

▶ **FILE #:** 7-C-12-UR

**AGENDA ITEM #:** 29

**AGENDA DATE:** 7/12/2012

▶ **APPLICANT:** U. S. CELLULAR CORPORATION

OWNER(S):

TAX ID NUMBER: 6 088

JURISDICTION: County Commission District 8

▶ **LOCATION:** East side of Monday Rd., northeast of Corryton Rd.

▶ **APPX. SIZE OF TRACT:** 95.26 acres

SECTOR PLAN: Northeast County

GROWTH POLICY PLAN: Rural Area

ACCESSIBILITY: Access is via Monday Rd., a local street with a 16' pavement width within a 40' right-of-way.

UTILITIES: Water Source: Luttrell-Blaine-Corryton Utility District

Sewer Source: NA

WATERSHED: Flat Creek

▶ **ZONING:** A (Agricultural)

▶ **EXISTING LAND USE:** Vacant land

▶ **PROPOSED USE:** 250' Lattice Telecommunications Tower

HISTORY OF ZONING: None noted

SURROUNDING LAND North: Union County

USE AND ZONING: South: Residences and vacant land / RB (General Residential) & A (Agricultural)

East: Rural residential / A (Agricultural)

West: Rural residential / A (Agricultural)

NEIGHBORHOOD CONTEXT: The proposed site is located in a rural residential area just north of the Corryton community.

**STAFF RECOMMENDATION:**

▶ **APPROVE the request for a 250' telecommunications lattice tower in the A zoning district and a waiver of the landscaping requirements around the tower enclosure, subject to 5 conditions.**

1. Meeting all applicable requirements of the Knox County Zoning Ordinance.
2. The access drive and turnaround area at the tower site shall meet the utility access driveway standards of the Knox County Fire Prevention Bureau.
3. Meeting all applicable requirements of the Knox County Department of Engineering and Public Works.
4. Meeting FAA requirements for required lighting for the tower.
5. At the time of the request for a building permit, posting a bond or other approved financial surety that would ensure the removal of the tower if it is abandoned.

With the conditions noted above, this request meets all criteria for a use-on-review in the A zoning district.

**COMMENTS:**

This is a request for a new 250 foot lattice telecommunications tower to be located within a 10,000 square foot lease area located on a portion of a 95.26 acre tract. The subject property is zoned A (Agricultural) and telecommunication towers are considered as a use on review in this district.

The proposed tower site will have access to Monday Road by a new 16' wide paved driveway that will meet utility access driveway standards of the Knox County Fire Prevention Bureau.

The proposed tower is required to be located 275 feet (110% of the tower height) from the nearest residence. The proposed tower far exceeds that minimum standard since the nearest residence is 535' from the proposed tower. The applicant is proposing a 7' high security fence around the tower and equipment area. Due to the height of the tower, FAA does require lighting for the tower.

The applicant is requesting a waiver of the landscaping requirements around the tower enclosure since the enclosure will not be visible due to existing vegetation on the site. Staff is recommending approval of the waiver.

The applicant states that there are no existing structures in the area that can be used for antenna placement to obtain the required coverage. The tower will support up to 5 telecommunication carrier antenna arrays. U. S. Cellular Corporation will be the principal user for the tower. An agreement has been submitted stating that U. S. Cellular Corporation agrees to make all of its facilities available to other wireless providers.

Attached to the staff report are several support documents, including a report from MPC's tower consultant, Mr. Larry E. Perry. Mr. Perry's report describes the proposal and highlights his findings. Mr. Perry concludes that the 250' lattice tower is technically justified by the materials submitted by the applicant (see attached report).

**EFFECT OF THE PROPOSAL ON THE SUBJECT PROPERTY, SURROUNDING PROPERTY AND THE COMMUNITY AS A WHOLE**

- 1. The proposed development will have minimal impact on local services since the required utilities are available to serve this site.
- 2. The tower site, being located in an area made up of primarily large tracts should have minimal impact on nearby residences.

**CONFORMITY OF THE PROPOSAL TO CRITERIA ESTABLISHED BY THE KNOXVILLE ZONING ORDINANCE**

- 1. With the recommended conditions, the proposed commercial telecommunications tower at this location meets the standards required in the A (Agricultural) zoning district.
- 2. The proposed tower is consistent with the general standards for uses permitted on review: The proposed development is consistent with the adopted plans and policies of the General Plan, East County Sector Plan and Wireless Communications Facility Plan. The use is in harmony with the general purpose and intent of the Zoning Ordinance. Since this site is in a rural area, the use will not significantly injure the value of adjacent property. The use will not draw additional traffic through residential areas.

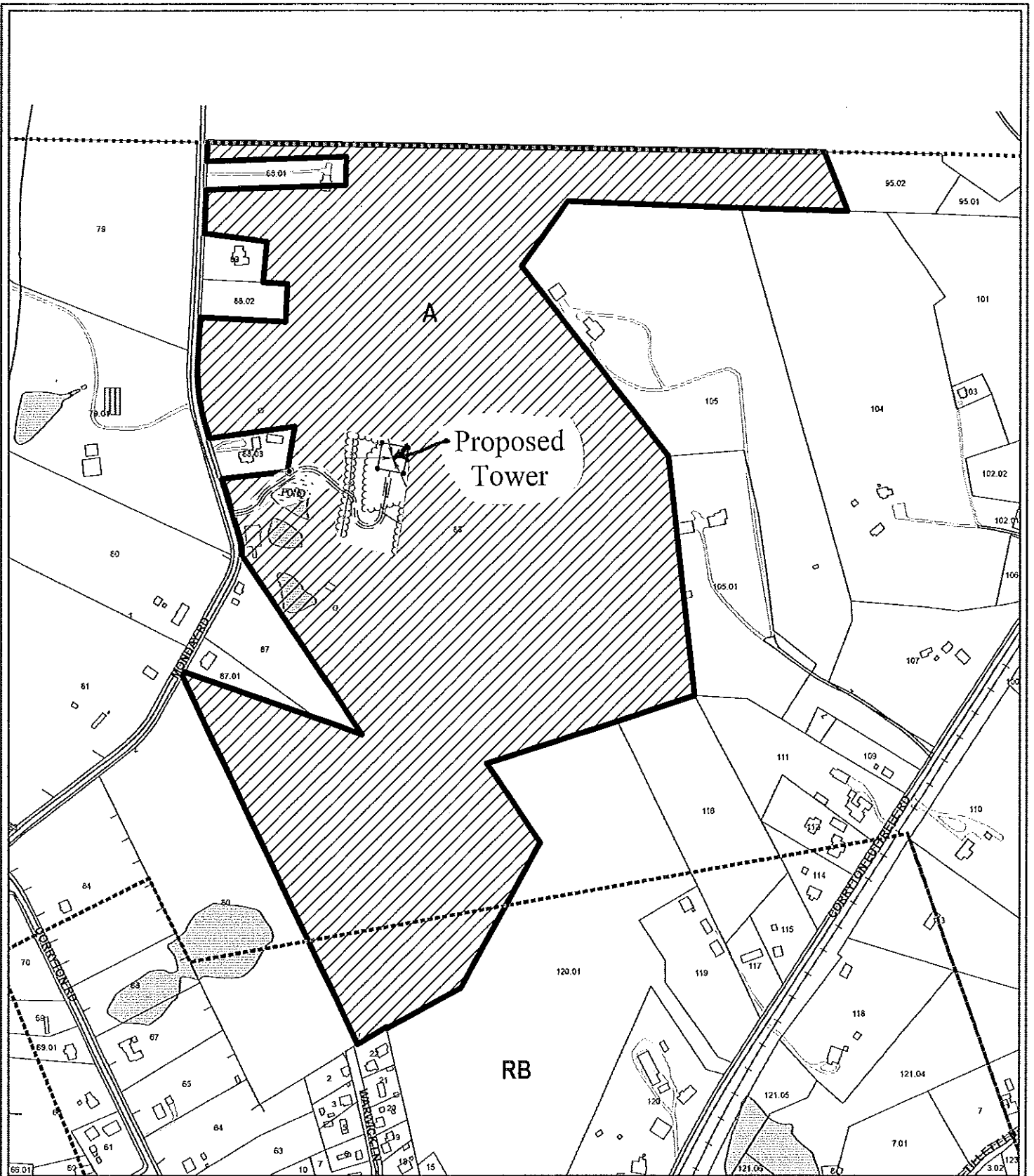
**CONFORMITY OF THE PROPOSAL TO ADOPTED PLANS**

- 1. The Northeast County Sector Plan proposes agricultural and rural residential uses on this property. With the minimal site alteration required for the proposed tower and the proposed location back in a wooded area, the proposed development is consistent with this land designation.
- 2. Under the guidelines for tower placement in the Wireless Communications Facility Plan, this proposed tower falls within the "Opportunity Area" since the proposed tower site is located in a rural/heavily wooded area. The Plan takes a neutral position on lattice towers located in rural/heavily wooded areas. The proposed tower also falls within the "Sensitive Area" since the proposed tower site is located on a hill below a ridgeline. While the site is located on a small hill, there is no significant ridgeline running through this area and the site is not located in a slope protection area. The Plan takes a neutral position on lattice towers located on a hill below a ridgeline.
- 3. The site is located within the Rural Area on the Knoxville-Knox County-Farragut Growth Policy Plan map.

ESTIMATED TRAFFIC IMPACT: Not calculated.

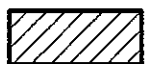
ESTIMATED STUDENT YIELD: Not applicable.

MPC's approval or denial of this request is final, unless the action is appealed to the Knox County Board of Zoning Appeals. The date of the Knox County Board of Zoning Appeals hearing will depend on when the appeal application is filed. Appellants have 30 days to appeal an MPC decision in the County.



**7-C-12-UR  
USE ON REVIEW**

Petitioner: U. S. Cellular Corporation

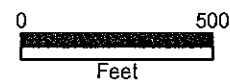


250' Lattice Telecommunications Tower in A (Agricultural)

Map No: 6

Jurisdiction: County

Original Print Date: 6/27/2012  
 Revised:  
 Metropolitan Planning Commission \* City / County Building \* Knoxville, TN 37902



US CELLULAR CORPORATION

Telecommunications Tower Site Review

USE ON REVIEW APPLICATION # 7-C-12-UR

CONSULTANT'S SUMMARY

CORRYTON SITE

Knox County

**Location:** 8152 Monday Road

**Proposed Tower Height:** 250 foot lattice tower

**Address:** 8152 Monday Road

Knoxville, Tennessee

**District:** # 8 County **Map Number:** 006 **Parcel** 088

**Use:** Telecommunications antenna support structure

**Zoning:** A (Agricultural)

**Land Planning Area:** AG/RR and SLPA

**Variances and waivers:** Applicant requests a waiver of the landscaping requirements of the Ordinance due to the fact that the site is isolated in a wooded area and the base area is not seen from a public road or area. Further, the applicant intends to preserve as much of the natural vegetation in place as possible.

**Need:** The applicant is US Cellular a licensed cellular carrier by the Federal Communications Commission and possibly other users. The applicant has proven a need for the site for its coverage requirements to include the new 4G technology and the site is necessary to provide that coverage and to overcome the shadowing effect of surrounding hills and wooded areas.

**Instant Proposal:** Construct a 250 foot lattice type support structure.

**Consultant's Recommendation:** The site and application meets the requirements of the Ordinance.



A handwritten signature in blue ink, followed by the date 6/27/2012.

**REPORT TO  
METROPOLITAN PLANNING COMMISSION**

for

Proposed Telecommunications Tower Site  
Located at 8152 Monday Road  
Knoxville, TN known as

**CORRYTON SITE**

**US CELLULAR**

**UOR 7-C-12-UR**

**COMPLIANCE WITH**

**THE MPC TELECOMMUNICATIONS FACILITY ORDINANCE**

6/27/2012

The proposed site for the applicant is a 250 foot lattice antenna support structure (including antennas and lightning rod) to be located east of Monday Road and near Corryton Road in Northeast Knox County. The supporting material from applicant has been reviewed for technical and Federal/State legal compliance As well as with the Knox County Wireless Communication Facilities Plan from 2002. This is a new telecommunications site.

