

SPECIAL USE EXCEPTION REVIEW REPORT

Petition Number: SUE 13-10

Petitioner: James Stockell
AT&T Mobility
13075 Manchester Rd.
Des Peres, MO 63131
314-984-5179

Agent/Engineer: William Jenkins
CIS Communications, LLC
749 Old Ballas Rd.
Creve Coeur, MO 63141
314-569-2275
William@ciscomm.com

Project Name: Ferris Park Cell Tower

Filing Date: 12/13/13

Review Report Date: 1/27/14

Submission Compliance Certification Date: 1/27/14

Requested Action: Special Use Exception

Purpose: Communications Tower Erection

Code Section Article XIV Sec. 1 (15)
Article XVI, Sec. 4 (B)
Chapter 7.6, Sec. 7.6-3 & 4

Location: 500 New Ballwin Rd. in
Ferris Park

Existing Zoning/Land Use: PA / Public Park

Surrounding Zoning/Land Uses: North – R-3 / Single Family
PA / Park
South – R-3 / Single Family
PA / Park

East – R-3 / Single Family

PA / Park
West – R-3 / Single Family
PA / Park

Plan Designation:

Active Recreation

Project Description:

William Jenkins of CIS Communications, LLC, is representing James Stockell of AT&T Mobility in his request for the granting of a special use exception to erect a communications tower near the pavilion in Ferris Park. The proposed tower is called a monopine tower. This is a monopole style tower disguised as a pine tree with exterior mounted antennas and wiring concealed within the branches. Ground-mounted equipment is proposed within a wall-enclosed compound at the base of the tower. The tower is planned to be 130' tall. It is proposed to be located immediately adjacent to the east side of the sidewalk running to the pavilion near the tree line. The submitted documents include a visibility study in which a balloon was flown at the 130 height and photographed from several locations around the park. The monopine tower was then imposed on the photographs to the height of the balloon to suggest the appearance of the monopine tower if it were erected on this site.

Zoning Ordinance Requirements / PA District (Article VIII A):

1. **Section 1. Generally:** This section explains that the PA district is primarily intended to be occupied by public as opposed to private uses and to encourage the use of such property in a "... relatively undeveloped state, such as public or private recreation uses..." **The proposed utility use does not seem to meet this general guideline, but the special use exception regulations (discussed later in this report) allow public utility uses in any district by special use exception.**

2. **Section 2. (1 - 4) Use Regulations:** The uses permitted in these subsections do not apply to this petition.

3. **Section 2. (5) Use Regulations:** Public utilities and services including easements are allowed by special use exception by this subsection provided that the exterior appearance of any building so permitted shall be in keeping with the character of the neighborhood. The land use of the immediately adjacent properties is recreational and the larger neighborhood is substantially single family residential in character. **This special use exception petition has been submitted partially pursuant to this section. The proposal provides that the fence enclosing the compound will be composed of masonry materials that pick up on the architecture of the nearby restroom building. Although the monopine is not a building it is a disguised structure the use of which is intended to make the tower blend into the recreational character of the park.**

4. Section 3. Height Regulations: The height regulation of the PA district is 35'. **This special use exception petition is also submitted pursuant to Article XVI Section 4 to allow a deviation to 130' from the limitations of this subsection.**

5. Section 4. Area Regulations: The proposed facilities appear to meet all minimum setback regulations of the PA District.

Zoning Ordinance Requirements/SUE Regulations (Article XIV Section 2):

1. Article XIV Section 2 (1) Yard Requirements: All minimum yard requirements of the zoning district (PA) appear to have been met with this petition.

2. Article XIV Section 2 (2) Site Illumination: **Motion sensing security illumination is proposed via luminaries mounted on the exterior of the compound wall. Luminaries of this nature will have to be equipped with cut off shields that prevent the lamps or the lenses from being directly visible from the residential properties adjoining the park. I believe the plan shows more fixtures than are needed for this purpose. One fixture per side of the compound should be adequate. There is also a question of the effectiveness of this lighting given the close proximity of proposed landscaping. Finally, it is recommended that these luminaries be of an LED or equivalent energy efficiency with a concomitant low maintenance character.**

