



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

▶ **FILE #:** 11-D-08-UR

AGENDA ITEM #: 74

AGENDA DATE: 11/13/2008

▶ **APPLICANT:** T-MOBILE SOUTH, LLC.

OWNER(S): GIBBS PREVOST JR.

TAX ID NUMBER: 107 F A 002

JURISDICTION: City Commission District 2

▶ **LOCATION:** Southeast side of Papermill Dr., north of I-40, southeast of Coleman Rd.

▶ **APPX. SIZE OF TRACT:** 2737 square feet

SECTOR PLAN: Northwest City

GROWTH POLICY PLAN: Urban Growth Area

ACCESSIBILITY: Access is via Papermill Dr., a minor collector street with a 20' pavement width within a 70' right-of-way. The existing dental office on the subject property is providing T-Mobile a 20' easement to access the lease area site.

UTILITIES: Water Source: Knoxville Utilities Board

Sewer Source: Knoxville Utilities Board

WATERSHED: Third & Fourth Creek

▶ **ZONING:** O-3 (Office Park)

▶ **EXISTING LAND USE:** Dental office

▶ **PROPOSED USE:** 150' monopole telecommunications tower

HISTORY OF ZONING: None noted

SURROUNDING LAND USE AND ZONING: North: Church & assisted living facility / R-1 (Low Density Residential) & O-3 (Office Park)

South: Interstate right-of-way / R-1 (Low Density Residential)

East: Dentist office / O-3 (Office Park)

West: Residences / R-1 (Low Density Residential)

NEIGHBORHOOD CONTEXT: The property is at the edge of an office park corridor along Papermill Dr. The I-40 right-of-way is to the south of the subject property and a residential subdivision is to the west.

STAFF RECOMMENDATION:

▶ **APPROVE the request for a 150' monopole telecommunications tower in the O-3 zoning district, subject to the following 7 conditions:**

1. Meeting all applicable requirements of the Knoxville Zoning Ordinance.
2. Meeting all applicable requirements of the Knoxville Department of Engineering.
3. Since the FAA does not require any lighting for this facility, there shall be no lighting on the tower.
4. In addition to an 8' wooden privacy fence around the tower and equipment area, the perimeter of the fenced area will be landscaped with Leyland Cypress on 8' centers.
5. Installing the proposed landscaping as shown on the landscape plan within six months of the tower

becoming operational.

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.

7. Obtaining a setback variance from the Knox County Board of Zoning Appeals to reduce the tower setback from 165' to 10' (11-L-08-VA).

COMMENTS:

This is a request for a new 150' monopole telecommunications tower to be located within a 2,737 square foot lease area located south of Papermill Dr., along the interstate right-of-way. The proposed tower will be located on a portion of a property that currently has a dentist office. Access to the lease area will be from a 20' easement provided by the office (12' gravel road). The subject property is zoned O-3 (Office Park) and telecommunication towers are considered as a use on review in this district.

The proposed site is immediately adjacent to a church and the interstate right-of-way, both of which are zoned R-1. Approximately 200' to the west is the nearest residence. This property, along with other properties to the north and east are zoned O-3. According to the Knoxville Zoning Ordinance, all towers shall be setback from all properties zoned residential, 110% of the height of the tower. The current proposal provides for a 10' setback between the tower and the neighboring residential property line, which is the interstate right-of-way.

According to the Knoxville-Knox County Wireless Communications Facility Plan, office corridors are considered "Opportunity Areas" for telecommunication towers. Since the proposed site is located within 500' of a residence it is also considered a "Sensitive Area". Due to the height of the proposed tower, (150') and the fact that the property is located along the interstate, the Facility Plan identifies this as an acceptable site for a telecommunication tower.

In order to reduce the visual impact on nearby residences, the proposed tower and equipment area will be surrounded by an 8' high wooden security fence, and the perimeter of the fenced area will be landscaped with Leyland Cypress on 8' centers. This new vegetation must be installed within 30 days of tower installation. 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 4 telecommunication carrier antenna arrays. T-Mobile will be the principal client for the tower.

According to the applicant there are no existing or acceptable structures within this area along Papermill Dr. The proposed site is to relieve capacity of existing or nearby sites. Co-location is not an option. No other structure exists within the area needed to provide coverage (see the attached letter from Lannie Greene.).

