



**KNOXVILLE/KNOX COUNTY METROPOLITAN PLANNING COMMISSION  
USE ON REVIEW REPORT**

▶ **FILE #:** 12-H-07-UR

**AGENDA ITEM #:** 118

**AGENDA DATE:** 12/13/2007

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

**OWNER(S):** JAMES LEPPINK

**TAX ID NUMBER:** 103 064

**JURISDICTION:** County Commission District 6

▶ **LOCATION:** North side of Sam Lee Rd., northeast of Steele Rd.

▶ **APPX. SIZE OF TRACT:** 10000 square feet

**SECTOR PLAN:** Northwest County

**GROWTH POLICY PLAN:** Rural Area

**ACCESSIBILITY:** Access is via Sam Lee Rd., a major collector street with an 18' pavement width within a 50' right-of-way.

**UTILITIES:** Water Source: West Knox Utility District

Sewer Source: West Knox Utility District

**WATERSHED:** Beaver Creek

▶ **ZONING:** A (Agricultural)

▶ **EXISTING LAND USE:** Residence

▶ **PROPOSED USE:** 195' monopole telecommunication tower

**HISTORY OF ZONING:** None noted

**SURROUNDING LAND USE AND ZONING:** North: Rural residential development / A (Agricultural)

South: Rural residential development and church / A (Agricultural)

East: Rural residential development / A (Agricultural)

West: Rural residential development / A (Agricultural)

**NEIGHBORHOOD CONTEXT:** This site is located in a rural residential area developed under A (Agricultural) zoning. The proposed tower site is just south of the recommended alignment of proposed SR-475.

**STAFF RECOMMENDATION:**

▶ **APPROVE the request for a 195' monopole telecommunications tower in the A zoning district, subject to the following 6 conditions:**

1. Meeting all applicable requirements of the Knox County Zoning Ordinance.
2. Meeting all applicable requirements and obtaining all required permits from the Tennessee Department of Environment and Conservation for the driveway crossing the sinkhole.
3. Installation of landscaping as shown on the development plan within six months of the tower becoming operational.
4. Meeting all applicable requirements of the Knox County Department of Engineering & Public Works.
5. Since the FAA does not require any lighting for this facility, there shall be no lighting on the tower.
6. 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 195' monopole telecommunications tower to be located within a 10,000 square foot lease area located on a 8.8 acre parcel. The majority of the site is wooded. The proposed tower site will have access to Sam Lee Rd. by a 30' wide access easement. The proposed driveway that will serve the site will cross a closed contour/sinkhole. The applicant will be required to obtain all applicable approvals from the Tennessee Department of Environment and Conservation for the crossing of the sinkhole. The subject property is zoned A (Agricultural) and telecommunication towers are considered as a use on review in this district.

The proposed tower is required to be located 214.5' (110% of the tower height) from the nearest residence. The nearest residence is located approximately 270' to the east of the proposed tower.

According to the Knoxville-Knox County Wireless Communications Facility Plan, rural/heavily wooded areas are considered "Opportunity Areas" for telecommunication towers. Since the proposed site is located within 500' of a residence it is also considered to be within a "Sensitive Area". At a proposed height of 195', the Plan discourages tall towers near residences. Since the adoption of the Facility Plan, the Knox County Zoning Ordinance has been amended to increase setback from residences to 110% of the towers height. The proposed telecommunication tower far exceeds that requirement.

The visual impact on nearby residences will be minimal due to the fact that the proposed site is heavily wooded. This vegetation will provide a natural buffer between the tower and adjacent residences. The applicant will be required to install a 6' high security fence prior to the tower becoming operational. A landscape screen is also being provided around the site.

The tower is designed so it will collapse upon itself in case of a natural disaster or other failure. FAA does not require any lighting for the tower. The tower will support up to 5 telecommunication carrier antenna arrays. U. S. Cellular Corporation will be the principal client for the tower. A letter has been submitted stating that U. S. Cellular Corporation agrees to make this facility available to other wireless providers for co-location. There are no other towers within one mile of the proposed tower that could provide the coverage needed by the applicant

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 195' 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 utilities are available to serve this site.
2. The tower, being located within a low density residential area, is required to be screened. Since this 8.8 acre parcel is heavily wooded and a landscaped screen will be provided around the tower site, the impact on nearby residences will be minimal.

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

1. The proposed commercial telecommunications tower at this location meets the standards required in the A 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 and Northeast County Sector Plan. The use is in harmony with the general purpose and intent of the Zoning Ordinance. Since this is a heavily wooded 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 Northwest County Sector Plan proposes low density residential uses for this area. The proposed

development is consistent with this land designation.

2. The Wireless Communications Facility Plan identifies the proposed 195' monopole as a "tall" monopole. Under the guidelines in the Tower Placement section of the Facility Plan, the proposed tower falls within both the "Opportunity Area" and "Sensitive Area" categories. The Plan takes a neutral position on tall monopoles located in "Opportunity Areas". While tall towers are discouraged in residential areas, the required setbacks reduce the impact to nearby residences. (see attached matrix).

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.





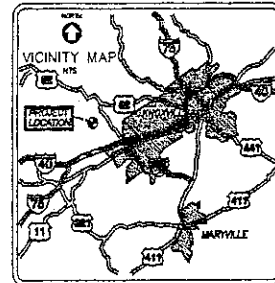
**FLOOD HAZARD STATEMENT:**

THIS COMMUNICATIONS SITE (THE SUBJECT SITE AS SHOWN) IS NOT LOCATED WITHIN THE LIMITS OF A DESIGNATED 100 YEAR FLOOD ZONE PER FEMA/FIRM MAP NO. COMMUNITY PANEL NUMBER 470932 0201 F, KNOX COUNTY, TENNESSEE, EFFECTIVE DATE MAY 2, 2007.

