

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

۲	FILE #: 11-F-08-UR	AGENDA ITEM #: 76
		AGENDA DATE: 11/13/2008
►	APPLICANT:	T-MOBILE SOUTH, LLC
	OWNER(S):	SOUTH CENTRAL BROADCASTING CORP
	TAX ID NUMBER:	69 K B 036
	JURISDICTION:	City Council District 5
►	LOCATION:	Sharps Ridge north of Ludlow Ave.
►	APPX. SIZE OF TRACT:	25.64 acres
	SECTOR PLAN:	Central City
	GROWTH POLICY PLAN:	Urban Growth Area (Inside City Limits)
	ACCESSIBILITY:	Access is via Sharps Ridge Memorial Park Dr., a local street with a 20' pavement width.
	UTILITIES:	Water Source: Knoxville Utilities Board
		Sewer Source: Knoxville Utilities Board
	WATERSHED:	First Creek
►	ZONING:	O-1 (Office, Medical, and Related Services)
►	EXISTING LAND USE:	Broadcasting facility for South Central Radio Group
۲	PROPOSED USE:	170' monopole telecommunications tower
	HISTORY OF ZONING:	None noted
	SURROUNDING LAND USE AND ZONING:	North: Vacant land and apartments / OS-1 (Open Space Preservation) & R-2 (General Residential)
		South: Vacant land and residences / OS-1 (Open Space Preservation) & R- 2 (General Residential)
		East: Vacant land / OS-1 (Open Space Preservation)
		West: Vacant land / OS-1 (Open Space Preservation)
	NEIGHBORHOOD CONTEXT:	The site is located east of Sharps Ridge Memorial Park on Sharps Ridge in an that is primarily open space with a series of telecommunication towers and broadcasting facilities located along the ridge.

#### STAFF RECOMMENDATION:

# APPROVE the request for a 170' monopole telecommunications tower in the O-1 zoning district, subject to the following 6 conditions:

- 1. Meeting all applicable requirements of the Knoxville Zoning Ordinance.
- 2. Obtaining the setback variances from the Knox County Board of Zoning Appeals (11-N-08-VA).
- 3. Meeting all applicable requirements of the Knoxville Department of Engineering.
- 4. Since the FAA does not require any lighting for this facility, there shall be no lighting on the tower.
- 5. Revising the access drive to a width of at least 15' and obtaining approval from the Knoxville Fire Marshal for the access drive and turnaround

for the	access	arive	and	turnaround.

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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 above conditions, this request meets all requirements for approval of a use on review in the O-1 zone.

#### COMMENTS:

This is a request for a new 170' monopole telecommunications tower to be located within a 4900 square foot lease area on top of Sharps Ridge, east of the broadcasting facility for South Central Radio Group and west of N Broadway. Access to the lease area will be from a 20' easement provided by the office (12' gravel road). The subject property is zoned O-1 (Office, Medical, and Related Services) and telecommunication towers are considered as a use on review in this district. Proposed access to the lease area will be from a 20' easement utilizing the existing paved driveway for the existing broadcast facility to the eastern end with the final extensior to the tower site utilizing a proposed 12' wide gravel drive.

The proposed tower site is located approximately 50' to the north of property that is zoned R-2 (General Residential). According to the Knoxville Zoning Ordinance, all towers shall be setback from all properties zoned residential, 110% of the height of the tower (187'). The applicant has requested variances from the setback requirements which will be considered by the Knoxville Board of Zoning Appeals on November 20, 2008.

At the proposed location, the base of the tower will not be visible from adjoining property or a public right-ofway, therefore, screening/landscaping will not be required. The tower is designed so it will collapse upon itself in case of a natural disaster or other failure. FAA does not require lighting for the tower since it is under 200' in height. 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 that will support the antennas proposed by the applicant to provide the needed coverage, so co-location is not an option. An agreement has been submitted stating that T-Mobile agrees to make all of its facilities available to other wireless providers. (See attached letters 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 170' tower is technically justified by the materials submitted by the applicant.

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. At the proposed location, the base of the tower will not be visible from adjoining property or a public right-ofway, therefore, screening/landscaping will not be required.

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-1 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. The use will not draw additional traffic through residential areas.

