 1515 E WOODFIELD RD, SUITE 860 SCHAUMBURG, IL 60173																
ENGINEER	 604 FOX GLEN BARRINGTON, IL 60010 TELEPHONE: 847.277.0070 FAX: 847.277.0080 ae@westchesterservices.com																
SITE INFORMATION	14220570 1641 LEE BURD RD BENTON, KY 42025 MARSHALL COUNTY																
DESIGN RECORD	<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>11/09/17</td> <td>PERMIT/CONSTRUCTION</td> <td>MC</td> </tr> <tr> <td>1</td> <td>10/25/17</td> <td>PERMIT/CONSTRUCTION</td> <td>MC</td> </tr> <tr> <td>0</td> <td>10/20/17</td> <td>PERMIT/CONSTRUCTION</td> <td>DS</td> </tr> </tbody> </table>	REV	DATE	DESCRIPTION	BY	2	11/09/17	PERMIT/CONSTRUCTION	MC	1	10/25/17	PERMIT/CONSTRUCTION	MC	0	10/20/17	PERMIT/CONSTRUCTION	DS
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PROFESSIONAL STAMP	 PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF KENTUCKY.																
SHEET TITLE	ADJOINERS PLAN																
SHEET NUMBER	<b>A-1</b>																

**EXHIBIT L**  
**COPY OF COUNTY JUDGE/EXECUTIVE NOTICE**



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

**VIA CERTIFIED MAIL**

Hon. Kevin Neal  
Marshall County Judge Executive  
1101 Main Street  
Benton, KY 42025

RE: Notice of Proposal to Construct Wireless Communications Facility  
Kentucky Public Service Commission Docket No. 2017-00435  
Site Name: Hansen

Dear Judge Neal:

Tillman Infrastructure LLC, a Delaware limited liability company, and New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 1641 Lee Burd Road, Benton, Kentucky (36°49'24.34" North latitude, 88°28'25.57" West longitude). The proposed facility will include a 302-foot tall tower, with an approximately 12-foot tall lightning arrester attached at the top, and related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

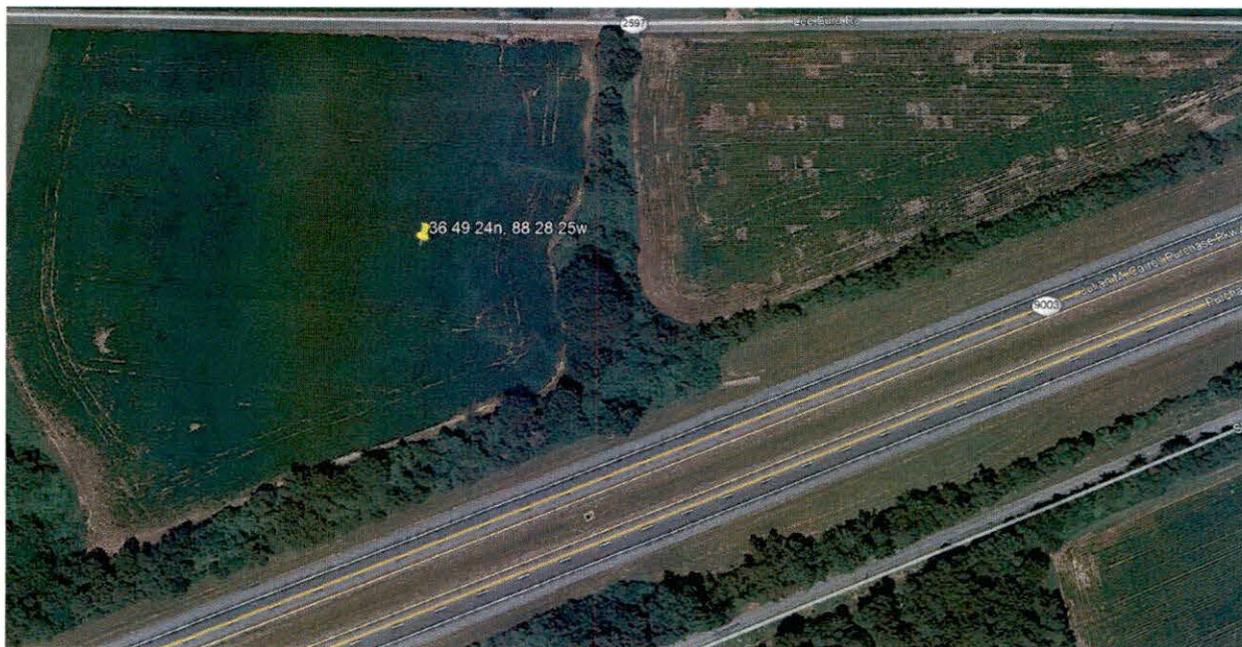
You have a right to submit comments to the PSC or to request intervention in the PSC's proceedings on the application. You may contact the PSC at: Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2017-00435 in any correspondence sent in connection with this matter.