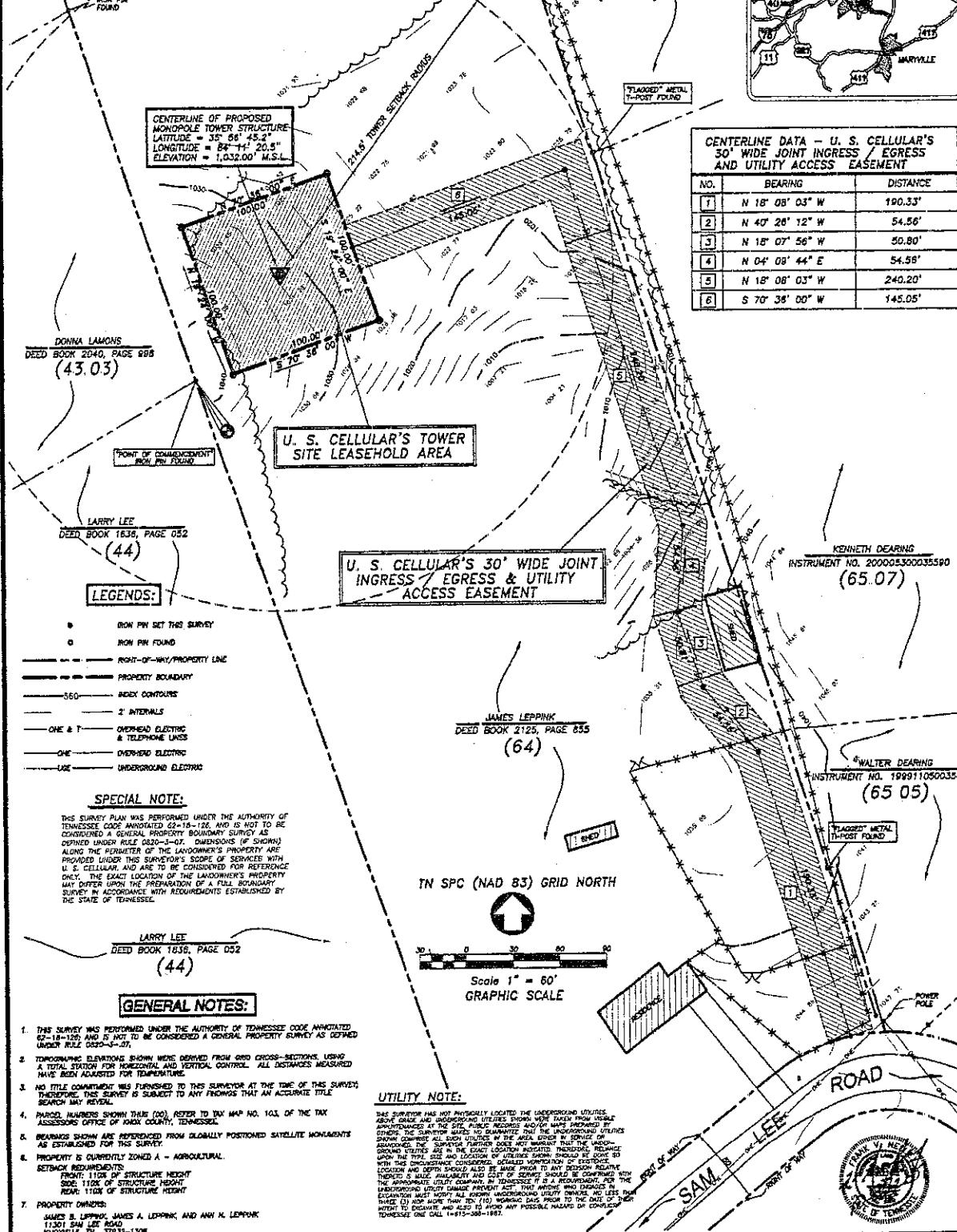
**PROJECT BENCHMARK:**

THE ELEVATION DATA IS BASED UPON GPS SURVEY METHODS AND PROCEDURES.

TOP OF IRON PIN FOUND THIS SURVEY  
ELEVATION = 1,042.85' M.S.L.  
(SEE PLAN FOR LOCATION)



RICHARD WILLIS  
INSTRUMENT NO. 189911220039175  
(65.06)



**CENTERLINE DATA - U. S. CELLULAR'S 30' WIDE JOINT INGRESS / EGRESS AND UTILITY ACCESS EASEMENT**

NO.	BEARING	DISTANCE
1	N 18° 08' 03" W	190.33'
2	N 40° 28' 12" W	54.56'
3	N 18° 07' 56" W	50.80'
4	N 04° 08' 44" E	54.58'
5	N 18° 08' 03" W	240.20'
6	S 70° 38' 00" W	145.05'

DONNA LAMONS  
DEED BOOK 2040, PAGE 898  
(43.03)

LARRY LEE  
DEED BOOK 1836, PAGE 052  
(44)

U. S. CELLULAR'S 30' WIDE JOINT INGRESS / EGRESS & UTILITY ACCESS EASEMENT

JAMES LEPPINK  
DEED BOOK 2125, PAGE 855  
(64)

KENNETH DEARING  
INSTRUMENT NO. 200005300035590  
(65.07)

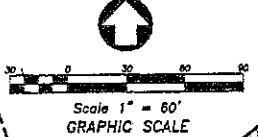
WALTER DEARING  
INSTRUMENT NO. 199911050035485  
(65.05)

- LEGENDS:**
- IRON PIN SET THIS SURVEY
  - IRON PIN FOUND
  - RIGHT-OF-WAY/PROPERTY LINE
  - PROPERTY BOUNDARY
  - 500' BENCH CONTOURS
  - 2' INTERNALS
  - ONE & T OVERHEAD ELECTRIC & TELEPHONE LINES
  - ONE OVERHEAD ELECTRIC
  - ONE UNDERGROUND ELECTRIC

**SPECIAL NOTE:**

THIS SURVEY PLAN WAS PERFORMED UNDER THE AUTHORITY OF TENNESSEE CODE ANNOTATED 62-18-126, AND IS NOT TO BE CONSIDERED A GENERAL PROPERTY BOUNDARY SURVEY AS DEFINED UNDER RULE 0200-1-01. DIMENSIONS (IF SHOWN) ALONG THE PERIMETER OF THE LANDOWNER'S PROPERTY ARE PROVIDED UNDER THIS SURVEYOR'S SCOPE OF SERVICES WITH U. S. CELLULAR AND ARE TO BE CONSIDERED FOR REFERENCE ONLY. THE EXACT LOCATION OF THE LANDOWNER'S PROPERTY MAY DIFFER UPON THE PREPARATION OF A FULL BOUNDARY SURVEY IN ACCORDANCE WITH REQUIREMENTS ESTABLISHED BY THE STATE OF TENNESSEE.

IN SPC (NAD 83) GRID NORTH



**GENERAL NOTES:**

1. THIS SURVEY WAS PERFORMED UNDER THE AUTHORITY OF TENNESSEE CODE ANNOTATED 62-18-126, AND IS NOT TO BE CONSIDERED A GENERAL PROPERTY BOUNDARY SURVEY AS DEFINED UNDER RULE 0200-1-01.
2. TEMPORARY ELEVATIONS SHOWN WERE DERIVED FROM GRID CROSS-SECTIONS USING A TOTAL STATION FOR HORIZONTAL AND VERTICAL CONTROL. ALL DISTANCES MEASURED HAVE BEEN ADJUSTED FOR TEMPERATURE.
3. NO TITLE COMMITMENT WAS FURNISHED TO THIS SURVEYOR AT THE TIME OF THIS SURVEY; THEREFORE, THIS SURVEY IS SUBJECT TO ANY FINDINGS THAT AN ACCURATE TITLE SEARCH MAY REVEAL.
4. PARCEL NUMBERS SHOWN THERE (00) REFER TO TAX MAP NO. 102 OF THE TAX ASSESSORS OFFICE OF KNOX COUNTY, TENNESSEE.
5. PARCELS SHOWN ARE IDENTIFIED FROM GLOBALLY POSITIONED SATELLITE MONUMENTS AS ESTABLISHED FOR THIS SURVEY.
6. PROPERTY IS CURRENTLY ZONED A - AGRICULTURAL. SETBACK REQUIREMENTS:  
FRONT: 1100' OF STRUCTURE HEIGHT  
SIDE: 1100' OF STRUCTURE HEIGHT  
REAR: 1100' OF STRUCTURE HEIGHT
7. PROPERTY OWNERS:  
JAMES B. LEPPINK, JAMES A. LEPPINK, AND ANNY M. LEPPINK  
11301 SAN LEE ROAD  
KNOXVILLE, TN 37932-1308

**UTILITY NOTE:**

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES ABOVE GROUND AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM AVAILABLE INFORMATION AT THE SITE. PUBLIC RECORDS AND/OR MAPS INDICATED BY OTHERS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN CORRECTLY ALL SUCH UTILITIES IN THE AREA. PRIOR TO ANY CONSTRUCTION, THE SURVEYOR FURTHER SUGGESTS THAT THE LANDOWNER SHOULD CONTACT THE APPROPRIATE AGENCIES TO IDENTIFY THE LOCATION OF UTILITIES. THE SURVEYOR'S LIABILITY AND SCOPE OF SERVICE SHOULD BE CLARIFIED WITH THIS UNDERSTANDING. THE SURVEYOR'S LIABILITY AND SCOPE OF SERVICE SHOULD BE CLARIFIED WITH THIS UNDERSTANDING. THE SURVEYOR'S LIABILITY AND SCOPE OF SERVICE SHOULD BE CLARIFIED WITH THIS UNDERSTANDING.