CONFORMITY OF THE PROPOSAL TO ADOPTED PLANS

1. The Central City Sector Plan identifies this property as being in a slope protection area. The City's One Year Plan identifies the property as being in a mixed use area for office and open space. Since the site is located adjacent to a broadcasting facility and will be utilizing existing access drives for the primary access to the site, proposed development is consistent with this land use designation.

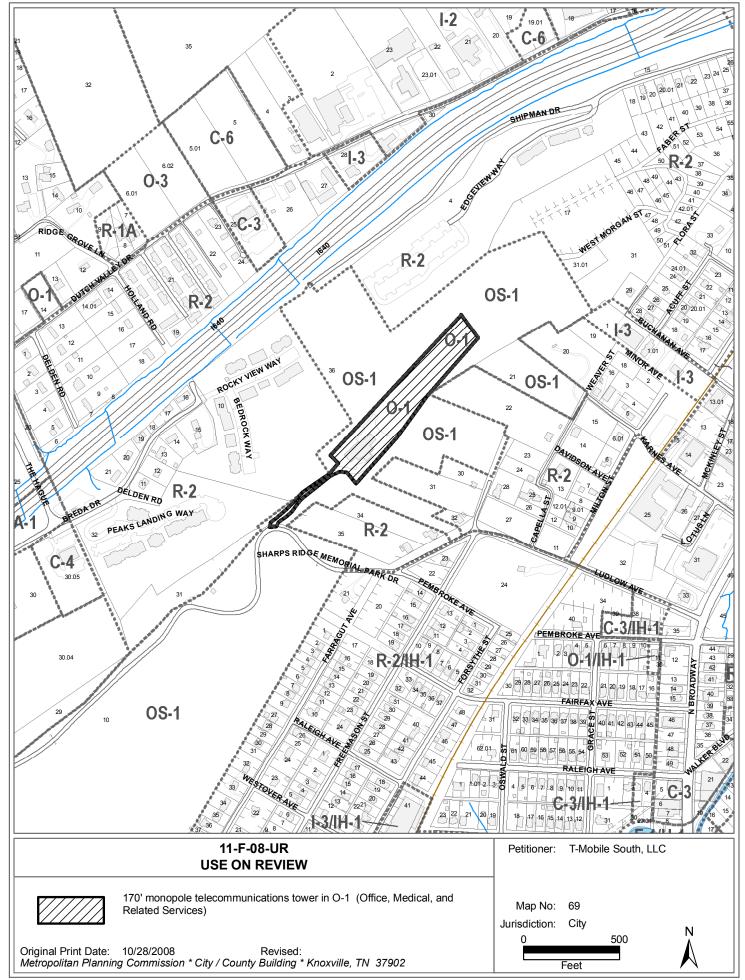
2. The Wireless Communications Facility Plan identifies the proposed 170' monopole as a "tall" monopole. Under the guidelines for Tower Placement section of the Facility Plan, the proposed tower falls within the

"Avoidance Area" categories. Under the "Avoidance Area" category, the Plan discourages tall monopoles located along ridge tops/ridge lines (see attached matrix). While the plan discourages a tower at this location the impact of this tower will be minimal due to the existing telecommunication towers and broadcasting facilities that are located along the ridge in this area.

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 Knoxville City Council. The date of the Knoxville City Council hearing will depend on when the appeal application is filed. Appellants have 15 days to appeal an MPC decision in the City.



# MPC November 13, 2008

Agenda Item # 76

#### T MOBILE

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

## CONSULTANT'S SUMMARY

#### SHARPS RIDGE ROAD SITE REQUEST

Location: Sharp Ridge Drive (City of Knoxville)

Proposed Tower Height: 180 feet (including lightning rod)

Address: 1110 Sharps Ridge Road Knoxville, Tennessee

District: 5th Councilmanic Dist Tax Map#: 69 Tract 36

**Use:** Telecommunications antenna support structure

**Zoning**: O1 (Office) but is immediately adjacent to an R-2 zoned area

**Variances and waivers:** Set back is less than 110% of the tower height to nearest residential property line. The instant application fall zone (110%) touches a residential property line corner 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 180 foot (maximum) monopole type support structure. Lighting not required.