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

Sincerely,  
David A. Pike  
Attorney for Applicants  
enclosures

**Site Name: Hansen**  
**Driving Directions to Proposed Tower Site**

1. Beginning at the offices of the Marshall County Judge Executive located at 1101 Main Street, Benton, KY 42025 start out going south on Main St/US-641 S/KY-408/KY-58 toward E 12th St.
2. Take the 1st right onto W 12th St/KY-58.
3. Turn slight left onto Mayfield Hwy/KY-58.
4. Turn right onto Houser Rd.
5. Turn right onto Wadesboro Rd N/KY-1949.
6. Turn left onto Woodall Cut Off Rd. which becomes Vann Pitt Rd.
7. Turn left onto Lee Burd Rd.
8. Arrive at 1641 Lee Burd Rd, Benton, KY 42025-5287.
9. The site coordinates are 36°49'24.34" North latitude, 88°28'25.57" West longitude.



Prepared by:  
Robert W. Grant  
Pike Legal Group PLLC  
1578 Highway 44 East, Suite 6  
P.O. Box 369  
Shepherdsville, KY 40165-3069  
Telephone: 502-955-4400 or 800-516-4293

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**ADJOINERS PLAN**

SCALE: 1" = 200'-0" (24x36)  
 (OR) 1/2" = 200'-0" (11x17)

APPLICANT	 <small>152 W. 57TH STREET NEW YORK, NEW YORK 10019 TEL: 212-706-1677</small>															
APPLICANT	 <small>1515 E WOODFIELD RD, SUITE 860 SCHAUMBURG, IL 60173</small>															
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SITE INFORMATION	<p>14220570          1641 LEE BURD RD          BENTON, KY 42025          MARSHALL COUNTY</p>															
DESIGN RECORD	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">REVISIONS</th> </tr> <tr> <th style="width: 10%;">REV</th> <th style="width: 10%;">DATE</th> <th style="width: 80%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>11/09/17</td> <td>PERMIT/CONSTRUCTION</td> </tr> <tr> <td>1</td> <td>10/25/17</td> <td>PERMIT/CONSTRUCTION</td> </tr> <tr> <td>0</td> <td>10/20/17</td> <td>PERMIT/CONSTRUCTION</td> </tr> </tbody> </table>	REVISIONS			REV	DATE	DESCRIPTION	2	11/09/17	PERMIT/CONSTRUCTION	1	10/25/17	PERMIT/CONSTRUCTION	0	10/20/17	PERMIT/CONSTRUCTION
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SHEET NUMBER	<p><b>A-1</b></p>															

**EXHIBIT M**  
**COPY OF POSTED NOTICES**

**SITE NAME: HANSEN**  
**NOTICE SIGNS**

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

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC proposes to construct a telecommunications tower on this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2017-00435 in your correspondence.

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC proposes to construct a telecommunications tower near this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2017-00435 in your correspondence.



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

Tribune Courier  
Attn: Public Notice Ad Placement  
86B Commerce Blvd.  
Benton, KY 42025

RE: Legal Notice Advertisement  
Site Name: Hansen

Dear Tribune Courier:

Please publish the following legal notice advertisement in the next edition of *Tribune Courier*.

#### NOTICE

**Tillman Infrastructure LLC, a Delaware limited liability company, and New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 1641 Lee Burd Road, Benton, Kentucky (36°49'24.34" North latitude, 88°28'25.57" West longitude). You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2017-00435 in any correspondence sent in connection with this matter.**

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

Sincerely,  
Robert W. Grant  
Pike Legal Group, PLLC

**EXHIBIT N**  
**COPY OF RADIO FREQUENCY DESIGN SEARCH AREA**