3. Article XIV Section 2 (3) Landscaping: **Landscaping should be provided in accordance with the minimum recommendations of Chapter 7.6, Section 7.6-3, and subsection (3) (G) (4).The petitioner has proposed the placement of twelve (12) Chinese Juniper trees (Juniperus Chinensis Keteleeri) along the east, west and north sides of the equipment compound. The enclosed description from the Missouri Botanical Garden describes these evergreens as being a low maintenance tree growing to a height of 15-20 feet with a spread of 4 – 6 feet. The icons on the site plan show trees at the full mature diameter. Any time one plants a cluster of this size of all one type of tree the door is being opened for a future problem. I recommend that the plant schedule be revised to incorporate a least three different species of trees. Perhaps a mixture of evergreens and deciduous trees spread over a somewhat larger area with less of a linear nature to the placement would be more appropriate. I am not suggesting more trees, just a mixture of trees planted in a manner to accentuate and blend the compound into the park rather than having the trees lined up in a soldier course along the wall. This kind of landscaping approach would blend with the security illumination rather than make it ineffective. Such landscaping must also be coordinated with the future plans for the development of the park, but the preliminary park plans**

do not call for significant park improvements in this area.

4. Article XIV Section 2 (4) Fencing: The fencing around the equipment compound is proposed to be a 6' tall masonry wall in a pattern to match the architecture of the restroom building in the park. This would be an appropriate approach from a landscape design perspective.

5. Article XIV Section 2 (5) Parking: No dedicated parking spaces are proposed for the proposed facilities. The existing parking spaces in the parking lot are adequate to accommodate post construction service vehicles are at the site at one time. This is stipulated in the petitioner's 12/23/13 letter.

6. Article XIV Section 2 (6) Paving: Site access in the existing park is proposed across the park driveways, parking lots and sidewalks. **No change to the existing facilities is foreseen as being necessary to access and service the proposed tower and equipment compound although damage to pavements and turf areas during construction is inevitable and this will have to be restored. Additionally the existing sidewalk from the parking lot to the compound site is probably not sufficient to accommodate construction or service vehicles and will have to be upgraded. This access is shown on sheets C-1 and C-1.1.**

More problematic is that Ballwin is presently planning to do a significant upgrade of this part of Ferris Park in 2015-16. The plans for that work are still in a preliminary phase and the final design is subject to change. It is clear, however, that the present parking lot will be completely removed, relocated somewhat south of the present lot and rebuilt at a higher elevation. Significant grading and construction of on-ground and in-ground facilities will take place as a part of the renovation of this part of the park. Access to the tower and compound following park construction will be different than it would be prior to such construction. Tower access under the new park design is conceptualized on sheets C-1.2 and C-1.3. The new sidewalk between the parking lot and the compound will have to be built to a higher standard than would typically be necessary for a park pedestrian application to accommodate service vehicle access to the vicinity of the tower and compound. At a minimum, I recommend that the petitioner be responsible for the costs of upgrading the sidewalk. Please note the comment under engineering concerns below relative to the impact on the pavement.

7. Article XIV Section 2 (7) Sewers: The proposed tower and compound do not require sanitary sewer or storm water facilities. The proposed construction would have virtually no impact on storm water runoff or sanitary sewer needs.

8. Article XIV Section 2 (8) Loading Facilities: No permanent loading facilities are required for a facility of this nature.

9. Article XIV Section 2 (9) Ingress/Egress: Access to the facility from New Ballwin Rd. is proposed to be accomplished via the existing roadways and parking lot. **A 30' wide access easement has been proposed over the park entrance roadway but it is unclear where it will be located in relationship to the parking lot in both the existing park and per the future park plan. This is a somewhat complicated issue because whatever easement is necessary now may not accommodate access once the park is renovated. Perhaps an easement right granted over all paved vehicular and pedestrian ways within the park without relying on a mapped easement would be the easiest approach. This probably comes closer to the reality of how access actually happens in such situations. The issue of access needs to be fully understood and resolved as a part of the consideration for the issuance of a special use exception.**

10. Article XIV Section 2 (10): Required area for the intended use: Given the nominal amount of land that will be occupied by the proposed use, I do not foresee any issues with there being inadequate area.

11. Article XIV Section 2 (11) Dead storage of automobiles: there has been no history of this as an issue on these kinds of sites, and I foresee no reason to expect this installation to create such a problem. There are other regulations in place that can be used to address this issue if it occurs.

12. Article XIV Section 2 (12) Trash containers: Insofar as this site operates without personnel most of the time, there is no need for permanent trash containers to be placed on site.

Zoning Ordinance Requirements/Height and Area Regulations (Article XVI)

1. Article XVI, Section 4 (A) (1-6): These subsections deal with locating and erecting satellite earth stations and are not applicable to this review.