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



#### REPORT TO

#### METROPOLITAN PLANNING COMMISSION

for

#### Proposed Telecommunications Tower Site located on Sharp's Ridge Knoxville, TN

#### T-MOBILE SOUTH LLC

## **UOR 11-F-08-UR**

#### **COMPLIANCE WITH**

#### THE MPC TELECOMMUNICATIONS FACILITY ORDINANCE

#### 11/3/2008

The proposed site for the applicant is on Sharp's Ridge in north Knoxville which already has numerous towers and antennas and is considered an electronic site by the Federal agencies. 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 5** and is located on **Tax Map 69 Tract 36**.

2. Zoning. O-1 (Office) zone

3. **Tower height.** The requested height is less than 200 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 on the edge of the 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 187 feet from the base of the tower.

5. **Site**. This application is for the construction of a new 170 foot monopole near the existing 1500 foot tower of a local TV station on the east end of Sharps Ridge. There are numerous other towers on the ridge and the additional tower proposed here will have no impact on the aesthetics of the area.

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 17E for O-I construction is a minimum 110% of the height of the tower from any property line. (Art. 4 Section 17(E)(2-4) see also Article 5 Section 20 (B)(2). A variance is required as a very small portion of the fall zone touches the property line of a local resident.

8 **Height**. The proposed structure will be up to 180 feet (maximum including lightning rod) overall height. It will not require any lighting as the other existing towers are taller and already have lighting to meet FAA requirements. (*Art.5, Section 20 of the Ordinance.*)

9. Alternatives: There are alternative antenna support structures in the area however, with only one exception, most are too far west to provide for the coverage needed by the proposed facility. The tall 1500 foot tower adjacent to the proposed location for this application is over stressed at the lower levels and will not accommodate any additional antennas or windloading without extensive work on the tower to shore it up, thus the instant application.

10. **Facilities Plan Compliance:** The proposed site is on a federally recognized Electronic Site with numerous other towers and communications facilities. There are residences along the bottom of the ridge but the proposed tower will not impact these residences. The area is an Avoidance Area in the Land Use Wireless matrix in that it is located on a ridgeline. However, in this case the ridgeline is already an electronic site and the addition of the facility will not add to the impact on the surrounding 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

Agenda Item # 76

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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 on a ridgeline with existing broadcast towers so there will be no impact on the aesthetics of the area.

The location is an area zoned O-1 (Office) and is located immediately adjacent to an residential zoned area (R-2). The area would be characterized as an Avoidance Area area based upon the Land Use/Wireless Facilities Matrix, however, since it is an existing electronic site with numerous towers and antennas already in place, there will be no impact on the area.

Lighting for the structure will not be required.

The new support structure will be located near an existing 1500 foot tower that is already overloaded and cannot take the additional loading as required by the applicant, thus this application for a new tower.

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.

#### SUMMARY

(1) The proposed antenna support structure is a 180 foot (maximum) monopole including antennas. There are 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 R1. There is are no residences in the immediate area.

(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 (187 feet) does touch the corner of a residential property line.

(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.