**REQUESTED**

- 1. Location.** The location is within the **County** of Knox in **District 8** and is located on **Tax Map Number 006 Parcel 088.**
- 2. Zoning.** A (Agricultural)
- 3. Land Planning Area:** AG/RR and SLPA
- 4. Proposed Tower Height:** 250 foot lattice tower
- 5. Address:** 8152 Monday Road  
Knoxville, Tennessee

6. **Tower height.** The requested height is 250 feet above ground level will support up to 4 additional telecommunications carrier antennas for a total of 5 users. Lighting will be required on this structure.

7. **Variances.** The set back requirements in Article 4.92 of the Ordinance for Knox County for "A" sites requires that the structure be set back a minimum distance of 110% of the structure height or in this case 275 feet from the nearest dwelling unit (residence). The proposed site meets that requirement and no variances are required as the nearest dwelling is more than 500 feet from the base of the proposed structure. However, the applicant is requesting a variance on section 4.92.02(4) requirement for landscaping the site. The proposed site is within a heavily wooded area and the base area cannot be seen from a public road as the applicant proposes to leave as much of the natural vegetation in place as possible which will accomplish the desired screening.

8. **Site.** This application is for the construction of a new lattice type antenna support structure to be located in a heavily wooded parcel on a ridgetop.

9. **Use.** This antenna support structure will be used for telecommunications with the present state of the art communications technology using PCS and cellular communication sources. The applicant is US Cellular Corporation and there are 4 possible additional telecommunications users for the facility.

10. **Setbacks.** The setback requirements are that the facility must be 110% height of the tower from any dwelling unit. The applicant meets that requirement and no variances are required.

11. **Height.** The proposed structure is for 250 feet with hazard lighting required.

## EVALUATION

The following is a list of items reviewed:

Zoning Ordinance for Knoxville Tennessee by Metropolitan Planning Commission---Telecommunication Facilities Section (as amended thru October 1, 2004)

Knoxville City Wireless Communications Facilities Plan dated 2002

Check for other existing towers capable of supporting the load and elevation clearance requested by the applicant herein and within 1 mile radius of site.

Check for Antenna Support Structure stress analysis for co-location users' equipment support

Review support structure drawings and specifications with applicant

Review FAA lighting and marking requirements and proposals

Review FCC requirements regarding signal coverage, towers and lighting

Review applicant's justification for site in compliance with the FCC's requirements for telecommunication company providers compliance with required coverage for the use of the general public.

Review Site plan by applicant  
Check Zoning

Check setbacks for building and antenna support structure

Check for compliance with Wireless Communication Facility Plan

Check proximity to other structures and district boundaries

Check nature of surrounding land uses  
Check surrounding foliage and tree coverage

Check design of tower for esthetic changes

Check height requirements necessary for coverage

Check separation from other towers

Check frequencies proposed for possible interference to TV and radio reception in the immediate vicinity of the structure.

## **DISCUSSION**

I visited the proposed tower site that is a part of this review.

The site elevation at this location is about 1100 feet. It is located in a heavily wooded timberland near Monday Road and Corryton Road in Northeast Knox County and near a set of railroad tracks.

The request is for a 250 foot lattice structure of which US Cellular will use the top 15 feet and the additional usable lower 100 feet is for other carriers' expansion.

This a capacity site. This means that the need for the service in the area exceeds the capacity capability of presently existing sites. There are no sites within a 1 mile radius of the proposed site herein.

The site is a good elevation location and by the addition of a cell site here, it would probably eliminate the need for other sites nearby.



It is located in an A zoned area.

Using the MPC's Wireless Facilities Matrix the site qualifies as a Neutral site in that it is 250 feet and located on a rural heavily wooded area. While it is located on a ridgetop that would normally place it in a Discouraged area, it is located a significant way from Emery Road, the nearest major thoroughfare, and the impact on the area should be minimal.

The proposed access road to the site rises from 1086 feet to 1124 feet in a little over 600 feet. The grade along the road varies between 15 and 17%. This may create a problem for any emergency vehicles if the road is gravel as proposed. Others will have to make any determination in this regard.

There are no other antenna support structures within 1.75 miles of this site and reviewing that site, the coverage needed for this area could not be achieved using that tower. The coverage is based on the new technology currently being touted by the various carriers, 4G, for data and voice transmission. The tower height is justified in this case in that the new technology is fairly limited as to range and there are surrounding hills to this location which the added tower elevation will help prevent shadow areas.

#### **DISCUSSION RE FACILITIES PLAN**

*The Facilities plan is a guideline adopted by the MPC in 2002 for the placement and appearance of wireless communications facilities. The following discussion is based on this application and how it relates to the Plan. The plan is an advisory plan and not a legal requirement.*

(1) **View Protection**--The structure (250 feet) coupled with lighting requirements and should have little or no impact on the view aesthetics of the area.

(2) **Land Use Compatibility**—The proposed site is on a ridgeline, but the structure and associated building/facilities would be compatible with the local land use and the surrounding area is wooded. The site will be unmanned and will have no impact on noise, traffic or air pollution.

(3) **Design Compatibility**—The proposed location in a heavily wooded area would blend in with surrounding agricultural land usage and design. The new structure will be a lattice type structure 250 feet in height. A monopole structure of this height at this location is not feasible and further could not accommodate as many future users as does the lattice structure.

(4) **Opportunity Area**---This location is Neutral and located in an Opportunity area of the Matrix.

#### **SUMMARY**

(1) The proposed antenna support structure is a 250 foot lattice structure including antennas. Lighting WILL BE required for this structure by the FAA due to its proposed height.

- (2) A review of the structure stress analysis on the proposed structure and specifications support the use of the lattice structure by four and possibly additional other potential users in the future.
- (3) The structure design meets or exceeds FCC and EIA requirements.
- (4) The area surrounding the site is heavily wooded and zoned Agricultural. There are no residences within 500 feet of the tower.
- (5) There is no general use technology (such as satellite communications) that is available at the present time nor in the immediate future that would negate the need for the structure. However, should such a technology become available and the structure of no further use, the Ordinance at Article 4.92 requires it to be removed.
- (6) The proposed equipment housing facility is an outdoor cabinet and will have no impact on the aesthetics of the adjacent land uses. The landscape plan indicates that the fenced area will be surrounded by wooded vegetation that is presently existing.
- (7) The applicant has received authorization from the various governmental agencies, including the Federal Communications Commission, to provide communication service to the citizens of Knoxville, Tennessee.
- (8) The requested site will have minimal impact on the community involved by its very location.
- (9) There are no other antenna support structures within 1 mile of the proposed site that are usable for the coverage required.
- (10) There are no waivers required, but the applicant is requesting a variance on the landscape requirements in 4.92.02(4) in that the site is located in a heavily wooded area and the base and equipment facilities cannot be seen from a public road due to the vegetation.
- (11) The proposed site and structure will have no environmental impact within the federal guidelines.
- (12) Assuming that there are 4 carriers operating cellular or PCS transmitters/receivers at this site and all are operating at the same time, the radiation produced by the combination of all the users at the same time using the standards and protocols proposed and used by the carriers today, will be considerably below that established by the Federal Communications Commission and the EPA as creating any danger to humans or animals.
- (13) There is a need for the structure in this area to provide for the wide spectrum wireless internet service and for other wireless voice and data services to be provided under government regulation by the various proposed carriers who plan to use the site.

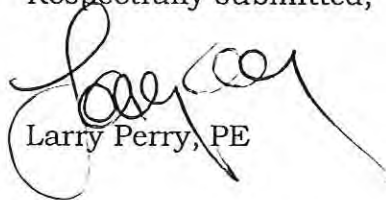
[14] Access road concern. I have a concern about the grade of the access road that in some cases exceed 15%. This grade may be beyond the grade considered by the Knox County Emergency Management staff as a safe grade for emergency vehicles on a graveled road and the applicant may have to pave a portion to meet the Emergency requirements, but that is for others to evaluate.

(14) There are no other antenna structures within 2 mile radius that would allow the coverage needed by the applicant for this area.

### RECOMMENDATION

In light of the analysis and review of documents, it is my professional opinion that the applicant meets all requirements of the Ordinance and the federal requirements.

Respectfully submitted,



Larry Perry, PE

**EXHIBIT 7.  
LAND USE/WIRELESS FACILITIES MATRIX**

	Co-Location	Stealth Structure	Low Monopole Below 90'	Moderate Monopole 90'-150'	Tall Monopole 150'-199'	Lattice Tower	Guyed Tower
<b>Opportunity Areas</b>	Industrial/Business Park						
	Industrial Use						
	Pre-approved Government-owned Property						
	Urban Expressway Corridor						
	Rural/Heavily Wooded					*	
	Pasture						
	Central Business District						
	Office/Commercial Corridor						
	Shopping Center						

<b>Sensitive Areas</b>	Within 500' of a residence						
	Rural Residential						
	Non-residential Properties in a Residential Area (church, cemetery, library, etc.)						
	Multi-family Residential						
	On Hill Below Ridgeline					*	

<b>Avoidance Areas</b>	Conservation Open Space						
	Scenic Highway						
	Public Park						
	Ridge Top/Ridge Line						
	Scenic Vista						
	Historic District/Site						
	Single-family Residential						
	Vacant Residential Lot						

Encouraged  Neutral  Discouraged

**KRAMER RAYSON LLP**  
— ATTORNEYS AT LAW —

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R.R. KRAMER (1888-1966)  
CARTER B. WALL (1915-1968)  
ANDREW JOHNSON (1918-1985)  
JACKSON C. KRAMER (1921-1993)  
R. ARNOLD KRAMER (1918-1993)

May 30, 2012

Metropolitan Planning Commission  
City-County Building, Suite 403  
400 Main Avenue  
Knoxville, Tennessee 37902

Re: **U.S. Cellular Corporation**  
**Application for Tower Site Use-On-Review**

Dear Sir or Madam:

Please be advised that the undersigned represents U.S. Cellular Corporation ("USCC"). USCC hereby files the enclosed Use-On-Review Application and requests that it be placed on the agenda for the July 12, 2012 Metropolitan Planning Commission meeting. Such Use-On-Review Application requests approval for a proposed cellular communications tower to be located on property owned by Archie and Ann Etta Johnson at 8152 Monday Road, Corryton, Knox County, Tennessee. Accordingly, enclosed herewith please find the following items:

1. Completed Application Form as signed by an authorized representative of USCC and as signed by the property owners, Archie and Ann Etta Johnson.
2. Information Summary and Table of Contents.
3. Ten (10) copies of the Development Plan with Exhibits 1 through 13 attached.
4. Our firm's check in the amount of Two Thousand Nine Hundred Forty Dollars (\$2,940.00), made payable to the Metropolitan Planning Commission. This check represents payment of (i) the \$1,440.00 fee for filing a Use-on-Review Application for a site in an agricultural zone that is larger than one (1) acre (i.e., the base fee of \$1,200.00 plus 20% for filing one day past the standard deadline),

and (ii) the \$1,500.00 fee for the escrow deposit relative to the Professional Engineering Consultant's fee.

As noted, USCC is proposing that a cellular communications tower be placed on a parcel consisting of approximately ninety-five (95) acres owned by Archie and Ann Etta Johnson at 8152 Monday Road, Corryton, Knox County, Tennessee. USCC has entered into a lease with the property owner for the proposed site.

USCC recognizes that pursuant to Article 4.92.02(1)(f) of the Knox County Zoning Ordinance, a professional engineering consultant qualified in the design and installation of wireless communications facilities may be employed to review its application. Accordingly, the One Thousand Five Hundred Dollar (\$1,500.00) escrow fee specified in the Zoning Ordinance is enclosed. USCC further understands that such fee shall not exceed One Thousand Five Hundred Dollars (\$1,500.00) in total.

USCC proposes to construct a 250 foot self-support tower. Since the proposed tower will exceed 200 feet in height, it will be lighted as required by FAA Regulations. In addition, as required by Article 4.92.02(1)(a) of the Knox County Zoning Ordinance, the tower will be constructed to support at least four (4) antenna arrays for co-location purposes. USCC's letter of intent setting forth its commitment to permit co-location on the proposed tower is included with the Application as Exhibit 5.