2. Article XVI, Section 4 (B): This subsection addresses tall structures such as church spires, towers, chimneys, etc, and allows such structures to be erected in excess of the height limitations of the zoning district by special use exception. This petition was partially submitted in accordance with this requirement, but this section contains no special design or operational requirements or limitations pursuant to the issuance of a SUE for such structures.

Chapter 7.6 Communication Facilities

Section 7.6-1. Purpose;

This section explains that the purpose of this chapter of the Ballwin Code of Ordinances is to:

1. Provide for appropriate locations and development of communications facilities serving the city. **This tower is proposed at this location to provide service to a geographic portion of Ballwin that is poorly served by cellular providers at this time.**

2. Minimize adverse visual impacts of facility installations through careful siting, design, screening and camouflaging techniques. **This proposal to erect a monopine stealth tower in the central portion of Ferris Park that is as far removed from surrounding residential properties as possible has been done in accordance with the siting objective of this subsection.**

3. Maximize the use of existing support structures to minimize the need for additional facilities. **Unfortunately the topographic limitations of the existing cellular towers in proximity to this portion of Ballwin and the lack of other types of structures or buildings suitable for the installation of cellular antennas makes the use of existing support structures infeasible to serve this area.**

4. Maximize the use of disguised support structures to insure architectural integrity of the area and scenic quality of protected natural habitats. **The proposed use of a monopine tower is intended to address this guideline and the screening and camouflaging guidelines of section #2 above.**

The reviewer should bear these purposes in mind as a basis for reviewing and evaluating the issues associated with this petition for a communications tower. These purposes outline the intent of these regulations.

Section 7.6-2 Definition

The plans accompanying this petition call the proposed tower a "Monopine pole". It is clear that this tower is intended to be disguised as a pine tree making this tower a "disguised support structure" (DSS) as defined in this section. The definition requires a DSS to be "...camouflaged or concealed as an architectural or natural feature. Such structures may include but are not limited to clock towers, campaniles, observation towers, pylon signs, water towers, light standards, flag poles and **artificial trees**".

Section 7.6-3 General Requirements

All support structures and antenna are required to comply with all provisions of this

section.

Section 7.6-3 (a). *Principal or Incidental Use:* Per this subsection, a support structure is an incidental use because the principal uses in the PA District are governmental and private recreational uses. The utility use is not allowed by right; it is allowed only by special use exception and is therefore limited by the associated criteria.

Section 7.6-3 (b). *Building Code and Safety Standards:* Compliance with all locally applicable construction code requirements will be reviewed as a part of the building permit review.

Section 7.6-3 (c). *Regulatory Compliance:* The facility is required to meet all applicable FCC, FAA and other federal and state regulations. As a matter of standard practice, proof of the issuance of all required state and federal permits or proof of such compliance is required prior to the issuance of any construction permits by Ballwin.

Section 7.6-3 (d). *Security:* Site security is proposed via a 6' wall surrounding the equipment compound with motion sensed luminaries. A similar approach has been used in Ballwin for previous similar facility installations and has proven to be adequate for the purpose.

Section 7.6-3 (e). *Lighting:* Other than illumination for security and servicing the equipment, no lighting of the tower or compound is proposed.

Section 7.6-3 (f). *Advertising:* No advertising is proposed for this facility.

Section 7.6-3 (g). *Design:*

(1 - 3) *Color:* These three subsections address the issue of color. **According to the 12/23/13 letter that addressed issues raised in the original review report, the monopine tower will consist of a brown painted tower as the tree trunk with green and brown branches to simulate a pine tree. The compound wall will be colored in a manner similar to the restroom building.**

Section 7.6-3 (g) (4) *Landscaping:* This subsection requires that that there shall be a landscaped area outside of the security enclosure of no less that 10' in width planted with materials that will provide a visual barrier to a minimum height of 6'. **The submitted landscape plan meets the dimensional requirements of this section, but, as called out in the SUE section, I recommend that the plantings be more diverse in species selection and that the trees be arranged in a manner that looks less regimented and does not interfere with the security lighting.**

This section allows the Board of Aldermen the alternative of accepting a decorative wall in lieu of the landscaping screen. A masonry wall designed to match the "existing architecture" has been proposed as a security enclosure for the equipment compound. **I recommend, due to the visibility of this location in the park, that**

decorative landscaping be put in place in conjunction with the wall. The purpose of such landscaping would be primarily as a decorative enhancement to the park to make the new facility blend into the milieu of the park. Facilities such as a cell tower and its associated equipment compound need to be placed and erected in a manner that blends them into the park background and minimizes their non-recreational use. The monopine tower is a step in the right direction, but additional low-level landscaping is also needed to fulfill this intent.