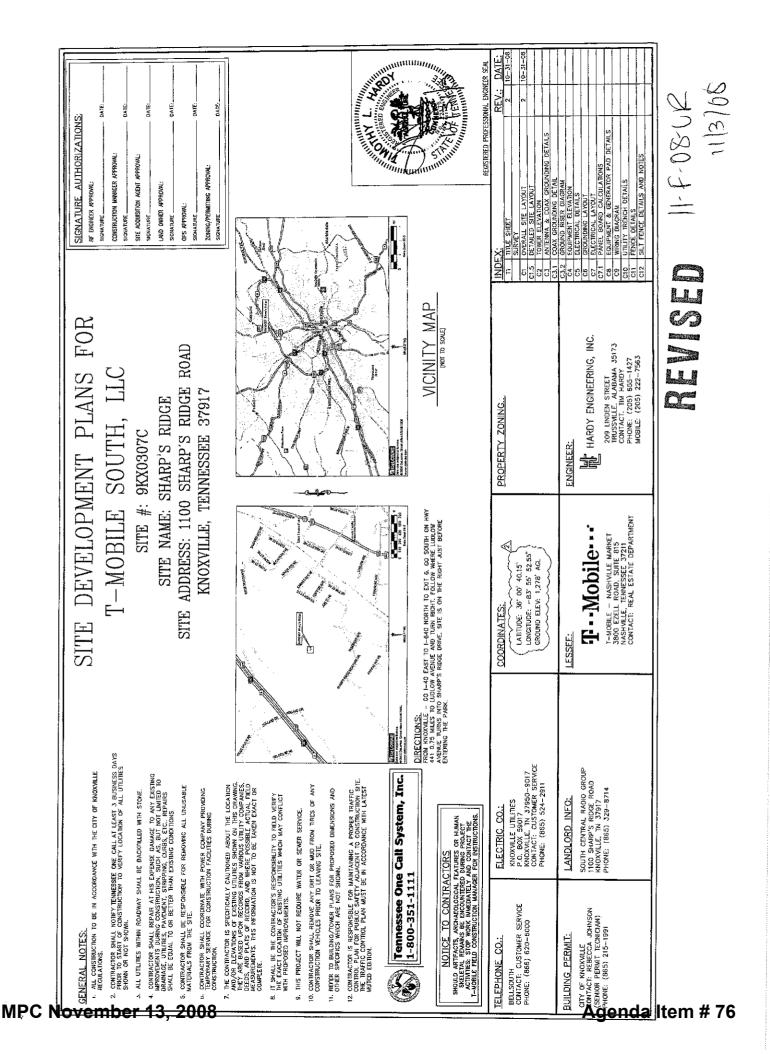
(10) The proposed frequencies to be used by the various applicants who plan to use the site should present no problem nor any interference to area reception of commercial television or radio signals.

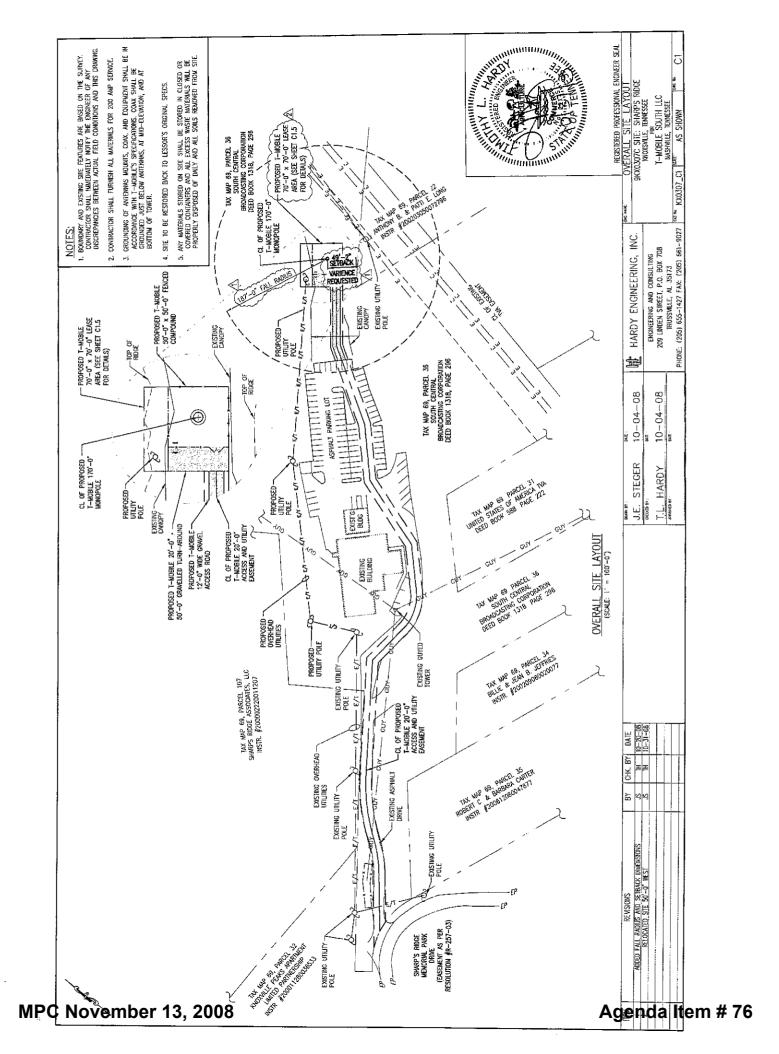
(11) There is a need for the structure in this area to provide signal coverage for the surrounding area by the applicant.