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 150' tower is technically justified by the materials submitted by the applicant.

An agreement has been submitted stating that T-Mobile agrees to make all of its facilities available to other wireless providers (see attached letter from Lannie Greene.).

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 all utilities are in place to serve this development.
2. The tower, being located adjacent to residential uses, is required to be heavily screened. The applicant will be required to install an 8' tall wooden fence and provide landscaping around the perimeter of the fence. The base of the tower and the tower enclosure will be well screened. This will reduce the impact of the proposed tower on existing residential property.

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 O-3 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 One Year Plan. The use is in harmony with the general purpose and intent of the Zoning Ordinance. By requiring extensive screening, the use will not significantly injure the value of adjacent property. The use will not draw additional traffic through residential areas.

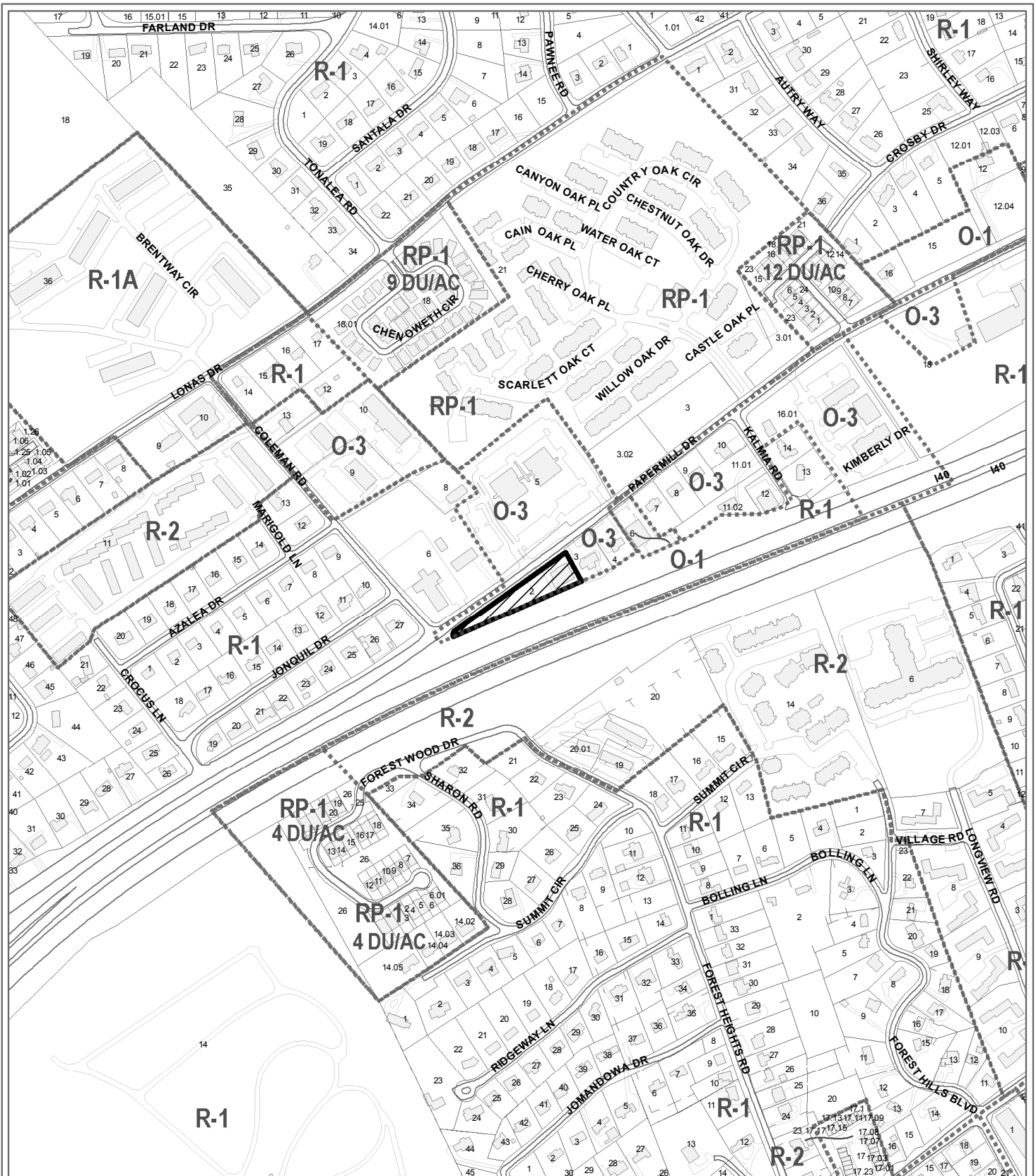
CONFORMITY OF THE PROPOSAL TO ADOPTED PLANS