Section 7.6-3 (g) (5) *Residential Separation*: The code requires that all towers be separated from any off-site single family or multifamily residential structure a distance equal to the height of the tower. **The proposed tower appears to meet this requirement.**

Section 7.6-3 (g) (6) *Ground anchors*: This tower is not a guyed tower so no ground anchors are proposed.

Section 7.6-3 (g) (7) *Vehicles storage*: The storage of motor vehicles on the site is prohibited by this subsection and no such storage is proposed as a part of the petition.

Section 7.6-3 (g) (8) *Parking*: This subsection requires the provision of on-site parking for service vehicles. **This issue appears to be resolved by the availability of the parking lot. According to the 12/23/13 letter no parking for service vehicles in close proximity to the tower will be necessary once construction is complete.**

Section 7.6-3 (h): *Shared Use*:

Section 7.6-3 (h) (1-2) These subsections deal with alterations and modifications to existing facilities so they do not apply to this review.

Section 7.6-3 (h) (3): **This subsection deals with towers in excess of 100 feet so it is applicable to this petition. Such towers are required to provide capacity for at least one additional user. The submitted plans show that the tower is designed for colocation. Two sets of additional antennas can be added for future users. The equipment compound, however, is not designed for additional users. Any future user of this tower will have to negotiate a land lease with Ballwin for its own equipment compound. This means that two additional equipment compounds may one day have to be located at the base of this tower. I believe that the tower and the proposed equipment compound should be moved approximately 30 feet north of the location proposed in this petition. That would leave sufficient room for additional future equipment compounds to the east and west of the tower without interfering with the proposed location of the future sidewalk.**

The lease agreement with AT&T that Ballwin will ultimately negotiate will have to

address the issue of additional users having access to the tower. This may require the placement of the tower base outside of the AT&T equipment compound. This concept of colocation and tower access for additional users should be discussed and included in the SUE document.

Section 7.6-3 (h) (4): This subsection requires that a tower developed within a tower multi-use interest area as designated by the Telecommunications Master Plan map shall be designed to accommodate not more than 3 users. I am not able to locate this map, but the proposed tower is designed to accommodate the petitioner and two additional users, so it appears to be consistent with the map requirement.

7.6-4 Permitted Use:

1. 7.6-4 (A, B & D): The provisions of these subsections are not applicable to this petition.
2. 7.6-4 (C): This subsection appears to allow the erection of a tower on land owned by the city following the approval of a lease agreement. **Article XIV of the zoning ordinance, however, requires a special use exception for the tower due to its height and Article VIII A requires a special use exception for the public utility use in the PA district, so a special use exception is required for this tower at this location.**
3. 7.6-5 (A-G): *Administrative Permit Required:*

This part of chapter 7.6 establishes criteria and a process for the issuance of administrative permits for communications towers. The administrative permit was created to assure that the criteria for tower construction and operation outlined in Section 7.6-3 is addressed if the facilities can be erected pursuant to Section 7.6-4. **Because of the need for a special use exception pursuant to provisions of the zoning ordinance, there is no purpose served for issuing an administrative permit. The tower has to be approved under the special use exception regulations so it would be redundant to require an administrative permit too.**

4. 7.6-5: ***Special Use Exception Required:***

Since the zoning ordinance requires a special use exception for this use and for a structure of this height in the PA District, the provisions of this section must also be met.

1. 7.6-6 A: Applications: The submission requirements of the Ballwin Zoning Ordinance have been met with this petition.
2. 7.6-6 B: Findings:
3. 7.6-6 B (1): The Board is required to make a finding as to whether or not this tower is located within a communications tower multi-use interest area as

designated in the Telecommunications Master Plan Map. I can find no record of such map, so making this determination will be problematic, but the code section does not require an affirmative finding for the project to be approved, just a finding of “whether or not”. Given that standard, the finding may influence the final approval or disapproval of the petition, but it does not appear to solely determine the final decision.