PROJECT NUMBER: J.K. 271285.00  
SHEET NUMBER: 1 OF 2

U. S. CELLULAR SITE SURVEY: TENNESSEE  
"HARDIN VALLEY" TOWER SITE  
LOCATED IN: KNOXVILLE, KNOX COUNTY, TENNESSEE  
TOWER SITE LEASEHOLD AREA SURVEY  
PREPARED FOR U. S. CELLULAR  
U. S. CELLULAR SITE NO.: 223-437

SHARONDALE SURVEYING INC  
1400 HILLSBORO PLACE SUITE 300  
KNOXVILLE, TN 37921  
615-581-5010  
FAX: 615-581-5070  
WWW.SHARONDALESURVEYING.COM

PROJECT NO. 271285.00  
DATE: 11/12/2007  
DRAWN BY: J.S.P.  
CHECKED BY: J.V.A.

APPROVED	11/12/2007
POWER	COORDINATED
REVISION	



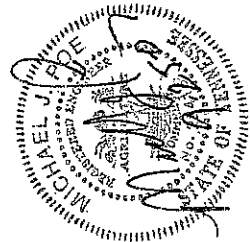
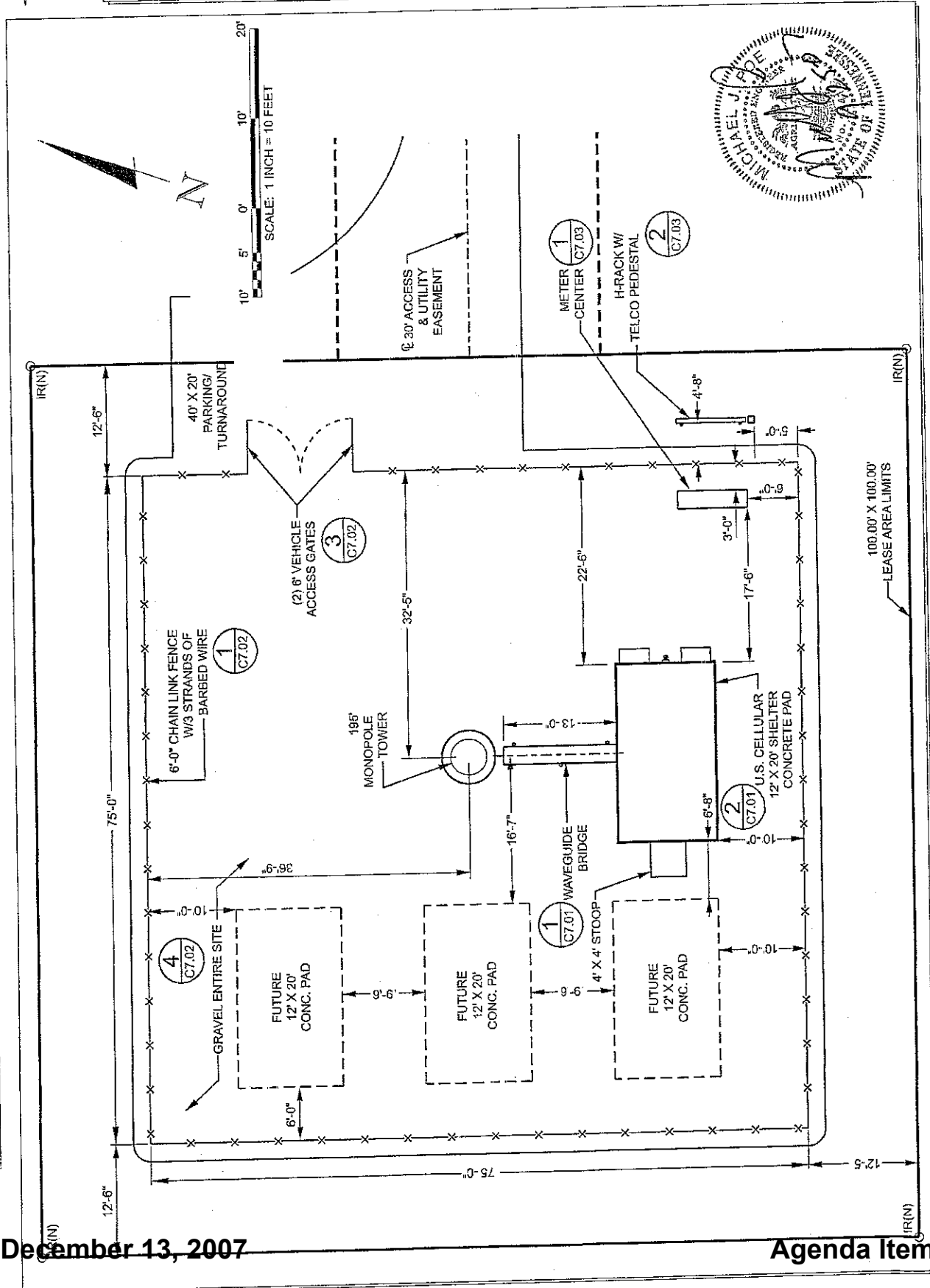
**U.S. Cellular**  
 9731 COGDILL ROAD  
 KNOXVILLE, TN 37932  
 (865)777-7030

**BWSC**  
 BARGE  
 WAGBNER  
 DUNN &  
 TURNER  
 ENGINEERS ARCHITECTS AND SURVEYORS  
 LANDSCAPE ARCHITECTS PLANNERS  
 10133 SHERILL BLVD, SUITE 200  
 KNOXVILLE TENNESSEE 37932

NO.	DATE	REVISION

THE DRAWING & CONTRACTS ARE TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFIC TO THE CITY OF KNOXVILLE, TENNESSEE. NO PART OF THIS DRAWING OR CONTRACTS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

Drawn by: DNS  
 Checked by: MJJP  
 PROJ. NO.: NUP  
 SHEET NO.:  
**U.S. CELLULAR**  
 HARDIN VALLEY  
 SHEET NUMBER:  
 223-437  
 SITE ADDRESS:  
 11301 SAM LEE ROAD  
 KNOXVILLE, TN 37932  
 SHEET TITLE:  
**SITE PLAN**  
 PROJECT # 33477-07  
 SHEET NUMBER:  
 C1.01  
 PROJECT SCALE:  
 1" = 1'





**U.S. Cellular**  
 9731 COGILL ROAD  
 KNOXVILLE, TN 37932  
 (665)777-7030

**BWSC**  
 BARRÉ WADDEN & GANNON, INC.  
 ENGINEER ARCHITECTS AND PLANNERS  
 10133 SHERILL BLVD., SUITE 200  
 KNOXVILLE, TENNESSEE 37932