The tower is proposed for this area in order to provide additional spectrum capacity for its network. The explosive growth in usage of hand-held devices (*i.e.*, smart phones) requires that USCC significantly increase the capacity of its network to transmit data. New technology known as "4G LTE" supports data transmission and provides the necessary additional capacity. Installation of 4G LTE technology requires that USCC split its current spectrum between its existing CDMA/EVDO network and 4G LTE technology, which necessitates additional antennae. Thus, this tower will provide additional capacity and relieve spectrum usage at USCC's existing Blaine, Gibbs and Graveston sites.

Radio frequency coverage maps showing coverage with and without the proposed tower are attached to the Application as Exhibits 8 and 9.

In an effort to address tower proliferation concerns, USCC performed a search in the proposed coverage area for other existing towers on which co-location might be possible. As noted on Exhibit 3, no existing towers or other suitable structures are located within a one-mile search ring. The closest existing tower, as shown on Exhibit 3, is owned by New Cingular Wireless PCS, LLC and is located over one (1) mile from the proposed site, but USCC cannot co-locate on such tower because it is located too close to USCC's existing Graveston site, which is one of the existing sites for which USCC seeks spectrum relief.

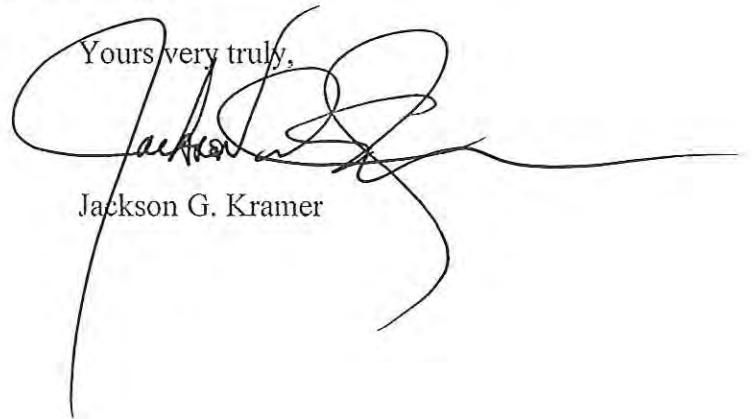
USCC also searched for other existing structures within the area of the proposed site on which co-location might be feasible. No suitable existing structures are present in this area.

This proposed tower is also consistent with the Goals, Objectives and Policies of the Wireless Communications Facilities Plan ("Plan") adopted by the Metropolitan Planning Commission in September, 2002. The proposed site is located on a large, rural, agriculturally zoned parcel and is located a significant distance away from Monday Road. As shown by the photographs of the proposed site attached as Collective Exhibit 12, wooded areas are located between Monday Road and the proposed site, and the base of the tower will not be visible from Monday Road.

In addition, the proposed tower meets the Plan's objective of being separated from any nearby residents by a distance of more than five hundred (500) feet, and also meets the Zoning Ordinance requirement of being separated from any residential structure by a distance of at least one hundred ten percent (110%) of the tower height (in this instance, two hundred seventy-five (275) feet). As shown by the Zoning Setback Drawing attached as Exhibit 2 to the Application, no residential structures are located within two hundred seventy-five (275) feet of the proposed site. The closest residence to this site is located more than five hundred (500) feet from the proposed site and is occupied by the landowners who are leasing the property to USCC. Further, such residence is separated from the site by a heavily wooded area and an existing stand of trees that will remain in place.

Thank you very much for your assistance in this matter. Should you need any additional information, please do not hesitate to contact the undersigned.

Yours very truly,

A handwritten signature in black ink, appearing to read 'Jackson G. Kramer', written over a horizontal line. The signature is stylized and cursive.

Jackson G. Kramer

JGK/tsg  
Enclosures

INFORMATION SUMMARY AND TABLE OF CONTENTS

USE ON REVIEW APPLICATION FOR

U. S. CELLULAR'S CORRYTON SITE NUMBER 223539

1. Site Plan - Construction Drawings, attached as Exhibit 1
2. Zoning Setback Drawing attached as Exhibit 2
3. No towers registered with the FCC as Telecommunications Towers were found on the FCC data base within a one-mile search ring (See Exhibit 3).
4. & 5. Application is made directly by the carrier -

U.S. Cellular Corporation  
9731 Cogdill Road, Suite 200  
Knoxville, Tennessee 37932

Contact: John Locascio, Senior Project Manager  
Telephone: (865) 777-7039  
Facsimile: (865) 777-7012

6. Basic Tower Information:
  - (a) U. S. Cellular Corporation ("USCC") proposes a self-support tower two hundred fifty (250) feet in height. The tower will be located on property owned by Archie and Ann Johnson at 8152 Monday Road, Knox County, Tennessee. The equipment compound and the base of the tower will be enclosed within a chain link fence six (6) feet in height.
  - (b) The tower will be two hundred fifty (250) feet in height.
  - (c) The tower will be lighted in accordance with FAA requirements.
  - (d) The specifications for an almost identical tower are provided in Exhibit 4. The tower is designed and will be constructed to permit co-location for at least three additional carriers.
  - (e) The leasehold area is one hundred (100) feet by one hundred (100) feet. An area approximately ninety (90) feet by ninety (90) feet will be enclosed by a chain link fence six (6) feet in height and topped with three (3) strands of barbed wire. See Construction Drawings, p. C.4.30. The tower and all ancillary equipment will be located within this fenced compound.



7. USCC's Letter of Intent committing itself to allow shared use of the proposed tower is attached as Exhibit 5. Other likely candidates for co-location:

AT&T  
Verizon  
Sprint/Nextel  
T-Mobile  
Cricket (Leap Wireless)

8. Zoning Map:

Proposed site and adjacent properties are zoned A. Site zoning and zoning of adjacent parcels are shown on Exhibit 6. Map of larger area within one mile of proposed site to be provided by the Metropolitan Planning Commission. General map of area attached as Exhibit 7.

9. Coverage Map without proposed site - Exhibit 8

10. Coverage Map with proposed site - Exhibit 9

11. Proposed landscaping – The site is heavily wooded and pursuant to Section 4.92.02(4)(b) of the Knox County, Tennessee Zoning Ordinance, USCC believes that existing natural vegetation will achieve the required screening. See photographs of site attached Collective Exhibit 12. However, should the determination be made that additional landscaping is necessary, USCC will meet the landscaping requirements of Section 4.92.02(4) of said Zoning Ordinance.

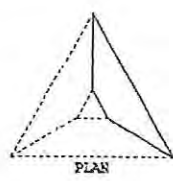
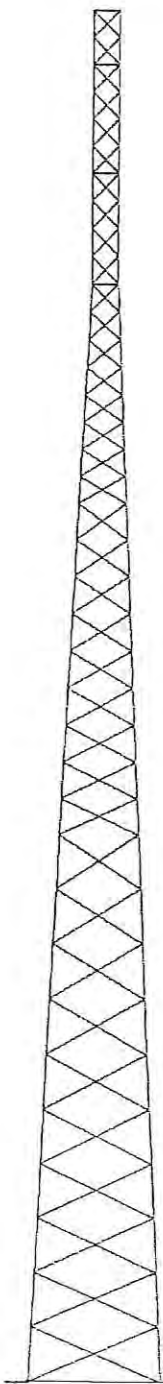
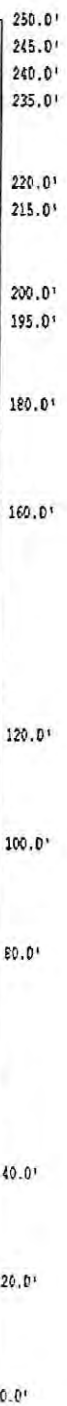
12. Technical Justifications Narrative - Exhibit 10

13. Variances or Waivers from Ordinance - Exhibit 11

14. Photographs of proposed site – Collective Exhibit 12

15. Safety Statements - Exhibit 13

50 ksi	8.6250"x0.5000" PIPE	A	5.5625"x0.5000" PIPE	B	C	D	E	F
36 ksi	L 3-1/2"x3-1/2"x1/4"	H	I	L 2"x2"x1/8"	J	K	L	M
36 ksi	L 4"x4"x1/4"	G						
A325X	(1) 3/4"		(1) 5/8"					
	25.0'							
	10 @ 10.0'		9 @ 6.7'		5.0'	18 @ 5.0'		5.0'



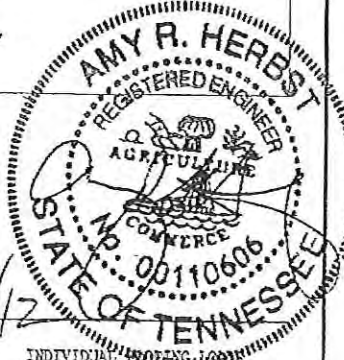
- NOTES:**
- The tower model is S3TL Series HD1.
  - Transmission lines are to be attached to standard 12 hole waveguide ladders with stackable hangers.
  - Azimuths are relative (not based on true north).
  - Foundation loads shown are maximums.
  - (6) 1 1/2" dia. F1554 grade 105 anchor bolts per leg. Minimum 5" embedment from top of concrete to top of nut.
  - All unequal angles are oriented with the short leg vertical.
  - This tower was designed for Structure Class II, Exposure Category C and Topographic Category 1.
  - The foundation loads shown below are factored loads.
  - No grout is required under the base plates.

**ANTENNA LIST**

NO	ELEV	ANTENNA	TX-LINE
1	250'	(2) AP15-850/090 + Platform	(12) 1 5/8
2	235'	(2) AP15-850/090 + 12' 3T-Boom (R)	(12) 1 5/8
3	220'	(2) AP15-850/090 + 12' 3T-Boom (R)	(12) 1 5/8
4	205'	(2) AP15-850/090 + 12' 3T-Boom (R)	(12) 1 5/8
5	195'	(2) 6' H.P. Dish	(2) EW63

**MATERIAL LIST**

NO	TYPE
A	8.6250"x0.3220" PIPE
B	5.5625"x0.3750" PIPE
C	5.5625"x0.2580" PIPE
D	4.0000"x0.3160" PIPE
E	2.8750"x0.2030" PIPE
F	2.3750"x0.1540" PIPE
G	L 3"x3"x1/4"
H	L 3"x3"x3/16"
I	L 2-1/2"x2-1/2"x3/16"
J	L 2"x2"x3/16"
K	L 2"x2"x1/8"



**TOTAL FOUNDATION LOADS**

H=73.27 k  
V=169.36 k  
M=10245.79 k-ft  
T=28.90 k-ft

**INDIVIDUAL FOUNDATION LOADS**

H=44.29 k  
V=489.67 k  
U=432.33 k

**Sabre Industries**  
**Sabre Communications Corporation**  
2101 Murray Street (P.O. Box 658), Sioux City, Iowa 51102-0658  
Phone: (712) 258-6690 Fax: (712) 258-6250

Client: US Cellular Corp Job No: 54101 Date: 10 Jan 2012  
Location: Snyder, TN Total Height: 250.00' Tower Height: 250.00'  
Standard: ITA 222-G-2005 Design Wind & Ice: 90mph 0" ice & 30mph 0.75" ice



Metropolitan Planning Commission  
of Knoxville/Knox County  
4th Floor, City-County Building  
400 Main Avenue  
Knoxville, Tennessee 37902

May 21, 2012

**Re: U.S. Cellular Corporation  
Proposed Corryton Site**

Dear Sir or Madam:

This letter is written to confirm U.S. Cellular Corporation's ("USCC") commitment to shared use of its proposed cellular communications tower site at 8132 Monday Road in Knox County, Tennessee.

As you are aware, Knox County Zoning Ordinance Article 4.92.02(1)(a) requires that any proposed communications tower 130 feet in height or greater be built to accommodate at least three antenna arrays for co-location purposes. USCC is proposing that the tower on Monday Road be 250 feet in height. USCC hereby states that it will construct the tower to accommodate the required three antenna arrays.

Furthermore, please accept this letter as confirmation that pursuant to Knox County Zoning Ordinance Article 4.92.02(1)(b), USCC and its successors are committed to allowing shared use of the tower at rental rates commensurate to those being charged in similar situations, so long as any additional user agrees in writing to meet reasonable terms and conditions concerning use of USCC=s tower and so long as space on such tower remains available.