1. The Northwest City Sector Plan identifies this property as being Mixed Use. The proposed development is consistent with this land designation.
2. The Wireless Communications Facility Plan identifies the proposed 150' monopole as a "moderate" monopole. Under the guidelines for Tower Placement section of the Facility Plan, the proposed tower falls within the "Opportunity & Sensitive Area" categories. Under the "Opportunity Area" category, the Plan encourages moderate monopoles located along office corridors and urban expressways (see attached matrix). Under the "Sensitive Area" category, the Plan takes a neutral position on moderate monopoles located nearby residential areas (see attached matrix). As previously stated, the tower will be setback approximately 10' from the nearest residential property line, which is the interstate right-of-way and at least 200' from the nearest residence.

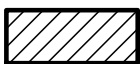
ESTIMATED TRAFFIC IMPACT: Not calculated.

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 City.



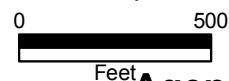
**11-D-08-UR
USE ON REVIEW**



150' monopole telecommunications tower in O-3 (Office Park)

Petitioner: T-Mobile South, LLC.

Map No: 107
Jurisdiction: City



Original Print Date: 10/28/2008 Revised:
Metropolitan Planning Commission * City / County Building * Knoxville, TN 37902

Agenda Item # 74

MITTRIX

11-D-08-VR

October 22, 2008

Knoxville-Knox County
Metropolitan Planning Commission
400 Main Street, Suite 403
City County Building
Knoxville, TN 37902

RE: T-Mobile Proposed 150' Monopole Tower @ 4714 Papermill Drive
(Parcel ID -107FA002): 9KX0304/Chenoweth Circle

Dear Honorable Commission Members:

On behalf of T-Mobile and the land owner, Gibbs Prevost Jr., I respectfully submit this application for a Use on Review of a wireless telecommunications facility. This facility is to be built for T-Mobile's wireless network. The proposed project includes a 150' monopole tower to be located within a cleared area of an O-3 zoned parcel adjacent to I-40 and Papermill Drive. This particular site will provide service along I-40 and in-building coverage to the areas north of Papermill Drive, which includes multi-family and single family residential developments and office complexes.

Due to the location of the proposed site the tower structure will not meet the requirement of 110% of the height of tower from residential uses. A variance request has been submitted to the City of Knoxville and will be heard on November 20. We ask that the Metropolitan Planning Commission approve this request with the condition that the requested variance be approved by the Board of Zoning Appeals.

T-Mobile is a building a new wireless network for the metropolitan Knoxville area. This new network is providing a new choice for wireless users in the Knoxville area and in northeast Tennessee. In 2006 cell phone usage overtook landline usage and more and more residents of Tennessee now use their cell phone as their only phone.

In addition to providing improved service to T-Mobile customers, the proposed antenna location is needed to meet Federal Communications Commission (FCC) requirements for Enhanced 911 (E911) service. The wireless E911 program is divided into two phases. Phase I requires wireless carriers, upon request from a local Public Safety Answering Point (PSAP), to report the telephone number of wireless 911 caller and the location of the antenna that received the call. Phase II of the E911 program requires wireless carriers to provide far more precise location information, within 50 to 100 meters in most cases. Provisions of E911 service in accordance with FCC requirements is a major component of the need for additional cell sites.

2421 St. Martin Way
Monroe, GA 30656

(678) 920 - 1262 (Office)
(678) 609 - 1458 (Fax)

Agenda Item # 74

MPC November 13, 2008

T-Mobile has already co-located or in the process of co-locating on several sites in Knox County and the City of Knoxville. In some cases T-Mobile has gone through the added expense of making significant modifications to make existing structures work. Unfortunately, there were no existing or acceptable structures within the target area available for co-location. The search radius is very specific due to T-Mobile's proposed network which includes the above mentioned sites that are currently slated for co-location.