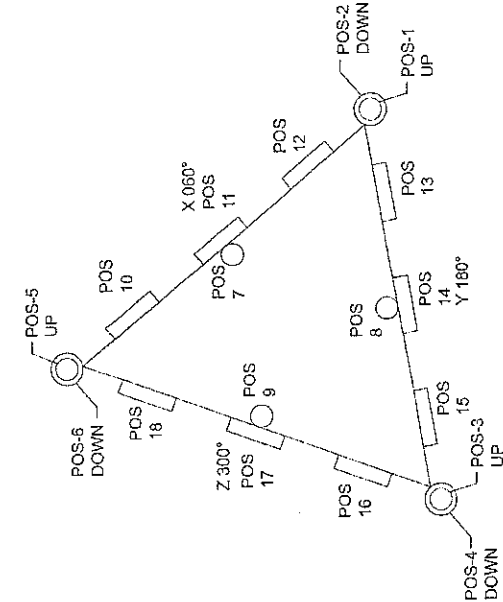
DATE	DESCRIPTION
11-28-07	CONSTRUCTION DOCUMENTS
11-29-07	ADD FUTURE CARRIER
11-29-07	ADD FUTURE CARRIER
11-29-07	ADD FUTURE CARRIER
11-29-07	ADD FUTURE CARRIER
11-29-07	ADD FUTURE CARRIER
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11-29-07	ADD FUTURE CARRIER

THE DESIGN IS APPROVED FOR THE USE  
 PROPERTY OF THE CLIENT. IT IS PROVIDED  
 AS A SERVICE TO THE CLIENT AND IS NOT  
 TO BE REPRODUCED OR TRANSMITTED IN  
 ANY FORM OR BY ANY MEANS, ELECTRONIC  
 OR MECHANICAL, INCLUDING PHOTOCOPYING,  
 RECORDING, OR BY ANY INFORMATION  
 STORAGE AND RETRIEVAL SYSTEM, WITHOUT  
 THE WRITTEN PERMISSION OF THE OWNER.

DESIGN BY: MJP  
 CHECKED BY: MJP  
 PROJECT NO.: MJP  
 SHEET NO.:  
 U.S. CELLULAR  
 HARDIN VALLEY  
 SHEET NUMBER  
 11501 SAM LEE ROAD  
 KNOXVILLE, TN 37932

11501 SAM LEE ROAD  
 KNOXVILLE, TN 37932

SHEET TITLE  
 ELEVATION &  
 PLATFORM DETAIL  
 PROJECT # 33477-07  
 SHEET NUMBER  
 C2.01  
 PLOT SCALE  
 1" = 1'



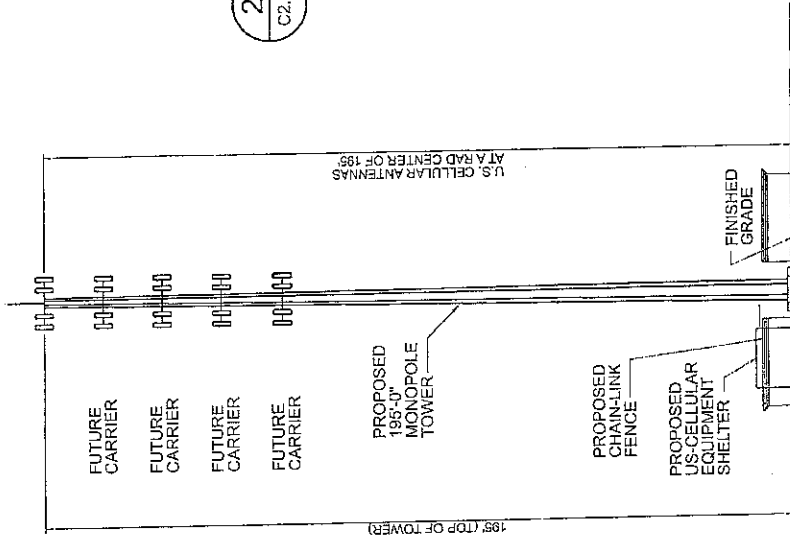
**2 ANTENNA SECTION**  
 N.T.S.  
 C2.01



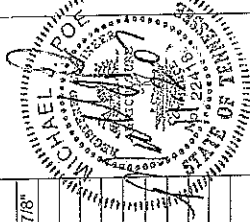
**3 ANTENNA PLATFORM ASSIGNMENT**  
 N.T.S.  
 C2.01

POS/ANTENNA #	ID	ANTENNA MODEL	GAIN	ANT. ERP	PA SETTING	MECH DT	ELEC DT	ANT. HEIGHT	ANT. AZIMUTH	CABLE LENGTH	CABLE SIZE
1											
2	2	BXA-80063-6CF				0	0	190'	210°	210'	7/8"
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14	1	BXA-80063-6CF				0	0	190'	130°	210'	7/8"
15											
16											
17	3	BXA-80063-6CF				0	0	190'	320°	210'	7/8"
18											