I trust that this letter is sufficient to address the inquiries posed concerning shared use. However, should you need additional information, please do not hesitate to contact either the undersigned at (865) 777-7039 or USCC=s attorney, Jackson G. Kramer, at (865) 525-5134.

Yours very truly,

A handwritten signature in black ink, appearing to read "John Locascio".

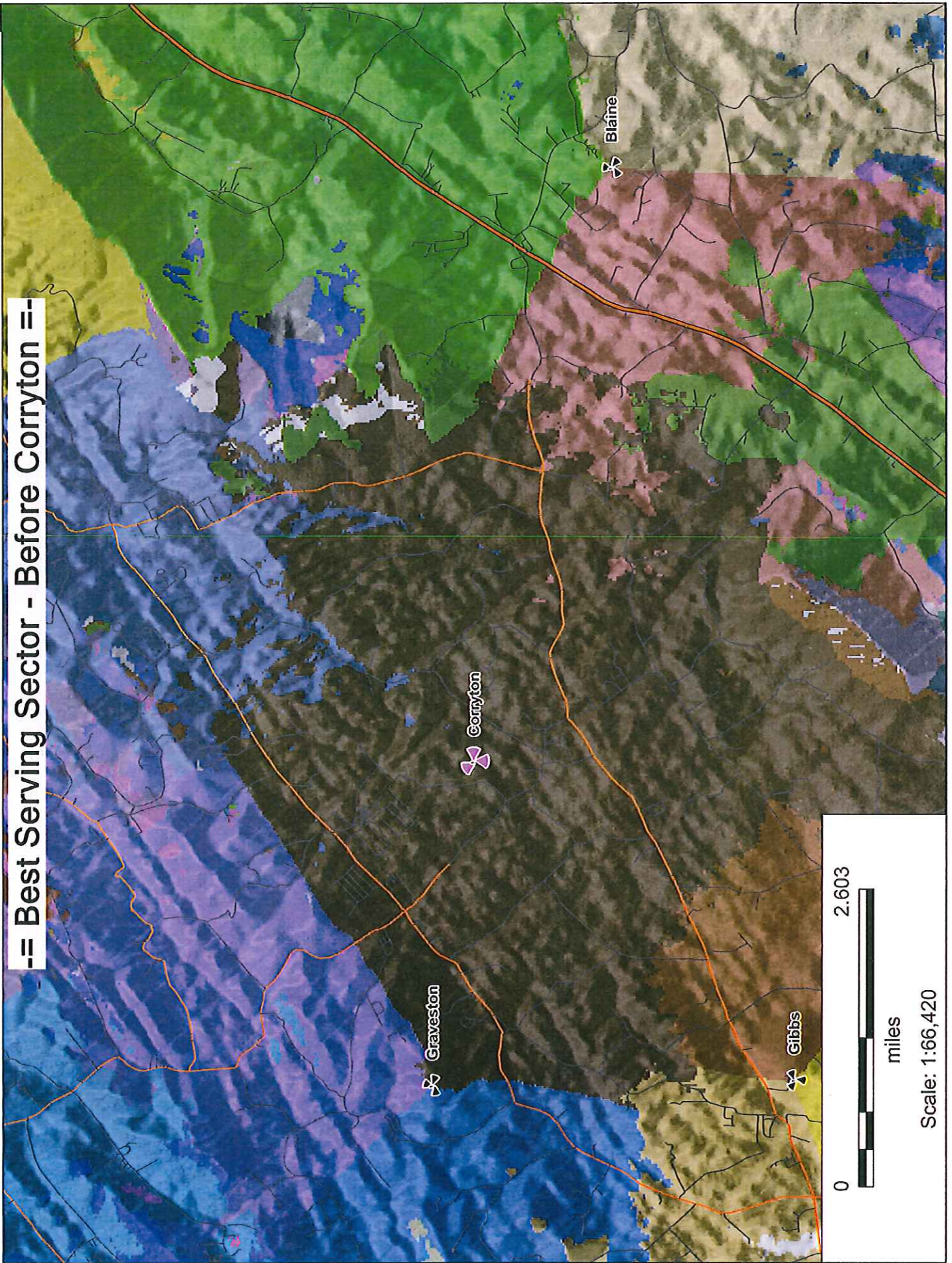
John Locascio  
Senior Project Manager

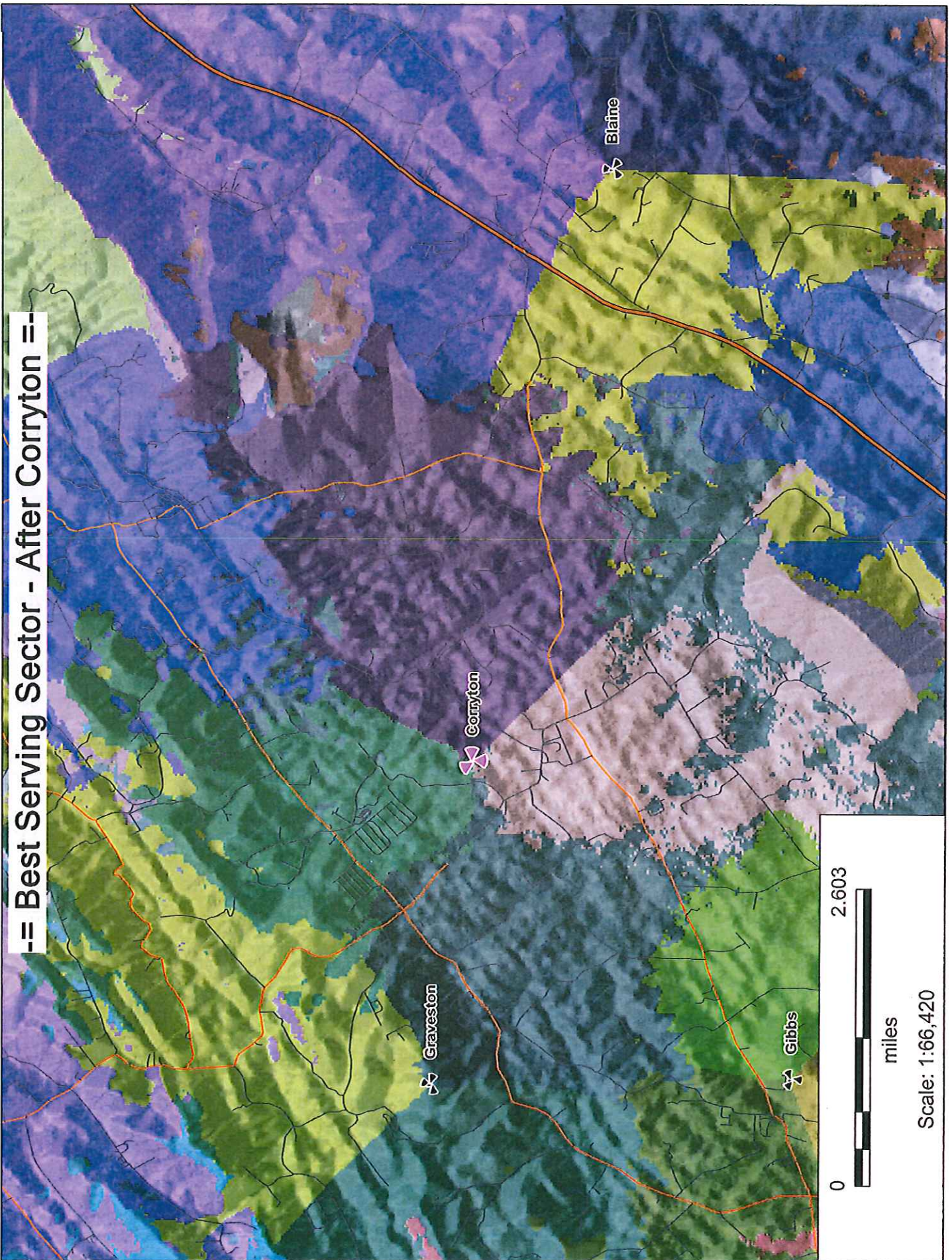
9731 Cogdill Rd.  
Suite 200  
Knoxville, TN 37932  
Tel: 865 777 7977 Fax: 865 777 8575  
www.uscellular.com

**MPC July 12, 2012**

**EXHIBIT 5  
Agenda Item # 29**

-- Best Serving Sector - Before Corryton ==





-- Best Serving Sector - After Corryton --

Blaine

Corryton

Graveston

Gibbs

0 2.603

miles

Scale: 1:66,420

**TECHNICAL JUSTIFICATION FOR PROPOSED NEW TOWER**

**U.S. CELLULAR SITE NAME: CORRYTON**

**U.S. CELLULAR SITE: 223539**

**Prepared by: Isaac Ndiaye**

**Sr. RF Engineer**

**U.S. Cellular®**

**Proposal:** Install CDMA Spectrum Relief Antennae on a new tower to be constructed on a site located at 8204 Monday Road, Corryton, Knox County, Tennessee on approximately 95 acres of property owned by Archie and Ann Johnson.

**Tower:** U.S. Cellular Corporation ("USCC") proposes to construct a 250 ft. above ground level self-support tower. The height of 250 ft. is necessary in order for signals to carry over the surrounding terrain and connect with USCC's existing network. The tower will require lighting pursuant to FAA regulations.

**RF Justification:** USCC proposes to build this facility in this area to provide additional capacity to its existing customers. With the explosive growth in usage of handheld devices (i.e., smart phones), the need for increased capacity to transmit data has grown tremendously. The newest technology which supports data transmission and provides the requisite capacity is known as "4G LTE" technology. To facilitate the rollout of 4G LTE in USCC's local network, USCC is splitting its current spectrum between the existing network (CDMA/EVDO) and the future 4G LTE network. Such "spectrum splitting" requires additional antennae to address the increased demand for spectrum usage. Specifically, this proposed tower will relieve spectrum usage on adjacent USCC antennae at USCC's Blaine, Gibbs and Graveston sites, thus providing sufficient spectrum to install LTE 4G technology. This necessary spectrum relief, as shown by USCC's coverage maps, can be efficiently corrected by a full cell site at this proposed location.

**Co-location:** The alternatives of co-locating USCC's equipment and antennae on existing structures in the surrounding area were considered. In accordance with the Knox County Zoning Ordinance, a search was performed to identify any existing registered structures within one mile of the proposed site. There were no towers found within one mile of the proposed site. The closest existing tower is located slightly over one mile from the proposed site, but USCC cannot co-locate on this tower because such tower is too close to USCC's existing Graveston site, which is one of the sites for which USCC seeks spectrum relief.

## EXHIBIT 11

List of variances and/or waivers from zoning ordinance requirements:

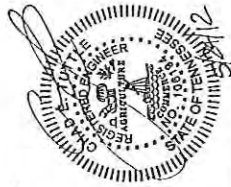
Applicant is requesting one (1) variance from the Knox County, Tennessee Zoning Ordinance relative to landscaping.

Landscaping Variance and/or Waiver: Article 4.92.02(4) sets forth landscaping requirements for telecommunications towers. Section 4.92.02(4)(b) states that “new or existing vegetation, earth berms, existing topographic features, walls, fences, building and features other than those described above may be used to meet the requirements of these regulations if the code administrator finds that they achieve the same degree of screening as 4.a.” As can be seen from photographs of the proposed site attached as Collective Exhibit 12, the proposed site is heavily wooded. Applicant intends to leave as much natural vegetation in place as possible. Further, the base of the proposed tower will be shielded from the public road by an existing stand of trees which will remain in place. Applicant therefore respectfully submits that the existing natural vegetation will accomplish the desired screening objectives set forth in the Zoning Ordinance, and Applicant respectfully requests a waiver of the landscape requirements set forth in the Zoning Ordinance. However, should the determination be made that landscaping is required, Applicant will comply with the landscaping requirements set forth in the Zoning Ordinance.