The Land Use/Wireless Facilities Matrix provides that the proposed location is encouraged due to the following:

- Moderate monopole with height of 150'
- Located along Urban Expressway Corridor

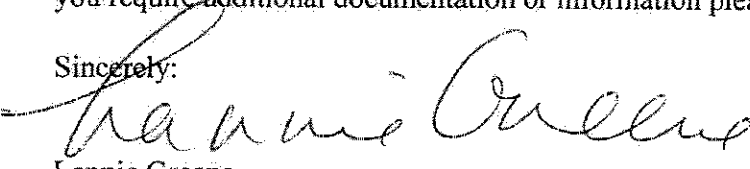
The Land Use/Wireless Facilities Matrix is also neutral to the proposed facility because it is within 500' of a residence. However, due the coverage objectives, the area in which a site is needed, and the parcels within this area of need, a distance of 500' from a residence is not possible. T-Mobile avoided more residential areas to the north along Lonas Drive and Coleman Road. In order to meet the objectives of City of Knoxville and to meet coverage objectives the subject site was selected.

I submit the following Pursuant to the Facilities Plan adopted by the Metropolitan Planning Commission in 2002:

- (1) View Protection -- The monopole tower is proposed to be at a maximum height of 150' (including lightening rod) and due to the existing transmission line structures and interstate light poles within this area the proposed facility will have a minimal impact on surrounding properties. Due to the proposed height of 150' there will be no lighting on the structure.
- (2) Land Use Compatibility - The subject property is zoned O-3, Office park District. The facility will be within a transitional area with a mixture of office uses and residential developments. The site will be landscaped which will screen the compound from public right-of-ways and nearby residential uses. This facility will be unmanned and will add no substantial increase in noise, air pollution, or traffic. Furthermore the proposed facility will not burden any county services.
- (3) Design Compatibility --The facility design, which will include a monopole tower will not impact the existing uses of surrounding properties due to its proximity to existing transmission lines and light poles. Monopoles are often considered the least obtrusive type of structure.

Finally, the proposed site meets the intent of the City of Knoxville and will meet all state, and federal requirements in its design, construction, and operation. I appreciate your time in reviewing this application. If you require additional documentation or information please feel free to give me a call at (678) 920 - 1262.

Sincerely:


Lannie Greene
Mittrix, Inc.
(678) 920 - 1262

Agenda Item # 74

MPC November 13, 2008

MITTRIX

REACH BEYOND

October 7, 2008

11-D-08-UP

Knoxville/Knox County Metropolitan Planning Commission
Suite 403, City/County Building
400 Main Street
Knoxville, Tennessee 37902

RE: T-Mobile Intent to Allow Co-location on proposed Tower
9KX0304

Honorable Commissioners:

Please allow this letter to confirm that T-Mobile agrees to make all of its wireless telecommunications facilities in Knox County and the City of Knoxville available to other wireless providers for co-location, provided such facilities are structurally and technically able to accommodate additional providers and provided that the wireless provider and T-Mobile can agree to all reasonable terms and conditions.