**4 TOWER ELEVATION**  
 N.T.S.  
 C2.01



**1 TOWER ELEVATION**  
 SCALE: 1" = 30'  
 C2.01



**U.S. Cellular**  
 9781 COGILL ROAD  
 KNOXVILLE, TN 37932  
 (665)777-7030

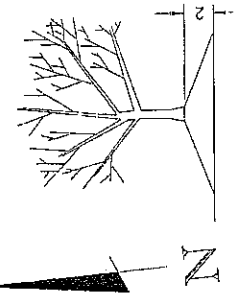
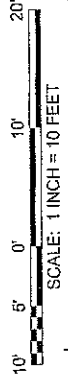
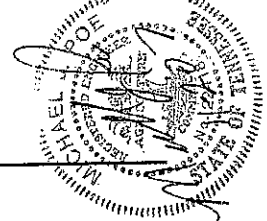
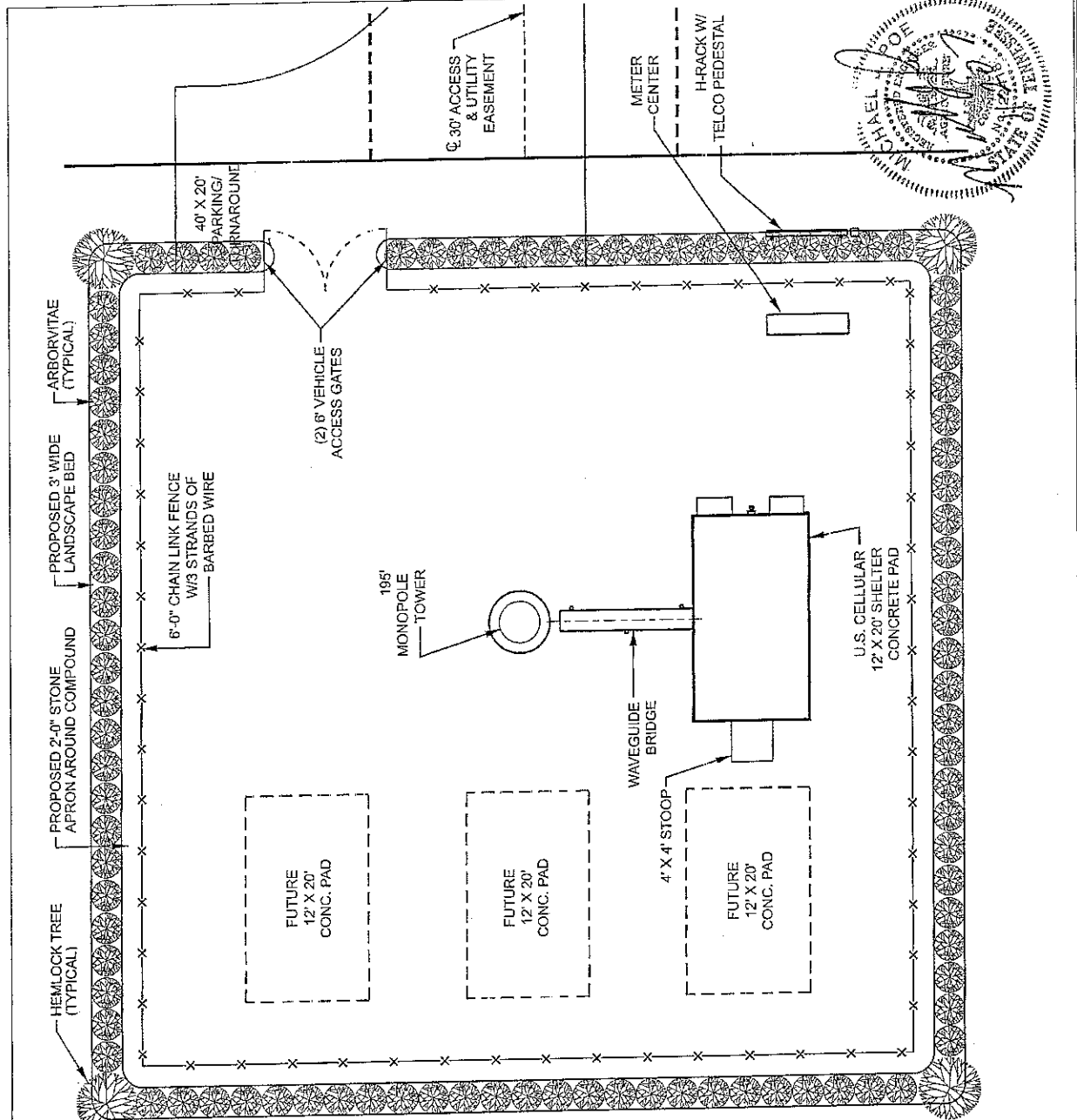
**BWSC**  
 BARGE WADSWORTH  
 DANNON, INC.  
 ENGINEER ARCHITECTS & PLANNERS  
 10133 SHERILL BLVD., SUITE 200  
 KNOXVILLE, TENNESSEE 37932

NO.	DATE	DESCRIPTION

THE DESIGN & CONSTRUCTION OF THIS SITE IS SUBJECT TO THE APPROVAL OF THE LOCAL HEALTH DEPARTMENT AND THE STATE DEPARTMENT OF REVENUE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO THE START OF CONSTRUCTION.

DRAWN BY: DMS  
 CHECKED BY: MJP  
 PROJ. NO.: MJP  
 SHEET NO.:  
 U.S. CELLULAR  
 HARDIN VALLEY  
 SHEET NUMBER: 223-437  
 SITE ADDRESS: 11301 SAM LEE ROAD  
 KNOXVILLE, TN 37932

SHEET TITLE: LANDSCAPE PLAN  
 PROJECT #: 33477-07  
 SHEET NUMBER: L101  
 TOTAL SHEETS: 1 OF 1



ELEVATION OF TREE BLEM  
 NO SCALE

- NOTES:
1. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING VEGETATION.
  2. IF SELECTED TRIMMING OF THE EXISTING TREES IS NECESSARY A "CERTIFIED TREE SURGEON" SHALL BE USED TO TRIM EXISTING FOLIAGE.
  3. INSTALL STAKES FOR TREE SUPPORT (3 EACH).
  4. INSTALL A 10 FOOT WIDE BY 2 FOOT HIGH LANDSCAPE BED GATE. PLACE PINE BARK MULCH ON LANDSCAPE BED. MULCH SHALL BE 4" THICK.
  5. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A 12 MONTH WARRANTY.
  6. TREES OR SHRUBS MUST BE CAPABLE OF FORMING A CONTINUOUS HEDGE AT LEAST FIVE FEET IN HEIGHT AND SCREENING THE BASE OF THE TOWER FROM PUBLIC VIEW WITHIN TWO YEARS OF PLANTING AND SHALL BE PLANTED AND MAINTAINED IN HEALTHY CONDITION.
  7. U.S. CELLULAR IS RESPONSIBLE FOR LONG TERM MAINTENANCE OF THE LANDSCAPING.

LANDSCAPE PLANTS		
SPECIES	SIZE	NUMBER
ARBORVITAE	5 GALLON	NINETY FOUR
HEMLOCK TREE	5 FEET TALL	FOUR

**US CELLULAR WIRELESS COMMUNICATIONS  
USE ON REVIEW APPLICATION # 12-H-07-UR  
CONSULTANT'S SUMMARY  
TELECOMMUNICATION SITE REQUEST**

**Location:** 11301 Sam Lee Road (KNOX COUNTY)

**Proposed Tower Height:** 198 feet (Including antennas and lightning rod)

**Address:** 11301 Sam Lee Road  
Knoxville, Tennessee

**District:** # 6 Northwest County Sector   **Map Number:** 103 Parcel 064

**Use:** Telecommunications antenna support structure.

**Zoning:** A, Agricultural

**Variances and waivers:** Setback from adjacent property lines:

Required: 215 feet

Requested: Approximately 73 feet and 210 feet Waivers

**Need:** The applicant is a cellular provider that is a licensed cellular carrier by the Federal Communications Commission.

**Instant Proposal:** Construct an 198 foot monopole type support structure for use as a cellular radio fill site.

**Consultant's Recommendation:** The applicant has justified the need for the site. Support material attached.

*Jayfer*  
12-3-07

**REPORT TO**  
**METROPOLITAN PLANNING COMMISSION**  
for

Tower Site at 11301 Sam Lee Road (HARDIN VALLEY)

**U.S. CELLULAR CORPORATION**

**UOR 12-H-07-UR**

**COMPLIANCE WITH**

**THE MPC TELECOMMUNICATIONS FACILITY ORDINANCE**

12/03/2007

The proposed site for the applicant is a 198 foot monopole antenna support structure (including antennas and lightning rod) to be located on Sam Lee Road near the intersection with Deering Way in the County of Knox. The supporting material from applicant has been reviewed for technical and Federal/State legal compliance.

**REQUESTED**

1. **Location.** The location is within the County limits in **Northwest County Sector** and is located on **Map Number 103, Parcel 064**. The site is located on a partially wooded site just off Sam Lee Road in West Knox County.

2. **Zoning.** The area around the site is zoned **A, Agricultural**.

3. **Tower height.** The requested height is 198 feet above ground level will support up to 3 additional telecommunications carrier antennas for a total of 4 possible users.

4. **Variances.** The required setback from the nearest residential home (Dwelling unit) per section 4.92.02(2)(a) for this site is 110% of the height of the structure, or in this case 215 feet. There are no dwelling units within 215 feet of the proposed site. In addition Section 4.92.02(2) (c) of the County Ordinance requires the distance to the nearest property line to be 110% of the structure height or greater or 215 feet in this case. **The site does not meet this requirement and thus requires a variance.**

5. **Need.** I have reviewed the applicant's present coverage for the area along with their coverage requirements and have determined that need for the site is justified.

6. **Use.** This antenna support structure will be used for telecommunications with the present state of the art communications

technology using cellular communications sources .