JAUS Cellular\Corryton Zoning Matter\Exhibit 11.doc



**9731 COGDILL ROAD,  
SUITE 200  
KNOXVILLE, TN 37932  
(865) 777-7039**



**U.S. CELLULAR  
RAW LAND  
CORYTON  
223539  
250' SELF SUPPORT  
TELECOMMUNICATIONS TOWER  
WITH MULTIPLE CARRIERS**

**SITE NAME:**  
CORYTON

**SITE NUMBER:**  
223539

**SITE ADDRESS:**  
8132 MONDAY ROAD  
CORYTON, TN 37721

**SITE OWNER:**  
U.S. CELLULAR CORPORATION  
9731 COGDILL ROAD, SUITE 200  
KNOXVILLE, TN 37932

**APPLICANT:**  
U.S. CELLULAR CORPORATION  
9731 COGDILL ROAD, SUITE 200  
KNOXVILLE, TN 37932

**ZONING:**  
A

**AREA OF LEASE:**  
0.230 ACRES

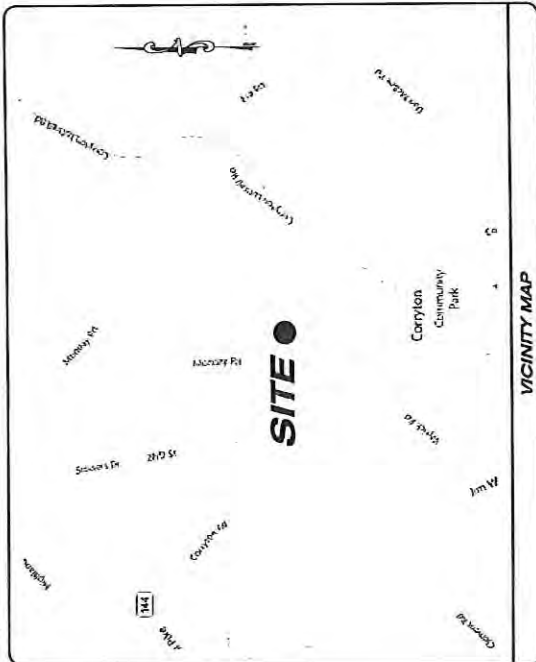
**PARCEL NUMBER(S):**  
006 088  
(KNOX COUNTY)

**SITE SUMMARY**

SHEET NO.	DESCRIPTION
TL00	TITLE SHEET/ SITE INFORMATION
CL00	GENERAL NOTES
CL10	SITE WORK NOTES
CL11	SITE WORK NOTES
1 OF 3	SITE SURVEY
2 OF 3	SITE SURVEY
3 OF 3	SITE SURVEY
CL00	ACCESS PLAN
CL10	SITE PLAN
CL20	ELEVATION AND PLATFORM DETAIL
CL30	GRADING PLAN
CL00	SITE WORK DETAILS
CA10	SITE WORK DETAILS
CA20	SITE WORK DETAILS
CA30	SITE WORK DETAILS
EL00	UTILITIES SERVICE PLAN
EL10	UTILITIES PLAN
EL20	ELECTRIC SPECIFICATIONS
EL30	GROUNDING PLAN
EL40	ELECTRICAL DETAILS
EL50	ELECTRICAL NOTES
EL60	ELECTRICAL DETAILS

**SHEET INDEX**

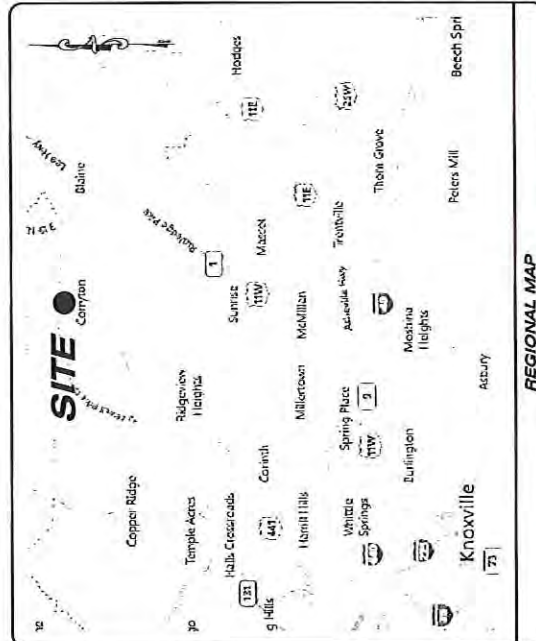
**T1.00**



**POINT TO POINT LAND SURVEYORS**  
810 JACKSON GROVE,  
GEORGIA 30248  
(P) 678.565.4440

**B&T ENGINEERING**  
1717 S. BOULDER, SUITE 300  
TULSA, OK 74119  
(P) 918-587.4630

**CONSULTANTS**



**DIRECTIONS TO SITE**

**FROM PELLISSIPPI PARKWAY & I-40 IN WEST KNOXVILLE:**  
TAKE I-40 EAST 9.3 MILES TO 775 NORTH. TAKE 775 NORTH 3.6 MILES AND CONTINUE STRAIGHT ONTO  
1-640 EAST. TAKE I-640 EAST 4.7 MILES AND TAKE RAMP ON RIGHT FOR WASHINGTON PIKE/MALL ROAD  
SOUTH TOWARD MILLERTOWN. TAKE 0.5 MILES. TURN LEFT ON WASHINGTON PIKE NE AND PROCEED  
0.3 MILES AND TURN RIGHT TO STAY ON WASHINGTON PIKE NE. PROCEED 7.9 MILES AND TURN LEFT  
ONTO ROBERTS ROAD. PROCEED 1.1 MILES ON ROBERTS ROAD AND TURN RIGHT ONTO TN-331/E  
ERRY RD. PROCEED 1.4 MILES ON E. ERY RD. AND TURN LEFT ONTO CORYTON ROAD. TAKE  
CORYTON ROAD 0.5 MILES AND TURN RIGHT ONTO MONDAY ROAD. PROCEED 0.5 MILES ALONG  
MONDAY ROAD TO SITE ON THE RIGHT.

**DIRECTIONS TO SITE**



NO.	DATE	REVISION
1	2-9-2012	ADD BENCHMARKS, JMW
2	2-9-2012	PER COMMENTS, CLC

**POINT TO POINT LAND SURVEYORS**

(w) pointtosurvey.com  
(p) 678.565.4440 (f) 678.565.4497  
810 Jackson Street  
Locust Grove, Georgia 30248

EASEMENT SURVEY PREPARED BY:

EASEMENT SURVEY PREPARED FOR:

**U.S. Cellular**

9731 CORDELL ROAD  
SUITE 200  
KNOXVILLE, TN 37932

"CORRYTON"

**SITE NO.**  
**223539**

8TH DISTRICT OF KNOX COUNTY, & 3RD DISTRICT OF UNION COUNTY, TENNESSEE

DATA BY: JMW  
CHECKED BY: CC  
APPROVED: C. INER  
DATE: 24-JAN-2012  
P29 JOB #: 2012.017

SHEET:  
**1**

**VICINITY MAP**  
NOT TO SCALE

**GENERAL NOTES**

THIS EASEMENT SURVEY WAS PERFORMED FOR THE EXCLUSIVE USE OF U.S. CELLULAR AND IS LIMITED TO THE TRANSMISSION OF THE LEASED AND THE RIGHTS OF EASEMENT. NO WARRANTY OR GUARANTEE SHALL BE MADE BY THE SURVEYOR AS TO THE ACCURACY OF ANY MEASUREMENTS, CALCULATIONS, OR DATA OBTAINED FROM ANY INSTRUMENTS OR EQUIPMENT USED FOR THIS SURVEY. THE SURVEYOR HAS CONDUCTED A VISUAL RECONSTRUCTION OF THE PROPERTY AND HAS FOUND THAT THE INSTRUMENTS AND EQUIPMENT USED FOR THIS SURVEY ARE IN GOOD WORKING ORDER AND THAT THE MEASUREMENTS AND CALCULATIONS MADE THEREON ARE CORRECT. THE SURVEYOR HAS CONDUCTED A VISUAL RECONSTRUCTION OF THE PROPERTY AND HAS FOUND THAT THE INSTRUMENTS AND EQUIPMENT USED FOR THIS SURVEY ARE IN GOOD WORKING ORDER AND THAT THE MEASUREMENTS AND CALCULATIONS MADE THEREON ARE CORRECT. THE SURVEYOR HAS CONDUCTED A VISUAL RECONSTRUCTION OF THE PROPERTY AND HAS FOUND THAT THE INSTRUMENTS AND EQUIPMENT USED FOR THIS SURVEY ARE IN GOOD WORKING ORDER AND THAT THE MEASUREMENTS AND CALCULATIONS MADE THEREON ARE CORRECT.

**SUBJECT PROPERTY**

OWNER: ARCHIE AND ANN JOHNSON  
SITE ADDRESS: 8132 MONDAY ROAD, CORRYTON, TN 37723  
PARCEL ID: 006 085 004 COUNTY: 084 COLOR: UNION COUNTY  
AREA: 161.54 ACRES  
ZONES: 990X COUNTY-A, R-B  
REFERENCES: PLAT BOOK: 39 PAGE: 69; INSTRUMENTS: 2002.01 08-04-003

**LEGEND**

- POB POINT OF BEGINNING
- POC POINT OF COMMENCEMENT
- PFC PLAT FILE NUMBER (SEE PLAT BOOK)
- PLC PLAT LOCATION (SEE PLAT BOOK)
- ULI UTILITY LOCATION (SEE PLAT BOOK)
- UTL UTILITY LINE
- PLC PLAT LOCATION
- ULI UTILITY LOCATION
- PLC PLAT LOCATION
- ULI UTILITY LOCATION
- PLC PLAT LOCATION
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- ULI UTILITY LOCATION
- PLC PLAT LOCATION
- ULI UTILITY LOCATION

EXHIBIT 2

**US Cellular**  
 871 GERRARD ROAD  
 KNOXVILLE, TN 37922  
 (615) 777-8935

**WIRELESS VISION L.L.C.**  
 Site Development Services

SCALE: 1"=60'  
 0 1" = 60'  
 1" = 60'

THIS DRAWING MAY NOT BE COPIED  
 OR REPRODUCED IN ANY MANNER  
 WITHOUT THE WRITTEN CONSENT OF  
 WIRELESS VISION L.L.C.