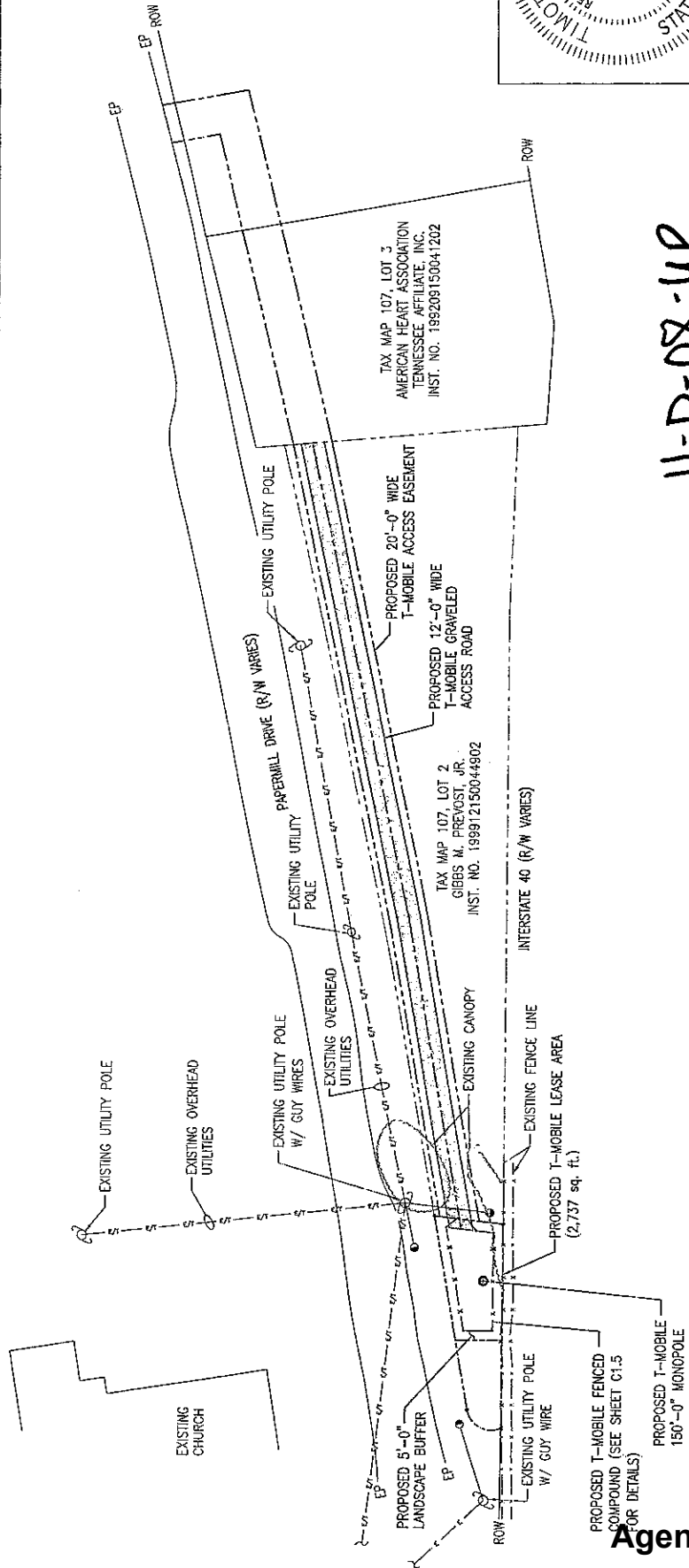
Sincerely,



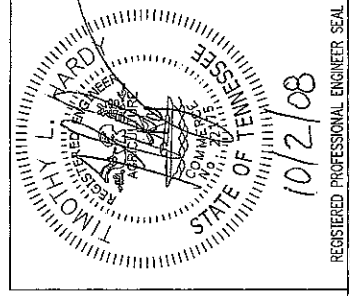
Lannie Greene
Mitrix, Inc. for T-Mobile
(678) 920 - 1262

GRADING NOTES:

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH KNOX COUNTY REGULATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL TREES AND OBSTRUCTIONS INSIDE THE LEASE AREA AND ACCESS EASEMENT.
3. CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS, AND WATERWAYS, USE SILT FENCE WHERE REQUIRED.
4. CONTRACTOR AND/OR DEVELOPER ARE RESPONSIBLE FOR PROVIDING SITE FREE OF DRAINAGE PROBLEMS.
5. CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING A PROPER TRAFFIC CONTROL PLAN FOR PUBLIC SAFETY ADJACENT TO CONSTRUCTION SITE. THE TRAFFIC CONTROL PLAN MUST BE IN ACCORDANCE WITH THE LATEST (MAY20) EDITION.
6. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES FOR CONSTRUCTION TO PREVENT THE DIVERSION OF SEDIMENT LADEN STORM WATER RUNOFF OR ERODED MATERIALS FROM LEAVING THE CONSTRUCTION SITE.
7. CONTRACTOR SHALL CLEAR ENTIRE ACCESS AND UTILITY EASEMENT OF OBSTRUCTIONS AS FIRST ORDER OF CONSTRUCTION TO ALLOW FOR INSTALLATION OF POWER BY POWER COMPANY. CONTRACTOR TO CONTACT POWER COMPANY SO THEY CAN BEGIN INSTALLATION OF POWER LINE ONCE EASEMENT IS CLEARED.