7. **Setbacks.** See Variances above.

8. **Height.** The proposed tower will be 198 feet. A structure at this height will not require any lighting nor is any proposed.

## **EVALUATION**

The following is a list of items reviewed:

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

Knox County 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 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 landscape 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

## **DISCUSSION**

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

The applicant has proposed a site in the largely pasture and farm land in west Knoxville on a partially wooded site off Sam Lee Road near Swafford Road on the west side.

The application requires a variance from distance to adjacent property lines. The required distance must be 215 feet from the base of the structure to the nearest property line. In this case the western and the eastern property lines are well within that distance and will require a variance from the Ordinance. The applicant has submitted notarized letters from the two adjacent property owners waiving the setback requirement which is allowed under the Ordinance.

There are no other structures within 1 mile radius of the proposed site that can provide the coverage needed by the applicant.

The location is zoned Agricultural the land around the proposed site is partially wooded and formerly used for farming. The nearest residence is in excess of 300 feet (estimated) from the proposed structure base.

There will be no requirement for any aviation avoidance (strobes or red lights) on the monopole.

The area of the proposed is bounded on 3 sides by wooded area with trees in the 50-60 foot range.

This a "fill" site. By that is meant that the coverage is inadequate in the area at the present from present facilities in the area and that the site is to be used as primary signal coverage to "fill in" a hole in the present coverage.

The proposed structure should not affect adjacent property as it is very wooded or would it constitute a safety hazard.

## **FACILITIES PLAN DISCUSSION AND EVALUATION**

*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 (198 feet) coupled with no lighting requirements and located in a fairly isolated wooded area should present no problems as to view.

(2) **Land Use Compatibility**---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 landscaping and facility design would blend in with surrounding agricultural land usage and design. The new structure will be a monopole type structure which are the least obtrusive type antenna support structures.

(A) **Opportunity Areas**---This proposed site is in an area zoned Agricultural and is wooded and meets the requirements of an opportunity area. It is unlikely to become a blighting influence on the surrounding area.

(B) **Sensitive Areas**---This site is not in a sensitive area as it is isolated and surrounded by woods.

(C) **Avoidance Areas**---This location is not in an avoidance area.

#### **COMMENT**

By using the monopole type support structures and antennas, the public will benefit in many ways and the concerns of residents in the various areas will be considerably reduced.

#### **SUMMARY**

(1) The proposed antenna support structure is a 198 foot monopole including antennas. There should be no lighting requirement by the FAA as the tower is under 200 feet.

(2) A review of the structure stress analysis on the proposed structure and specifications support the use of the tower by one other potential user in the future.

(3) The structure design meets or exceeds FCC and EIA requirements.

(4) The surrounding area is zoned A, Agricultural. The structure should have no impact on the adjacent land uses as it will blend in with the environment.

(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 4.92.03 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 as it

will be located beside the monopole away from public areas.

(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) There are no other towers within 1 mile of the proposed site that could provide the coverage needed by the applicant.

(9) The proposed site and structure will have no environmental impact within the federal guidelines.

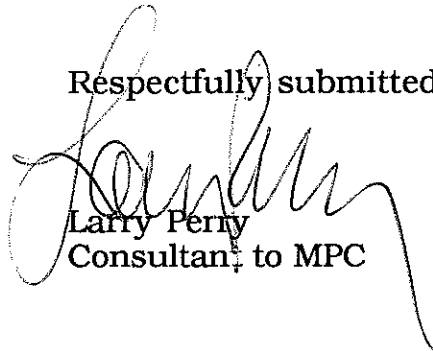
(10) A variances is required and requested for this site for setbacks from the adjacent property lines on each side of the site. Letters requesting waiver of the setback requirements are included with the application from the landowners.

(11) The nature of the development in the surrounding area is not such as to pose a potential hazard to the proposed tower or to create an undesirable environment for the proposed tower.

## **RECOMMENDATION**

In light of the analysis and review of documents, it is my professional opinion that the applicant, US Cellular has met the requirements for coverage and the MPC's requirements and has made a showing that justifies a need for the location.

Respectfully submitted,



Larry Perry  
Consultant to MPC



# USCC HARDIN VALLEY SITE



Site Location

35-56-45.2 D-M-S N  
084-11-20.5 D-M-S W

**MUS CELLULAR  
HARDIN VALLEY SITE  
12-H-07-UR**

**Existing sites**

December 13, 2007

**PROPOSED SITE**

**Mississippi Parkway**

**Hardin Valley Road**

Image © 2007 DigitalGlobe

Agenda Item # 118

**KRAMER RAYSON LLP**  
ATTORNEYS AT LAW

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KNOXVILLE, TENNESSEE 37901-0629

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EDWARD G. PHILLIPS  
THOMAS M. HALE  
JACKSON G. KRAMER  
BEECHER A. BARTLETT JR.  
ROBERT W. KNOLTON  
JOHN C. BURGIN, JR.  
ADRIENNE L. ANDERSON  
CHARLES M. FINN  
ROBERT A. CRAWFORD  
ROBERT P. MURRIAN  
JOHN E. WINTERS  
ROBERT L. BOWMAN  
CHARLES E. YOUNG JR.  
FRANCIS L. LLOYD, JR.  
AMANDA M. BELEW  
STEVEN E. KRAMER  
ANN E. SARTWELL  
THOMAS C. CRAVENS IV  
KATE E. TUCKER  
BETSY J. BECK  
WILLIAM J. CARVER  
SUSAN SCHULTZ DAVIS  
CHAD W. HAMPTON

November 5, 2007

12-11-07-JR  
11/5/07

SPECIAL COUNSEL  
SHANNON D. COLEMAN

OF COUNSEL  
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OAK RIDGE, TENNESSEE 37830  
TELEPHONE 865 220-5134  
TELECOPIER 865 220-5132

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

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 December 13, 2007 Metropolitan Planning Commission meeting. Such Use-On-Review Application requests approval for a proposed cellular communications monopole to be located on property owned by James Leppink at 11301 Sam Lee Road in 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 owner, James Leppink.
2. Information Summary and Table of Contents
3. Ten (10) copies of the Development Plan with Exhibits 1 through 15 attached
4. USCC's check in the amount of Six Hundred Ninety-Five Dollars (\$695.00), made payable to the Metropolitan Planning Commission in payment of the review fee
5. USCC's check in the amount of One Thousand Five Hundred Dollars (\$1,500.00), made payable to the Metropolitan Planning Commission for the Escrow deposit relative to the Professional Engineering Consultant's fee

As noted, USCC is proposing that a cellular communications monopole be placed on property owned by James Leppink at 11301 Sam Lee Road in 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 195 foot monopole structure. Since the proposed monopole will be less than 200 feet in height, FAA regulations will not require the monopole to be lighted. In addition, as required by Article 4.92.02(1)(a) of the Knox County Zoning Ordinance, the monopole will be constructed to support at least three (3) antenna arrays for co-location purposes. USCC's letter of intent setting forth its commitment to permit co-location on the proposed monopole is included with the Application as Exhibit 4.

The monopole is proposed for this area in order to fill a radio frequency coverage gap experienced by USCC along Hardin Valley Road, North Campbell Station Road, Steele Road, Sam Lee Road, Brighton Farm Road, Carmichael Road, Yarnell Road, and other areas in the vicinity, and to address capacity issues on existing USCC sites. Moreover, signal hand-offs from USCC's existing sites surrounding this area are impeded because of terrain blocking and because of capacity constraints.