NO.	REVISIONS	DATE

DESIGNED: JAE  
 DRAWN: JAE  
 CHECKED: GMA  
 DATE: 12-04-09  
 JOB NUMBER: 22010108

**B&T ENGINEERING**  
 1777 S BOLLINGER  
 SUITE 305 TULSA, OK 74119  
 PH: (918) 582-4620

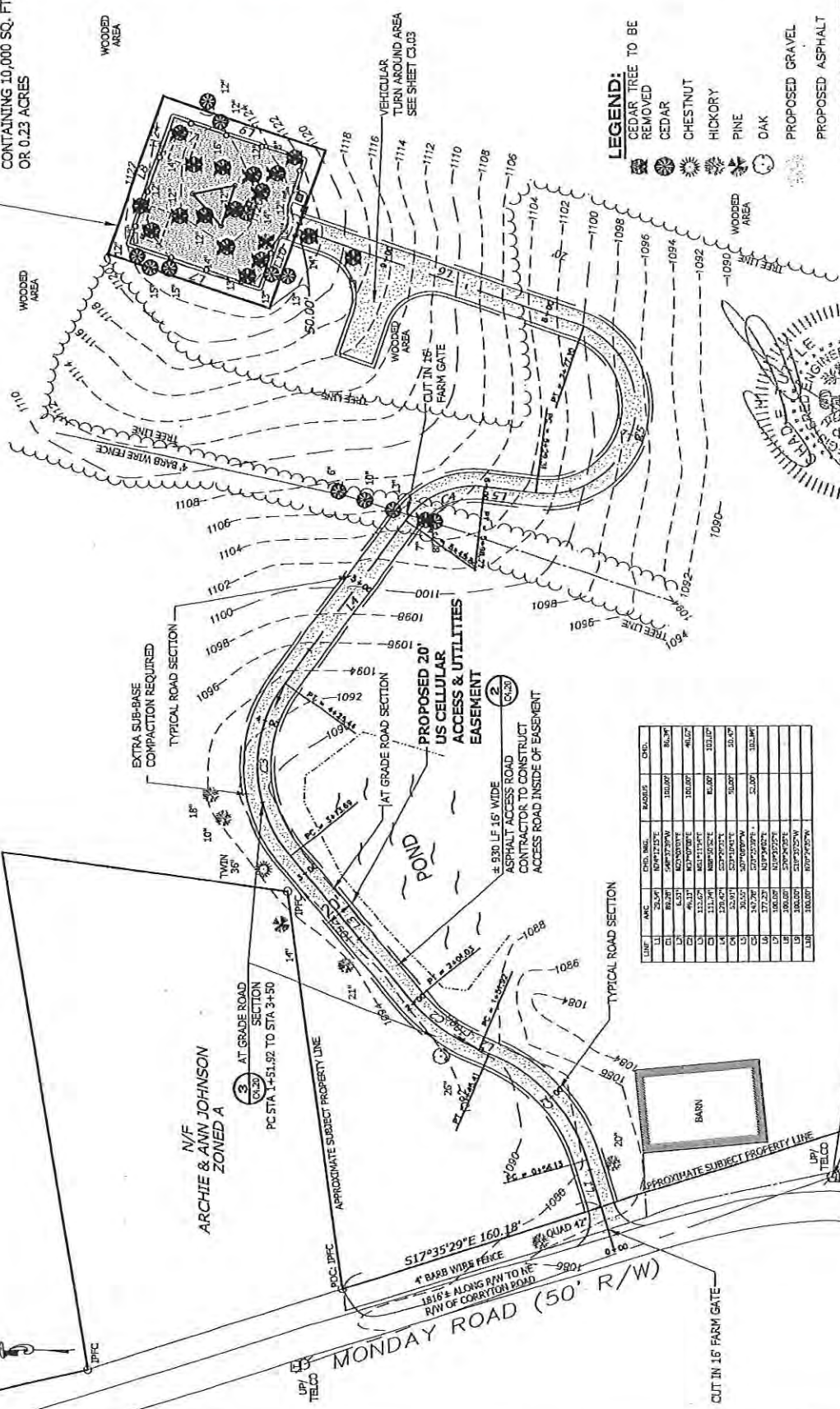
CHAD TUTTLE  
 PROFESSIONAL ENGINEER  
 REGISTRATION NO.: 26134

US CELLULAR  
 CORRITON  
 SITE NUMBER:  
 223539  
 SITE ADDRESS:  
 6232 MONDAY ROAD  
 CORRITON, TN 37721

PROJECT TITLE:  
**ACCESS PLAN**

SHEET NUMBER:  
**C3.00**

PROPOSED US CELLULAR  
 LEASE PARCEL AREA  
 CONTAINING 10,000 SQ. FT.  
 OR 0.23 ACRES



- LEGEND:**
- CEDEAR TREE TO BE REMOVED
  - CEDEAR
  - CHESTNUT
  - HICKORY
  - PINE
  - OAK
  - PROPOSED GRAVEL
  - PROPOSED ASPHALT



**REVISED**  
 7-C-12-UR  
 6-22-12

LINE	MARK	CHD. INCL.	MARKS	CHD.
1	20.00	100.00	100.00	100.00
2	20.00	100.00	100.00	100.00
3	20.00	100.00	100.00	100.00
4	20.00	100.00	100.00	100.00
5	20.00	100.00	100.00	100.00
6	20.00	100.00	100.00	100.00
7	20.00	100.00	100.00	100.00
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9	20.00	100.00	100.00	100.00
10	20.00	100.00	100.00	100.00

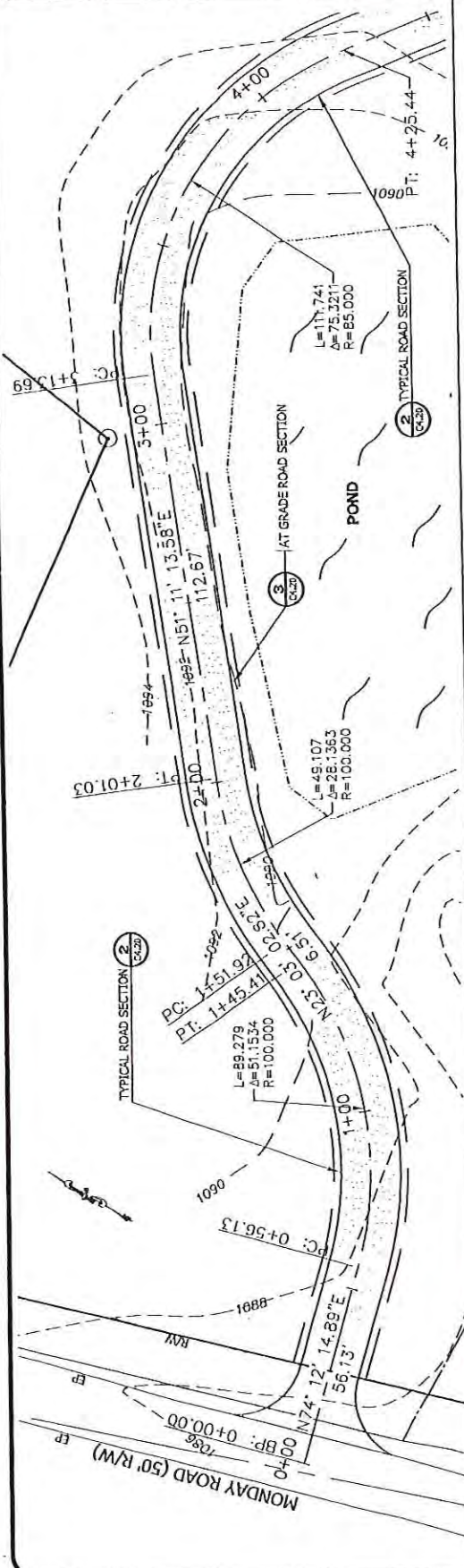
N/F  
 ARCHIE & ANN JOHNSON  
 ZONED A

3 AT GRADE ROAD SECTION  
 PC STA 1+51.92 TO STA 3+4.50

517°35'29"E 160.18'  
 4' BARB WIRE FENCE  
 1816'± ALONG R/W TO NE R/W OF CORRITON ROAD  
 MONDAY ROAD (50' R/W)

POWER & TELCO  
 DEMARC LOCATION

<b>U.S. Cellular</b> 871 CORDILL ROAD POWELL, TN 37822 (615) 777-9182	<b>WIRELESS VISION</b> Site Development Services	SCALE: VERTICAL = 1" = 10' HORIZONTAL = 1" = 100'	DATE: 5-28-12	<b>B&amp;B ENGINEERING</b> 1376 HICKORY SUITE 300, TULLA, TN 37169 PH: (615) 587-4600	CHAD TUTTLE PROFESSIONAL ENGINEER REGISTRATION NO. 100354
DESIGNER: JAC	DRAWN: JAC	CHECKED: JAC	DATE: 5-28-12	PROJECT NUMBER: 225539	SHEET TITLE: ACCESS PLAN
THIS DRAWING HAS NOT BEEN REPRODUCED OR REPRODUCED WITHOUT THE EXPRESS WRITTEN CONSENT OF B&B ENGINEERING, INC.			SITE ADDRESS: 8232 MONDAY ROAD CORRYTON, TN 37721		
SHEET NUMBER: C3.01			SHEET TITLE: ACCESS PLAN		



**ACCESS ROAD PROFILE**

Station	Elevation	Grade
1115	1093.182	
1112	1092.40	
1108	1090.88	
1104	1090.874	
1100	1090.88	
1096	1090.874	
1092	1090.874	
1088	1090.88	
1084	1090.88	

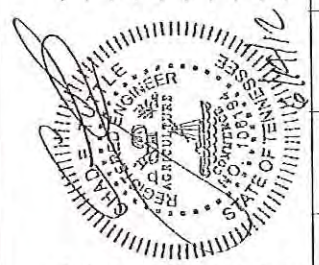
  

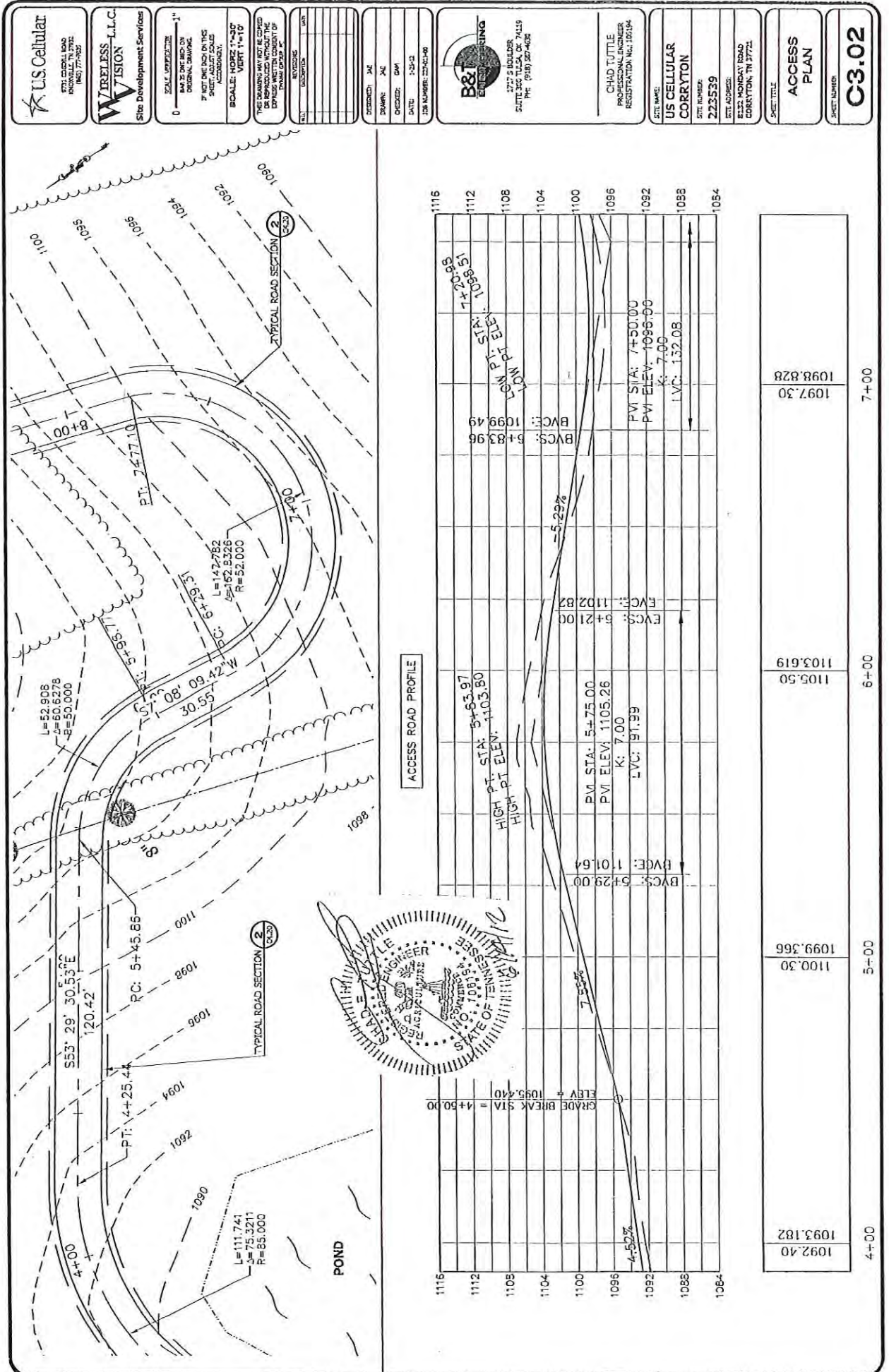
Station	Elevation	Grade
1115	1091.502	
1112	1091.502	
1108	1091.502	
1104	1091.502	
1100	1091.502	
1096	1091.502	
1092	1091.502	
1088	1091.502	
1084	1091.502	

Station	Elevation	Grade
1115	1088.66	
1112	1088.452	
1108	1088.66	
1104	1088.66	
1100	1088.66	
1096	1088.66	
1092	1088.66	
1088	1088.66	
1084	1088.66	

**GRADE BREAK STA = 2+84.55  
ELEV = 1091.056**





4+00

5+00

6+00

7+00

1092.40

1100.30

1103.619

1097.30

1098.828

U.S. Cellular  
8711 CELLULAR ROAD  
MEMPHIS, TN 38125  
(901) 777-9025

WIRELESS VISION, LLC  
Site Development Services

SCALE: HORIZ 1"=40'  
VERT 1"=10'

FOR DIMENSIONS AND LOCATIONS OF THE PROPOSED CELLULAR LEASE PARCEL AREA, REFER TO THE ATTACHED SURVEY DRAWING.