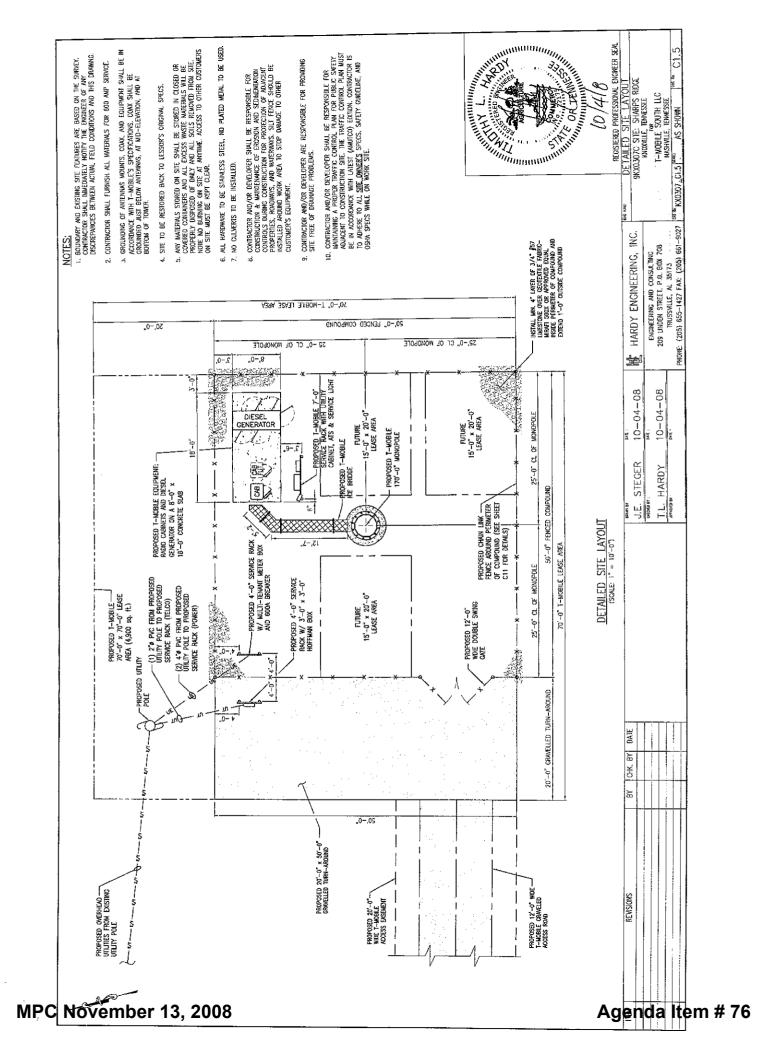
#### SUMMARY

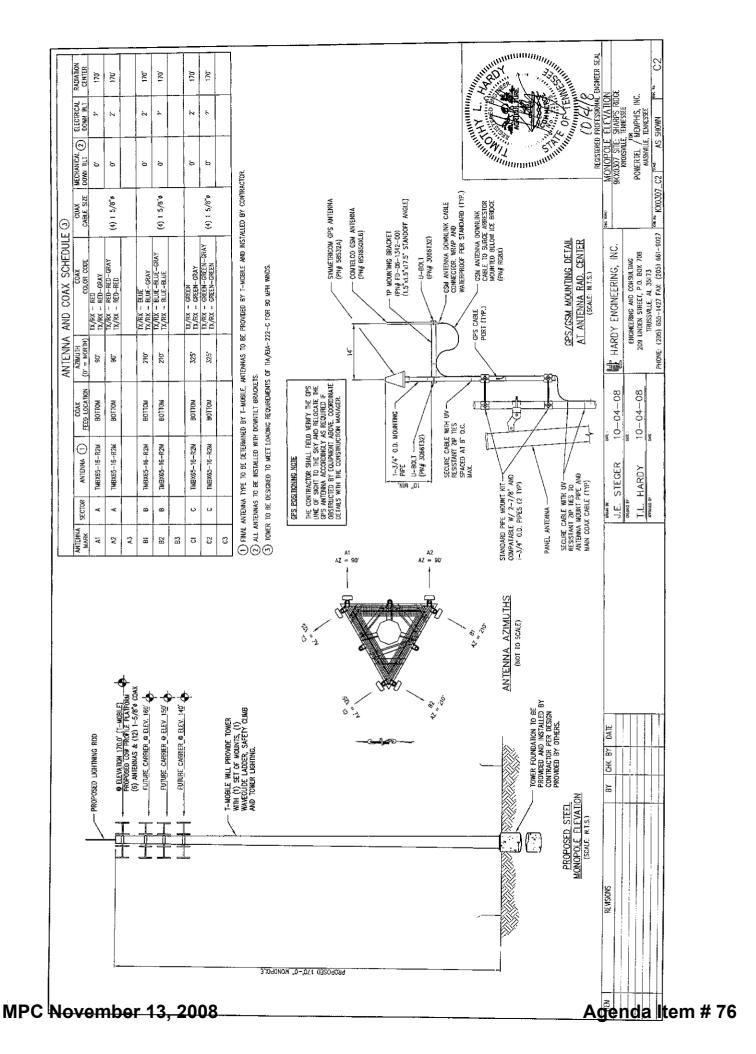
In light of the analysis and review of documents, it is my professional opinion that the applicant **has made a showing of justification** for the site on Sharps Ridge Road adjacent to an existing broadcast tower and should have no impact on the surrounding land uses.