Radio frequency coverage maps showing coverage with and without the proposed monopole are attached to the Application as Exhibits 7 and 8.

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 1, no existing towers or other suitable structures are located within a one-mile search ring.

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.

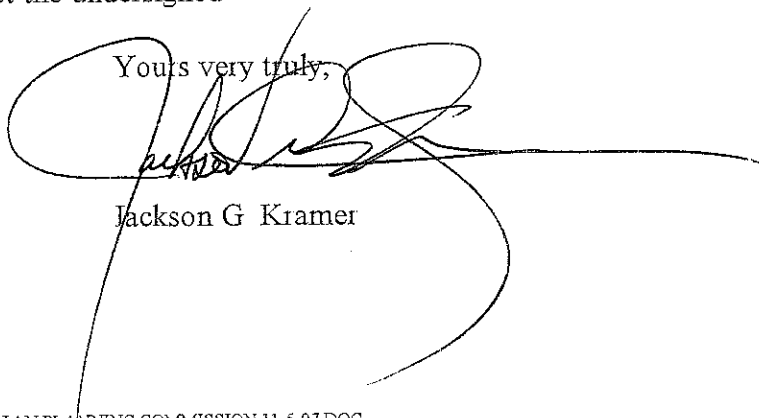
This proposed monopole is also consistent with the Goals, Objectives and Policies of the Wireless Communications Facilities Plan ("Plan") adopted by the Metropolitan Planning Commission in September, 2002. The proposed site is agriculturally zoned and is located a significant distance away from Sam Lee Road. The Plan states that "one of the most effective screening techniques involves locating towers among stands of mature trees so that the base and a large part of the tower will be hidden from view." As shown by the photographs of the proposed site attached as Collective Exhibit 13, a wooded area is located between Sam Lee Road and the proposed site, and the base of the tower will not be visible from Sam Lee Road, thereby screening

a significant part of the monopole from passersby. The proposed monopole will be located below the ridge line. As shown on the map attached to the Application as Exhibit 6, the site is adjacent to the proposed State Route 475 expressway corridor. As identified on Exhibit 7 to the Plan (see Land Use/Wireless Facilities Matrix), the proposed monopole is in an area that is identified on such Matrix as "neutral" because the site is located adjacent to an expressway corridor, is located in a rural/wooded area with adjacent pasture land, and is located below the ridge line.

In addition, the proposed monopole meets the Plan's objective of being separated from any nearby residents by a distance of at least one hundred ten percent (110%) of the tower height (in this instance, two hundred fourteen and one-half (214.5) feet). Although the proposed site is located closer than this distance to two (2) adjacent property lines, one of those adjacent sites has no structures on it. The owner-occupied residence on the other site is located a significant distance away from the proposed site, and is shielded from the proposed site by an existing stand of trees which will remain in place. Moreover, both of such property owners have agreed that the minimum setback requirement for telecommunications towers of one hundred ten percent (110%) of the tower height can be waived, and their notarized letters waiving such setback requirement are attached hereto as Exhibits 11 and 12, respectively. Finally, it should be noted that no residential structures are located within two hundred fourteen and one-half (214.5) feet of the proposed site.

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,



Jackson G. Kramer

JGK/tsg  
Enclosures



November 2, 2007

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

**Re: U.S. Cellular Corporation  
Proposed Hardin Valley 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 monopole site on Sam Lee 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 monopole on Sam Lee Road be 195 feet in height As is evident from both Page C2 01 of the engineering plan submitted with the Use on Review Application to which this letter is attached and Exhibit 2 to such Application, the specifications show that USCC is constructing 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 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,



John Locascio  
Senior Project Manager

J:\US Cellular\Hardin Valley Zoning Matter\Metropolitan Planning Commission from Locascio 11-2-07 doc

**TECHNICAL JUSTIFICATION FOR PROPOSED  
HARDIN VALLEY CELLSITE**

Prepared by: Isaac Ndiaye  
RF Engineer  
US Cellular

**Proposal:** Build a digital only CDMA 2000 cellular telephone communications monopole at 11301 Sam Lee Road, Knoxville, Knox County, Tennessee on property owned and occupied by James B Leppink

**Tower:** US Cellular Corporation proposes to construct a 195 ft above ground level monopole structure. The proposed site is at 1032 feet AMSL per the mandatory FAA 2-C survey. Because the height of the tower is less than 200 ft above ground level, it will require no lighting pursuant to FAA regulations

**RF Justification:** US Cellular Corporation ("USCC") proposes to build this facility in this area to fill in radio frequency coverage gaps as well as strengthen coverage in the areas of Hardin Valley Road, N Campbell Station Road, Steele Road, Sam Lee Road, Brighton Farm Road, Carmichael Road, Yarnell Road, and other areas in the vicinity of the Pellissippi State Technical Community College. This facility will also augment existing coverage, provide additional capacity, and reduce access failures and dropped calls on existing USCC sites in the area in question.

USCC's existing cell sites at Bethel Valley, Campbell Station, and Mabry Hood are located a significant distance away from the coverage gaps and thus are not able to provide adequate service. The Pellissippi and Carmichael sites are terrain blocked from the areas of proposed coverage improvements. In the past, USCC has attempted to address customer requests for better service by enhancing the equipment on and otherwise optimizing the existing cell sites surrounding the coverage problem areas. However, USCC was not able to alleviate the coverage issues with the optimization changes. This poor coverage, as shown by the weak signal in our coverage map, can only be corrected by a full cell site.

**Collocation:** The alternatives of collocating USCC's equipment and antennas 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 such structures within one mile of the proposed site.



EXHIBIT 10**List of Variances and/or Waivers From Zoning Ordinance Requirements**

Applicant is requesting one (1) variance and/or waiver from Knox County, Tennessee zoning ordinance requirements:

- I. Setback Variance / and/or Waiver: Section 4 92 02(2)(a) of said zoning ordinance states that telecommunications towers are to be set back from any "Dwelling Unit" located on properties zoned "agricultural" a minimum distance equal to one hundred ten percent (110%) of the height of the tower (i.e., in this instance, two hundred fourteen and one-half (214 5) feet), or the minimum principal use setback of the zoning district in which the tower is located, whichever is greater. Section 4 92 02(2)(c) of said zoning ordinance states that upon notarized written agreement between the tower applicant and the property owner whose property line falls within the specified setback, the minimum setback may be reduced to the principal use setback in the zoning district in which the tower is located, if approved by the Metropolitan Planning Commission as a part of the Use on Review Application for the new tower.

No residences or other structures are located within two hundred fourteen and one-half (214 5) feet of the proposed tower (i.e., within one hundred ten percent (110%) of the height of the proposed tower). In addition, the proposed tower is located the required minimum distance from all adjacent property lines for agriculturally zoned property. However, the proposed tower does not meet the one hundred ten percent (110%) of the height of the tower setback requirement from the property lines of two adjacent properties.

One such property is owned by Donna and Charles Kenneth Lamons and is described as Tax Map 103, Parcel 43 03. No structures are located on this property. Mr. and Mrs. Lamons have agreed to waive the setback limitation that the tower be located a distance equal to one hundred ten percent (110%) of the height of the tower from their property line, and a notarized letter signed by Mr. and Mrs. Lamons is attached hereto as Exhibit 11.