11-D-08-UR



REGISTERED PROFESSIONAL ENGINEER SEAL
 OVERALL SITE LAYOUT
 KX0304 SITE PREWOST
 KNOXVILLE, TENNESSEE
 T-MOBILE SOUTH, LLC
 NASHVILLE, TENNESSEE
 INST. NO. KX0304_C1
 DATE: AS SHOWN
 SCALE: C.I.

HARDY ENGINEERING, INC.
 ENGINEERING AND CONSULTING
 209 LINDEN STREET, P.O. BOX 708
 TRUSSVILLE, AL 35773
 PHONE: (205) 655-1427 FAX: (205) 661-9027

DATE BY: J.E. STEGER 10-01-08
 CHECKED BY: J.L. HARDY 10-01-08
 DATE: 10-01-08

OVERALL SITE LAYOUT
 (SCALE 1" = 80'-0")

ITEM	REVISIONS	BY	CHK. BY	DATE

11-D-08-UR

**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
Opportunity Areas	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						

Sensitive Areas	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						

Avoidance Areas	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

T MOBILE

USE ON REVIEW APPLICATION #11-D-08-UR

CONSULTANT'S SUMMARY

PAPERMILL DRIVE SITE REQUEST

Location: 4714 Papermill Dr. (City of Knoxville)

Proposed Tower Height: 150 feet (including lightning rod)

Address: 4714 Papermill Drive
Knoxville, Tennessee 37919

District: 2th Councilmanic Dist **Tax Map#:** 107FA **Parcels:** 1 and 2

Use: Telecommunications antenna support structure

Zoning: O-3 (Office Park)

Variances and waivers: Set back is less than 110% of the tower height to nearest property line. The instant application protection zone (110%) overlaps two property lines and is within 500 feet of a residence (but outside the fall zone) and a variance is required.

Need: The applicant is a communications carrier that provides communication service to area citizens. The applicant in this case is T Mobile, a licensed PCS carrier by the Federal Communications Commission. The carrier has justified a need for service in the area.

Instant Proposal: Construct a 150 foot (maximum) monopole type support structure. Lighting will not be required.

Consultant's Recommendation: The applicant proves adequate justification for the site using a monopole type antenna support structure.

Lauby
11-5-08

**REPORT TO
METROPOLITAN PLANNING COMMISSION**

for

Proposed Telecommunications Tower Site
located on Papermill Drive
Knoxville, TN

T-MOBILE SOUTH LLC

UOR 11-D-08-UR

COMPLIANCE WITH

THE MPC TELECOMMUNICATIONS FACILITY ORDINANCE

11/5/2008

The proposed site for the applicant is on Papermill Drive in west Knoxville (City) near Coleman Road and north of I 40. The supporting material from applicant has been reviewed for technical and Federal/State legal compliance.

REQUESTED

1. **Location.** The location is within the **City** of Knoxville limits in **Councilmanic Dist 2** and is located on **Tax Map 107A Parcels 1 and 2**.

2. **Zoning.** O-3 (Office Park) zone

3. **Tower height.** The requested height is less than 200 feet (150 feet) above ground level. Lighting will not be required on this structure.

4. **Variances.** The set back requirements in Article 5 Section 20 of the Ordinance for the City of Knoxville cannot be met at this location just below a ridge line and the applicant has requested a variance of the set back line which is required to be 110% of the tower height or in this case 165 feet from the base of the tower which in this case overlaps two adjacent property lines.

5. **Site.** This application is for the construction of a new 150 foot monopole on a hill across the street from a church between Papermill and I 40.

6. **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.

7. **Setbacks.** The setback requirements in Article 4 Section 6A for O-3 construction is a minimum 110% of the height of the tower from any property

Agenda Item # 74

line. (Art. 4 Section 6(D) see also Article 5 Section 20 (B)(2). A variance is required as two sides of the fall zone circle fall over adjacent property lines. One is across the State right of way for I 40 and the other the City right of way for Papermill Road.

8. Height. The proposed structure will be up to 150 feet (maximum including lightning rod) overall height. It will not require lighting to meet FAA requirements. (Art.5, Section 20 (3) of the Ordinance.)

9. Alternatives: There are no other alternative antenna support structures in the immediate area.

10. Facilities Plan Compliance: The proposed site is located in Sensitive area in that it is within 500 feet of a residential home and in an Opportunity Area in that it is in an Expressway corridor and zoned Office. It is an essentially a neutral area.