DATE: 3-25-12  
JOB NUMBER: 22013-08

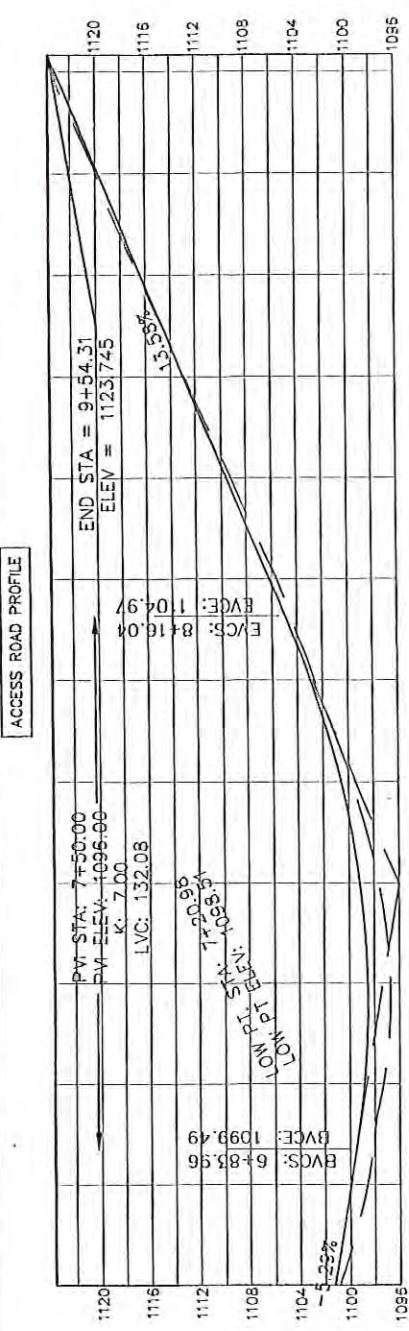
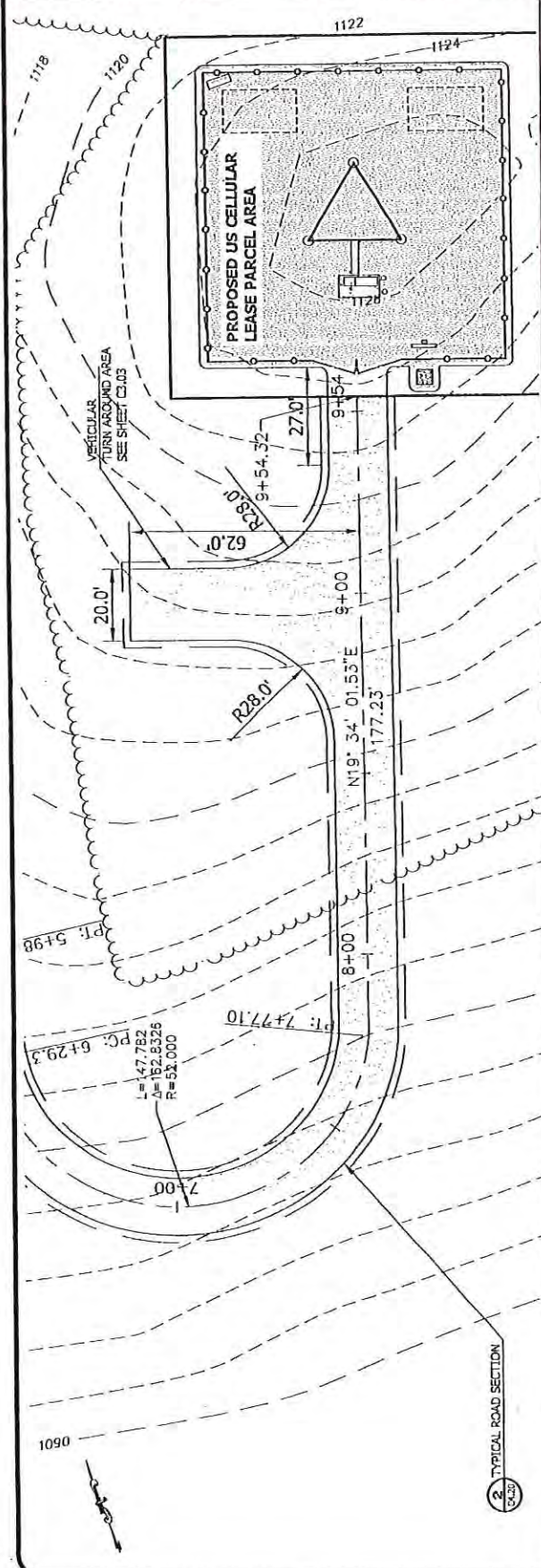
B&T ENGINEERING  
5727 S. BOLIVAR  
SUITE 300 TULSA, OK 74119  
PH: (918) 447-4048

CHAD TUTTLE  
PROFESSIONAL ENGINEER  
REGISTRATION NO. 10934

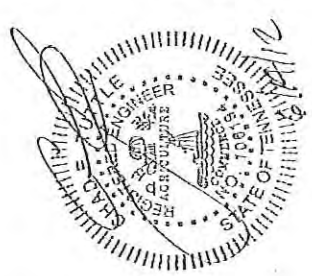
US CELLULAR  
CORRYTON  
SITE NUMBER: 22013-08  
SITE ADDRESS: 8132 MONDAY ROAD  
CORRYTON, TN 37721

ACCESS PLAN

C3.03

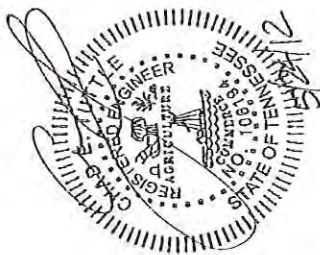


1097.30	7+00
1102.64	8+00
1116.53	9+00
1116.370	10+00



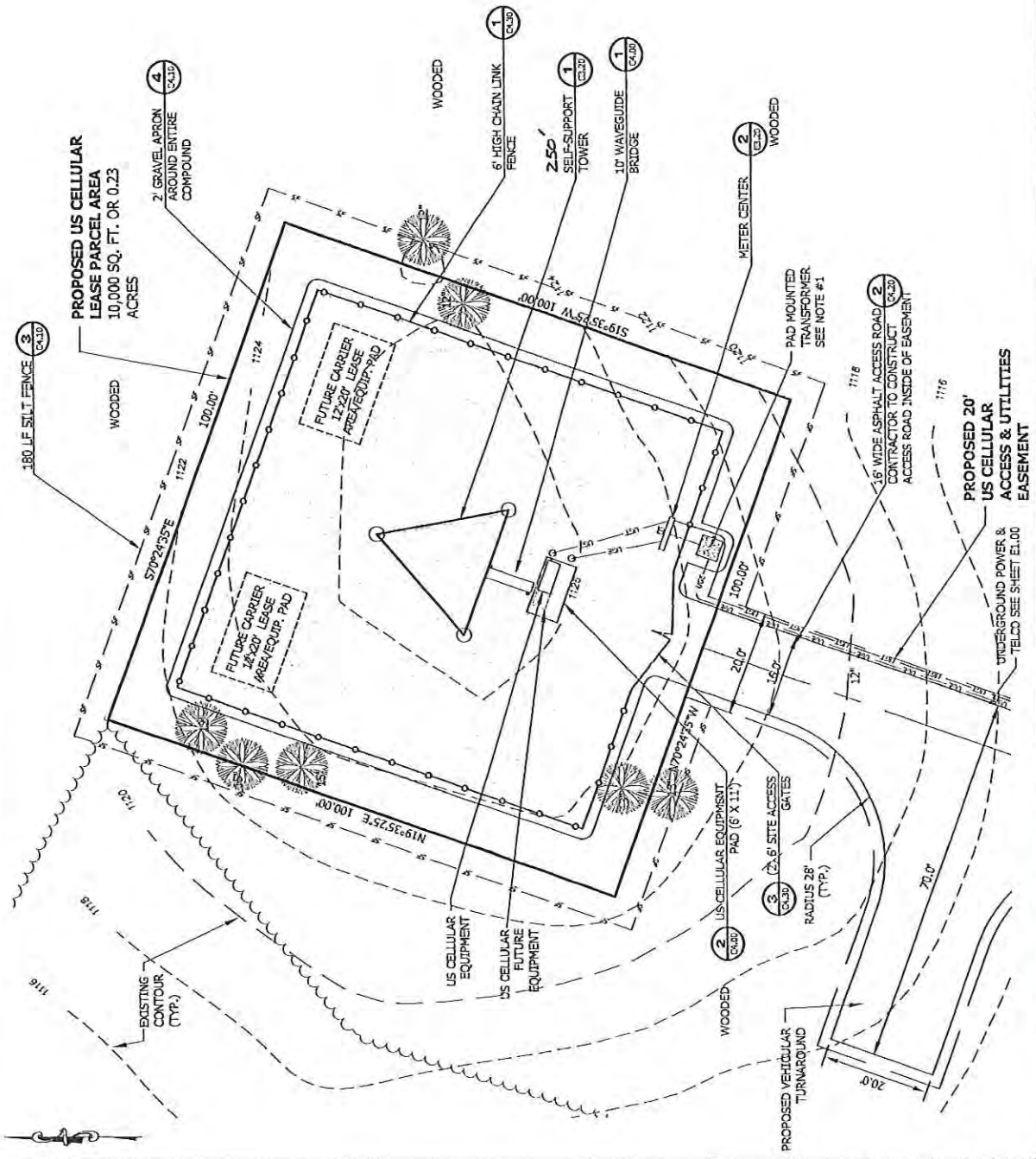
		SCALE: UNITS IN INCHES 1" = 20' IF NOT ONE INCH ON THE SHEET, ADJUST SCALES ACCORDINGLY.	THIS DRAWING MAY NOT BE COPIED OR REPRODUCED WITHOUT THE WRITTEN CONSENT OF THE COMPANY.	REVISIONS NO. DATE DESCRIPTION	DESIGNED: JMC DRAWN: JMC CHECKED: GJM DATE: 1-25-12 JOB NUMBER: 223539		CHAD TUTTLE PROFESSIONAL ENGINEER REGISTRATION NO. 116334	SITE NAME: <b>US CELLULAR</b> <b>CORRYTON</b>	SITE NUMBER: <b>223539</b>	SITE ADDRESS: 1555 HICKORY ROAD CORRYTON, TN 37723	SHEET TITLE: <b>SITE PLAN</b>	SHEET NUMBER: <b>C3.10</b>
--	--	--	--	-----------------------------------	--	--	---	---	-------------------------------	--	----------------------------------	-------------------------------

- NOTES:**
1. NEW UTILITY EQUIPMENT PAD PER UTILITY COMPANY SPECIFICATIONS
  2. CONTRACTOR TO COORDINATE UTILITY CONNECTIONS WITH LOCAL SERVICE PROVIDER PRIOR TO BIDDING PROJECT. THE PLACEMENT OF NEW POWER POLES SHALL BE COORDINATED WITH SERVICE PROVIDERS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
  3. BASE OF TOWER IS NOT VISIBLE FROM ADJOINING PROPERTY OR DEDICATED RIGHT-OF-WAY DUE TO LOCATION IN WOODED AREA. NO LANDSCAPING/SCREENING IS REQUIRED.



**REVISED**  
6-22-2012

- LEGEND:**
- CEEDAR TREE
  - PROPOSED GRAVEL
  - PROPOSED ASPHALT





SCALE: VERTICAL 1" = 10'  
 HORIZONTAL 1" = 20'  
 THIS DRAWING MAY NOT BE COPIED OR REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE ORIGINAL DRAWING CONTRACTOR.