Respectfully submitted, Lafry Perry Consultant to MPC









# 11-F-08-UR



October 22, 2008

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

> RE: I-Mobile Proposed 170' Monopole Tower @ 1100 Sharps Ridge Memorial Park Drive (Parcel ID -069KB036): 9KX0307/Sharps Ridge

Dear Honorable Commission Members:

On behalf of T-Mobile and the land owner, South Central Broadcasting, 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 170' monopole tower to be located within a wooded area of a O-1 zoned parcel and located just between I-640 and North Broadway (Hwy 441). This particular site will provide service to the commercial and residential development in this area of Knoxville

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)

MPC November 13, 2008

Agenda Item # 76

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. T-Mobile investigated other towers within the area but these structures did not provide the coverage required by T-Mobile. Additionally T-Mobile investigated the possibility of co-locating at 170' on the WKXT tower located on the subject property however this tower was not structurally adequate to accommodate T-Mobile's antennas.

Due to the location of the proposed facility on a ridge The Land Use/Wireless Facilities Matrix discourages the proposed facility; however, T-Mobile still has an obligation to provide reliable service to its customers. This includes providing service to residential areas, the heavily travelled I-640 corridor and providing E911 service. Additionally the ridge already has several structures and therefore this proposed 170' monopole will not impact this ridge because it is shorter than most of the others and will blend with the existing structures.

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 170' (including lightening rod) The proposed structure is a monopole tower which is considered the least obtrusive. The tower will be placed among several other structures and will have limited impact upon the existing view.
- (2) Land Use Compatibility The subject property is zoned O-1, Office, Medical and Related Services District and is developed with the South Central Broadcasting facility. The property already includes a television tower and to the south the property is bounded by transmission lines. The site compound will be screened by natural vegetation. 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 broadcast towers. Monopoles are often considered the lease obtrusive type of structure.

Finally, the proposed site will meet all local, 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: annie meen

Eannie Greene Mittrix, Inc (678) 920 - 1262

## Agenda Item # 76



11-F-08-UR

October 7, 2008

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 9KX0307

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:

Deno

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

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LAND USE/WIRELESS FACILITIES MATRIX	Co- Location	Stealth Structure	Low Monopole Below 90'	Moderate Monopole 90'-150'	Tail Monopole 150°-199	Lattice Tower	Guyed Tower
Industrial/Business Park							
Industrial Use							
8 Pre-approved Government-owned Property							
Urban Expressway Corridor							
Rural/Heavily Wooded							
Pasture							
Central Business District							
Office/Commercial Corridor							
Shopping Center							
Within 500' of a residence							
en Rural Residential							de la companya de la La companya de la comp
A Non-residential Properties in a Residential Area (church, cemetery, library,	; etc.)						
On Hill Below Ridgeline							
😧 📔 Ridge Top/Ridge Line							
Scenic Vista							
S Historic District/Site							
Single-family Residential							
Vacant Residential Lot							
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MPC November 13, 2008

★ Agenda Item # 76

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