The remaining property where the property line falls within the one hundred ten percent (110%) of the height of the tower setback is owned by Larry E. and Jeanne G. Lee and is described as Tax Map 103, Parcel 44. Although Mr. and Mrs. Lee's property line falls within the one hundred ten percent (110%) distance setback, Mr. and Mrs. Lee's residence is located outside such setback distance. Further, Mr. and Mrs. Lee have agreed to waive the setback requirement, and a notarized letter signed by Mr. and Mrs. Lee agreeing to waive the setback requirement that the tower be located one hundred ten percent (110%) of the height of the tower from their property line is attached as Exhibit 12.

Donna Lee Lamons  
Charles Kenneth Lamons  
8759 Warm Springs Way  
Knoxville, TN 37923

10/11/2007

Metropolitan Planning Commission  
of Knoxville / Knox County, TN  
Fourth Floor, City / County Building  
400 Main Street, Suite 403  
Knoxville, TN 37902

**Re: U.S. Cellular Corporation  
Proposed Telecommunications Tower Site**

Dear Sir or Madam:

It is our understanding that U.S. Cellular Corporation proposes to place a telecommunications tower one hundred ninety-five (195) feet in height on property owned by James B. Leppink and James A. Leppink at 11301 Sam Lee Road, Knoxville TN 37932. Please be advised that the undersigned are the owners of property located at 2722 Swafford Road, Knoxville, TN 37932, in the vicinity of the proposed tower site.

We understand that the Leppink property is currently zoned "Agricultural" under the Knox County, Tennessee Zoning Ordinance. In addition, we understand that Section 4.92.02(2)(a) of said Zoning Ordinance states that telecommunications towers are to be set back from any "Dwelling Unit" located on property zoned "Agricultural" a minimum distance equal to one hundred ten percent (110%) of the height of the tower (i.e., in this instance, two hundred fourteen and one-half (214.5) feet), or the minimum principal use setback of the zoning district in which the tower is located, whichever is greater. Further, we understand that Section 4.92.02(2)(c) of said Zoning Ordinance states that upon notarized written agreement between the tower applicant and the property owner whose property line falls within the specified setback, the minimum setback may be reduced to the principal use setback in the zoning district in which the tower is located, if approved by the Metropolitan Planning Commission as a part of the Use on Review Application for the new tower.

We also recognize that although our property does not contain a Dwelling Unit as defined in the Knox County Zoning Ordinance, the location of the proposed tower is within two hundred fourteen and one-half (214.5) feet of the common property line shared by our property and the Leppink property. Nevertheless, please be advised that we do not object to the location of the proposed tower on the Leppink property. We further support U.S. Cellular's application and request that the Metropolitan Planning Commission approve a reduction of the one hundred ten

Metropolitan Planning Commission  
of Knoxville / Knox County, TN  
October 11, 2007  
Page 2

percent (110%) of the height of the tower setback requirement with regard to U.S. Cellular's application.

Thank you for your consideration of this matter.

*Donna Lee Lamons*

Donna Lee Lamons

*C. Kenneth Lamons*

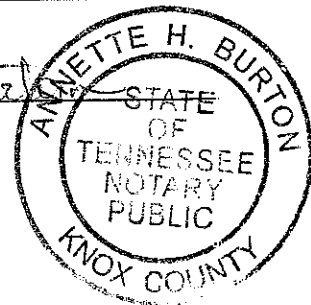
Charles Kenneth Lamons

STATE OF TENNESSEE )  
COUNTY OF KNOX )

Before me, the undersigned Notary Public of said County and State, personally appeared Donna Lee Lamons and Charles Kenneth Lamons, the within named bargainers, with whom I am personally acquainted, or proved to me on the basis of satisfactory evidence, and who acknowledged that such persons executed the within correspondence for the purposes therein contained.

Witness my hand and seal at office, this 4<sup>th</sup> day of November, 2007.

*Annette H. Burton*  
Notary Public



My Commission Expires: May 5, 2009

Larry E. Lee  
Jeanne G. Lee  
2718 Swafford Road  
Knoxville, TN 37932

10/11/2007

Metropolitan Planning Commission  
of Knoxville / Knox County, TN  
Fourth Floor, City / County Building  
400 Main Street, Suite 403  
Knoxville, TN 37902

**Re: U.S. Cellular Corporation  
Proposed Telecommunications Tower Site**

Dear Sir or Madam:

It is our understanding that U.S. Cellular Corporation proposes to place a telecommunications tower one hundred ninety-five (195) feet in height on property owned by James B. Leppink and James A. Leppink at 11301 Sam Lee Road, Knoxville TN 37932. Please be advised that the undersigned are the owners of property located at 2718 Swafford Road, Knoxville, TN 37932, in the vicinity of the proposed tower site.

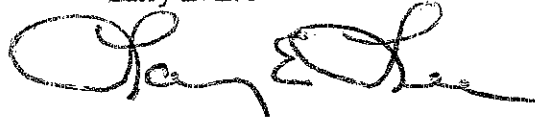
We understand that our property and the Leppink property is currently zoned "Agricultural" under the Knox County, Tennessee Zoning Ordinance. In addition, we understand that Section 4.92.02(2)(a) of said Zoning Ordinance states that telecommunications towers are to be set back from any "Dwelling Unit" located on property zoned "Agricultural" a minimum distance equal to one hundred ten percent (110%) of the height of the tower (*i.e.*, in this instance, two hundred fourteen and one-half (214.5) feet), or the minimum principal use setback of the zoning district in which the tower is located, whichever is greater. Further, we understand that Section 4.92.02(2)(c) of said Zoning Ordinance states that upon notarized written agreement between the tower applicant and the property owner whose property line falls within the specified setback, the minimum setback may be reduced to the principal use setback in the zoning district in which the tower is located, if approved by the Metropolitan Planning Commission as a part of the Use on Review Application for the new tower.

Our property contains a Dwelling Unit as defined in the Knox County Zoning Ordinance, and the location of the proposed tower is within two hundred fourteen and one-half (214.5) feet of the common property line shared by our property and the Leppink property. Nevertheless, please be advised that the Dwelling Unit on our property is not within the required setback; and we do not object to the location of the proposed tower on the Leppink property. We further support U.S. Cellular's application and request that the Metropolitan Planning Commission

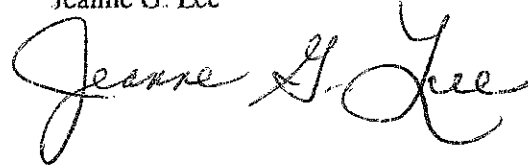
approve a reduction of the one hundred ten percent (110%) of the height of the tower setback requirement with regard to U.S. Cellular's application

Thank you for your consideration of this matter.

Larry E. Lee



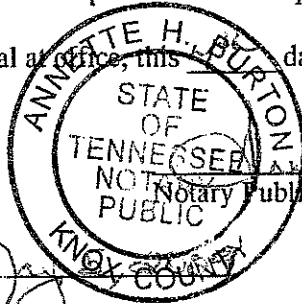
Jeanne G. Lee



STATE OF TENNESSEE )  
COUNTY OF KNOX )

Before me, the undersigned Notary Public of said County and State, personally appeared Larry E. Lee and Jeanne G. Lee, the within named bargainors, with whom I am personally acquainted, or proved to me on the basis of satisfactory evidence, and who acknowledged that such persons executed the within correspondence for the purposes therein contained.

Witness my hand and seal at office, this 11th day of November, 2007.



Annette H. Burton

My Commission Expires: May

**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