NO.	REVISIONS	DATE

DESIGNED: JAC  
 DRAWN: JAC  
 CHECKED: GJM  
 DATE: 1-25-12  
 JOB NUMBER: 22-031-08



1777 S BOLDER  
 SUITE 300 TULSA, OK 74119  
 PH: (918) 587-4030

CHAD TUTTLE  
 PROFESSIONAL ENGINEER  
 REGISTRATION NO.: 382124

US CELLULAR  
 CORRYTON  
 SITE NUMBER:  
 223539

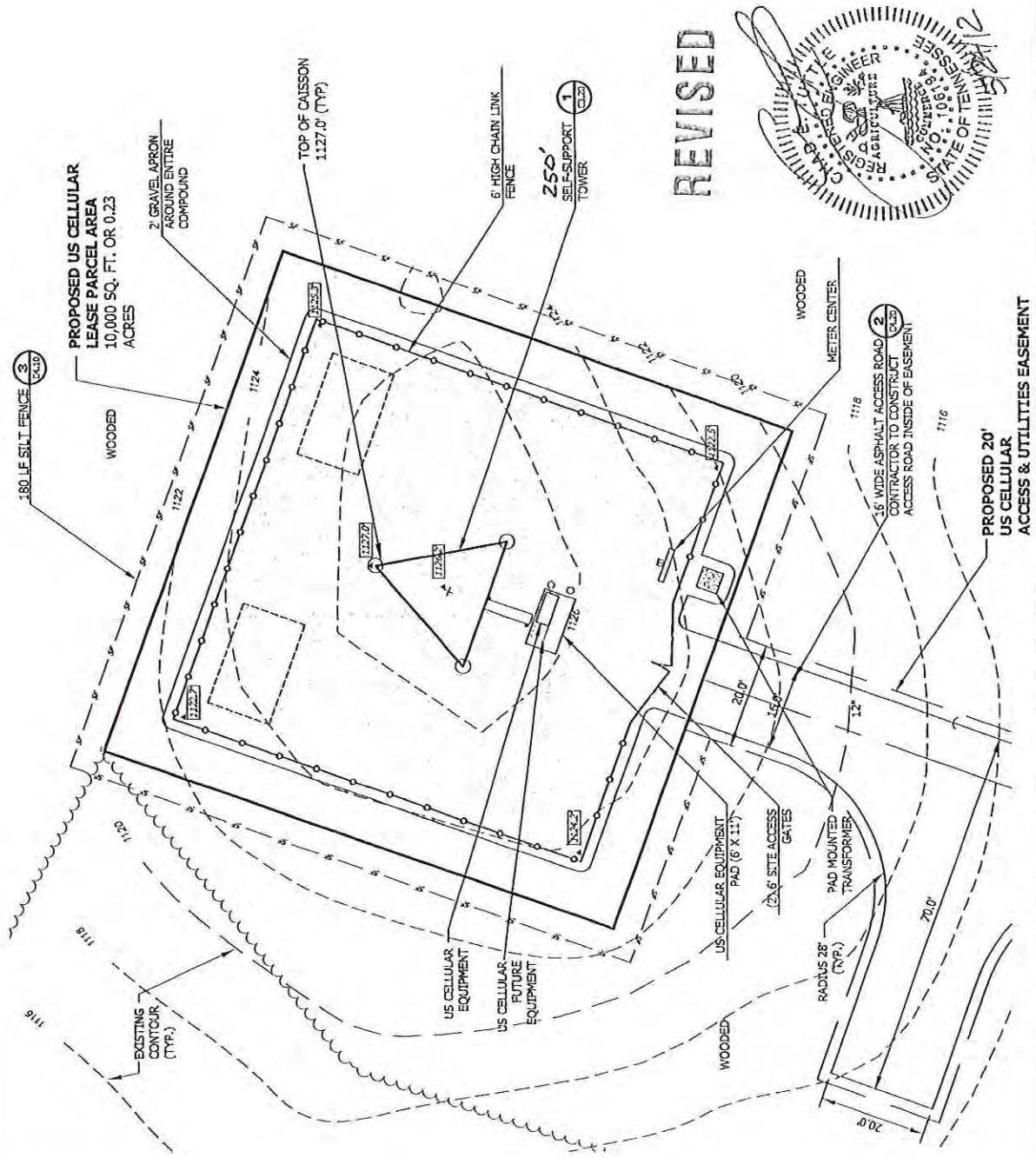
PROJECT TITLE  
**GRADING PLAN**  
 SHEET NUMBER  
**C3-30**

- LEGEND:**
- 1. PROPOSED FINISHED GRADE
  - 2. PROPOSED GRAVEL
  - 3. PROPOSED ASPHALT

**CONTRACTOR'S NOTE:**  
 DRAINAGE TO BE MAINTAINED AS CLOSELY AS POSSIBLE TO PRE CONSTRUCTION CONDITIONS.

**NOTES:**

1. TYPICAL FINISH GRADES ARE TOP OF STONE.
2. PROVIDE VEGETATION CONTROL FOR SUBGRADE PRIOR TO PLACEMENT OF STONE.
3. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON SITE AT ALL TIMES. SILT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED ON THE DOWNSLOPE SIDE OF THE SITE AT ALL TIMES. ANY DAMAGE TO ADJACENT PROPERTY WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
4. SEEDING AND MULCHING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE SITE DEVELOPMENT. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING AN ADEQUATE COVER OF VEGETATION OVER THE SITE FOR A ONE YEAR PERIOD. ALL SEEDING AND MULCHING SHALL BE PER N.C.D.O.T. SPECIFICATIONS.
5. PLACE SOG ON ALL SLOPES GREATER THAN 4:1. PIN SOG ON ALL SLOPES GREATER THAN 3:1. PLACE EROSION CONTROL BLANKET ON ALL SLOPES GREATER THAN 2:1. ALL VEGETATIVE CONTROL MEASURES SHALL BE PER NCDDOT.
6. TREES INTERFERING WITH CONSTRUCTION SHALL BE REMOVED FROM THE SITE. NO VEGETATION OR DEBRIS SHALL BE ALLOWED TO FALL OVER SLOPE.
7. PERMISSION FOR GRADING OUTSIDE THE LEASE AREA IS PROVIDED BY U.S. CELLULAR AGREEMENT WITH OWNER.
8. CONTRACTOR TO MINIMIZE CLEARING AND GRUBBING LIMITS TO MAINTAIN VEGETATION IN NATURAL STATE AS MUCH AS POSSIBLE.
9. ALL DISTURBED AREAS SHALL BE TREATED WITH PERMANENT EROSION CONTROL MEASURES.
10. SEE SITE SURVEY SHEET 1 OR 3 FOR BENCHMARKS.





Site Development Services  
 0 SCALE: NOT INDICATED  
 1" = 100'  
 SCALE: N.T.S.

THIS DRAWING HAS NOT BEEN CHECKED FOR CONFORMANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL SAFETY CODE (NEC) AND THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARDS.  
 SCALE: N.T.S.

DESIGNED BY	JAE
DRAWN BY	JAE
CHECKED BY	GAM
DATE	3-25-12
DWG NUMBER	2P-01-06



1777 S BOULDER  
 SUITE 200  
 PR. (615) 307-4400

CHAD TUTTLE  
 PROFESSIONAL ENGINEER  
 REGISTRATION NO.: 105104

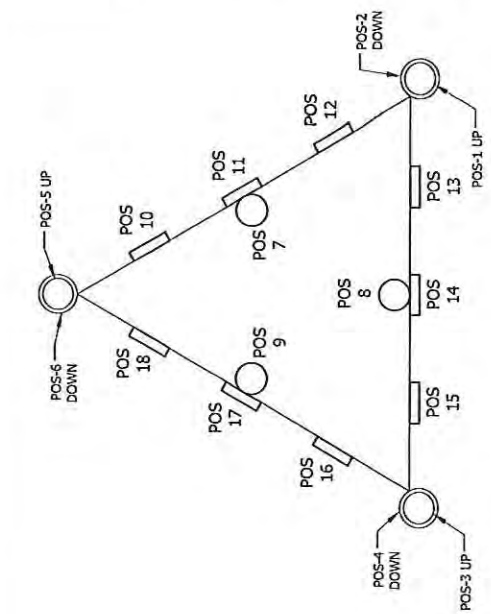
SITE NAME:  
**US CELLULAR  
 CORRYTON**

SITE NUMBER:  
**223539**

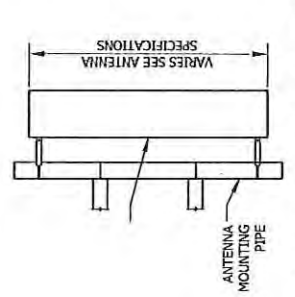
SITE ADDRESS:  
**8132 MORRAY ROAD  
 CORRYTON, TN 37721**

SHEET TITLE:  
**ELEVATION AND  
 PLATFORM  
 DETAIL**

SHEET NUMBER:  
**C3.20**



**3 ANTENNA PLATFORM ASSIGNMENT**  
 N.T.S.



**2 ANTENNA SECTION**  
 N.T.S.

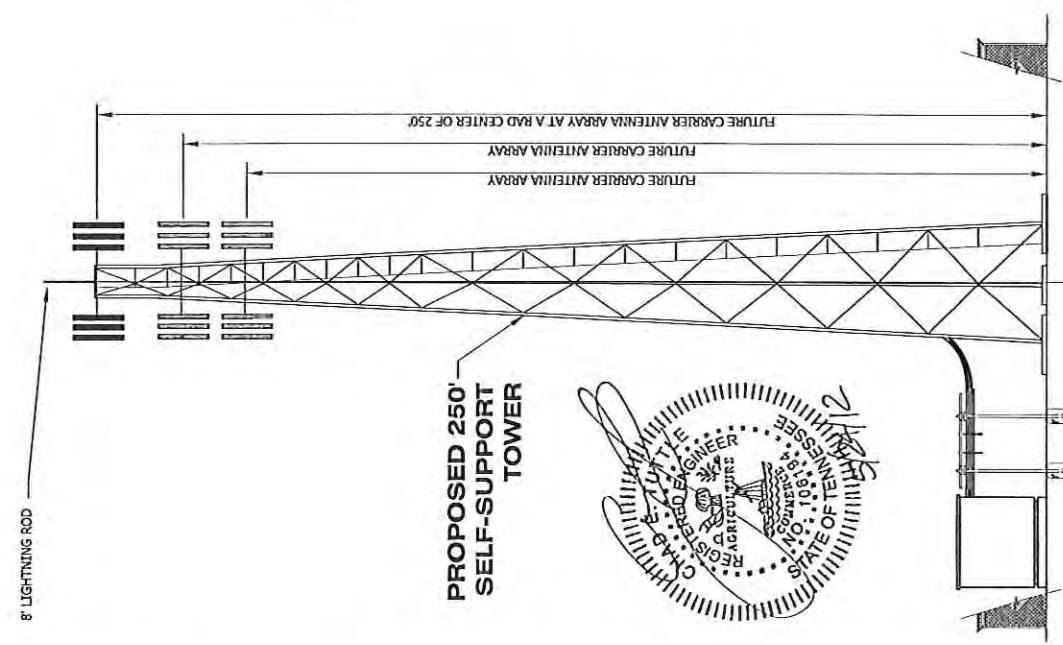
SECTOR	COAX COLOR CODE			# OF STRIPES			
	COLOR	TX	RX1	RX2	TX	RX1	RX2
ALPHA X	RED	1	2	3			
BETA Y	WHITE	1	2	3			
GAMMA Z	BLUE	1	2	3			

REV 'C' INFORMATION  
 STRUCTURE CLASS II  
 EXPOSURE CATEGORY B  
 TOPOGRAPHIC CATEGORY 3 (HILL TOP)

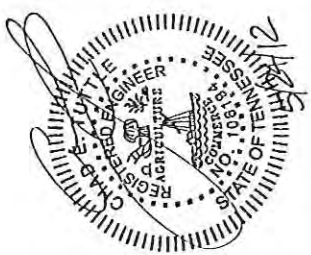
POS #	ANTENNA ID	ANTENNA MODEL	GAIN	ANT. ERP	PA SETTING	MECH DT	ELEC DT	ANT. HEIGHT	AZIMUTH	CABLE LENGTH	CABLE SIZE
1											
2											
3											
4											
5											
6											
7											
8											
9											
0											
11											
12											

NO RF PROVIDED TO ENGINEER

**4 ANTENNA SCHEDULE**  
 N.T.S.



**PROPOSED 250' SELF-SUPPORT TOWER**



**1 TOWER ELEVATION**  
 N.T.S.