EVALUATION

The following is a list of items reviewed:

Zoning Ordinance for Knox Tennessee by Metropolitan Planning Commission---Telecommunication Facilities Section (as amended thru July 1, 2006)

The MPC Wireless Facilities Plan dated 2004.

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.

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 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

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. Further, I reviewed their specifications and requirements.

The applicant has proposed a site that is located between a public city road (Papermill Road) and interstate 40 on a very narrow strip of land.

The location is an area zoned O-3 (Office Park). The area would be characterized as a Sensitive/ Opportunity Area area and would be neutral based upon the Land Use/Wireless Facilities Matrix.

This is a fill site, by that is meant that it fills in areas that are in weak or no signal area for the coverage.

Lighting for the structure will not be required.

There is a need for the added signal coverage as proposed by the carrier, T Mobile based on the signal contour maps provided and verified by the applicant along the I 40 corridor and the surrounding area along Papermill Road.

SUMMARY

(1) The proposed antenna support structure is a 150 foot (maximum) monopole including antennas. There is no lighting required by the FAA.

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

(3) The area of the proposed site is zoned O-3 (Office Park). There is a residence in the immediate area adjacent to the church across the road and within 500 feet but is isolated and separated by Papermill Drive between.

(4) The proposed equipment housing facility will have no impact on the aesthetics of the adjacent land uses.

(5) 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.

(6) The requested site will have little impact on the community involved when compared with the benefits to be derived from the advanced service offered by the applicant and it is only temporary and seasonal.

(7) There is a variance required for setbacks for the proposed site as the fall zone of the tower (165 feet) does partially lie within two property lines (the State and the City) , but the overlap is of no hazard to any residential home.

(8) The proposed site and structure will have no environmental impact within the federal guidelines as it is located on an existing Electronic Site.

(9) 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.

(10) The proposed frequencies to be used by the various applicants who plan to use the site should present no problem nor any interference to area reception of commercial television or radio signals.

(11) There is a need for the structure in this area to provide signal coverage for the surrounding area by the applicant.

SUMMARY

In light of the analysis and review of documents, it is my professional opinion that the applicant **has justified** the showing for the site on Papermill Road across from a church building and should have minimal impact on the surrounding land uses zoned O-3 (Office Park).

Respectfully submitted,

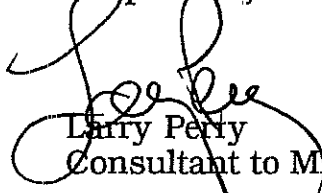
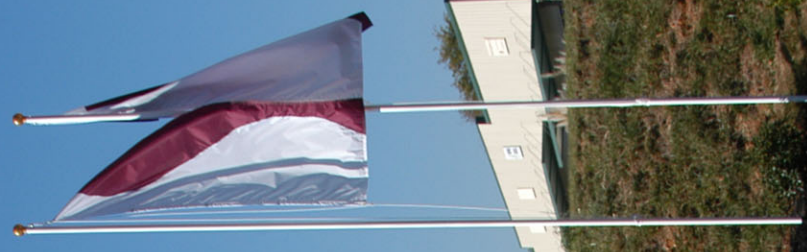

Larry Perry
Consultant to MPC
11-5-08



Photo Simulations

4714 Papermill Drive
11 – D – 08 - UR
9KX0304 / Chenoweth Circle

150ft. Balloon Test



T-Mobile

Pretest 9KX0304
4714 Papermill Drive, Knoxville, TN

150ft. Monopole

Simulation
Viewshed Analysis Report
November 13, 2008
approximately 1,200ft. east of site

Agenda Item # 74

150ft. Balloon Test



T-Mobile

Pretest 9KX0304
4714 Papermill Drive, Knoxville, TN

150ft. Monopole

Simulation
MPC #13, November 13, 2008
approximately 250ft. north of site

Agenda Item # 74

150ft. Balloon Test



T-Mobile

Pretest 9KX0304
4714 Papermill Drive, Knoxville, TN

150ft. Monopole

Simulation
View from **Overseas Highway 2008**
approximately 450ft. south of site

Agenda Item # 74

150ft. Balloon Test



T-Mobile

Pretest 9KX0304
4714 Papermill Drive, Knoxville, TN

150ft. Monopole

Simulation
November 13, 2008
approximately 800ft. west of site

Agenda Item # 74