4. 7.6-6 B (2): The Board is required to make a finding as to whether or not existing towers are located within the geographic area necessary for the applicant’s engineering requirements. **In the 12/23/13 letter the petitioner has stated that “AT&T’s main coverage objective is the residential area near Big Bend and New Ballwin Rd. There are no existing towers or other tall structure (rooftops, water tanks, etc.) within this area that would work for my clients radio frequency (RDF) needs.” I would have to concur with this statement. I am not aware of any towers or other tall structures in this area that offer citing opportunities for cellular antennas.**

5. 7.6-6 B (3): The Board is required to make a finding whether or not the existing towers, structures or buildings within the geographic area of this location are of sufficient height to provide alternate locations for these proposed antennas. **The petitioner’s statement in the 12/23/13 letter relative to this issue is that there are no existing structures available that would provide the height necessary to meet its coverage objectives.**

6. 7.6-6 B (4): The Board is required to make a finding whether or not the existing towers, structures or buildings within the geographic area of this location have sufficient structural strength to support the antennas proposed by the petitioner. **Again, no structures are available in the area as alternative locations for these antennas.**

7. 7.6-6 B (5): The Board is required to make a finding whether or not the proposed antennas would cause signal interference with antennas on existing towers or structures. **The petitioner states in its 12/23/14 letter that “my client’s equipment operates in a specific slice of spectrum owned by and assigned to them by the Federal Communications Commission. AT&T has exclusive right to broadcast on their frequency thus interference will not be an issue.”**

8. 7.6-6 B (6): The Board is required to make a finding whether or not the fees, costs, or other contractual terms required by the owner of existing towers, structures or buildings within the required geographical area of the applicant or to retrofit the existing towers or structures are reasonable as compared to costs associated with the proposed improvement. **There are no other structures suitable for such use.**

9. 7.6-6 B (7): The Board is required to make a finding whether or not there are other limiting conditions that render existing towers, structures or buildings within the petitioner's required geographic unsuitable. **There are no other structures suitable for such use.**

Planning and Engineering Concerns:

1. The submitted site development plan proposes the placement of an underground electric utility lateral from the Ameren Missouri pole near the west end of the existing parking lot under the entrance driveway and along the north side of the restroom building to a point of intersection with a utility easement for communications running from the north property line east of the restroom facility to the new tower location. **This routing is appropriate to keep the service lateral out from under most existing proposed future improvements and pavements. I recommend, however, that the lateral be placed under the park driveway at a 90 degree angle to minimize the amount of pavement that is potentially disrupted and that the utility line be bored under the pavement and through the park rather than utilizing an open trench for the placement. To avoid any conflict with proposed future improvements to the park it is also recommended that these utility lines be placed at a depth of no less than 4'.**

2. As mentioned earlier in this report Ballwin is anticipating a major renovation to the rear portion Ferris Park in 2015-16. This work will significantly change the location and configuration of the parking lot, the elevation of the area of the new parking lot and most of the open field area, the location of the access sidewalk to the pavilion and will construct a significant new sidewalk feature around the practice field. The exact specifications of this work are not yet designed, but the work will clearly disrupt the location and grade of the access route to the tower as well and potentially impact the utility laterals and access to the tower during construction. Furthermore, it will be necessary to upgrade pavement thicknesses and make similar facility upgrades to accommodate vehicular access to the tower. According to the Department of Parks and Recreation, the grading and construction work planned for this part of the park for 2015-16 is currently estimated to be over \$100,000. **The costs of the upgrades to accommodate tower access are completely unknown. These costs need to be identified and covered by the petitioner as a condition of any approval of this petition. It may be necessary to engage the park planning consultant involved in this project to expand the plan to a more final form to determine the exact final location and elevation of improvements and the anticipated costs of accommodating the tower and equipment compound in this plan when the work is done.**

2. **The photographic simulation handout provided by the petitioner attempts to address the issue of visibility of the proposed "monopine" tower from selected surrounding locations. These were produced by flying a balloon to the**

130' proposed height of the tower at its proposed location and taking pictures of the balloon from surrounding vantage points. The petitioner then electronically inserted the proposed monopine tower into these pictures to give an approximation of what it would look like from these vantage points. The petitioner also took pictures of the proposed location of the equipment compound in the park and inserted the proposed improvements in a similar manner. The simulations of the ground improvements may not be completely accurate since the elevation drawing of the tower shows the lowest limbs being 30' above the ground and the photographic simulations suggest that they will only be about 10' above the ground. This issue aside, I believe that the simulations do a reasonably good job of representing what this structure will look like at this location.

Thomas H. Aiken, AICP
Assistant City Administrator / City Planner