

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

▶ **FILE #:** 3-A-14-UR **AGENDA ITEM #:** 46

POSTPONEMENT(S): 3/13/2014 **AGENDA DATE:** 4/10/2014

▶ **APPLICANT:** NEW CINGULAR WIRELESS LLC (FORMERLY AT&T WIRELESS)

OWNER(S): Canaan Baptist Housing Corp.

TAX ID NUMBER: 83 H A 01001 AND 010

JURISDICTION: City Council District 6

STREET ADDRESS: 1109 Beaman Lake Rd

▶ **LOCATION:** West side of Beaman Lake Rd., south of Romines Dr.

▶ **APPX. SIZE OF TRACT:** 20.2 acres

SECTOR PLAN: East City

GROWTH POLICY PLAN: Urban Growth Area (Inside City Limits)

ACCESSIBILITY: Access is via Beaman Lake Rd., a minor collector street with a 19' pavement width within a 50' right-of-way.

UTILITIES: Water Source: Knoxville Utilities Board

Sewer Source: Knoxville Utilities Board

WATERSHED: Holston and French Broad

▶ **ZONING:** RP-1 (Planned Residential)

▶ **EXISTING LAND USE:** Apartments and vacant land

▶ **PROPOSED USE:** 125' monopole commercial telecommunications tower

HISTORY OF ZONING: None noted

SURROUNDING LAND USE AND ZONING: North: Residences / R-1 (Low Density Residential)

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

East: Church, vacant land and residences / R-1A (Low Density Residential) and R-1 (Low Density Residential)

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

NEIGHBORHOOD CONTEXT: The site is located in an area of established residential neighborhoods that have developed within the R-1 (Low Density Residential) zoning district.

STAFF RECOMMENDATION:

▶ **APPROVE the request for a 125' monopole commercial telecommunications tower in the RP-1 (Planned Residential) zoning district subject to 7 conditions.**

1. Meeting all applicable requirements of the Knoxville Zoning Ordinance.
2. Meeting all applicable requirements of the Knoxville Fire Prevention Bureau.
3. Providing verification to the Knoxville Department of Engineering that the tower and equipment pads are at least one foot above the Beaman Lake Dam spillway elevation.
4. Meeting all applicable requirements of the Knoxville Department of Engineering.
5. Installing the evergreen landscaping screen along the fenced enclosure, as identified on the tree planting plan, within six months of the tower becoming operational.

6. Since the FAA does not require any lighting for this facility, there shall be no lighting on the tower.
7. 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 RP-1 zoning district.

COMMENTS:

This is a request for a new 125' monopole commercial telecommunications tower to be located within a 10,000 square foot lease area located on a portion of a 20.2 acre tract. The subject property is zoned RP-1 (Planned Residential) and telecommunication towers are considered as a use on review in this district. Access to the site is by an easement off of Beaman Lake Rd., a minor collector street. The driveway is required to meet the Utility Access Driveway standards of the Knoxville Fire Prevention Bureau which requires a 16' wide paved access driveway.

The proposed tower is required to be located 137.5 feet (110% of the tower height) from the nearest residentially zoned property. The proposed tower exceeds that minimum standard since the nearest property line is 142.5' from the base of the tower. The nearest residence is approximately 400' from the base of the tower. The applicant is proposing an 8' high security fence around the tower and equipment area. The FAA does not require any lighting for a tower of this height.

The applicant states that there are no existing structures in the area that can be used for antenna placement to obtain the required coverage. The applicant is proposing up to 4 telecommunication carrier antenna arrays on this tower. AT&T will be the principal client for the tower. A letter has been submitted stating that American Towers LLC agrees to make all of its facilities available to other wireless providers.

Attached to the staff report are several support documents, including a report from MPC's tower consultant, Mr. Larry E. Perry. Mr. Perry's report describes the proposal and highlights his findings. Mr. Perry concludes that the proposed monopole 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 site, being located on a 20.2 acre tract, has been located on the site to maximize the distance from existing residential properties in order to minimize the impact on nearby residences.

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

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

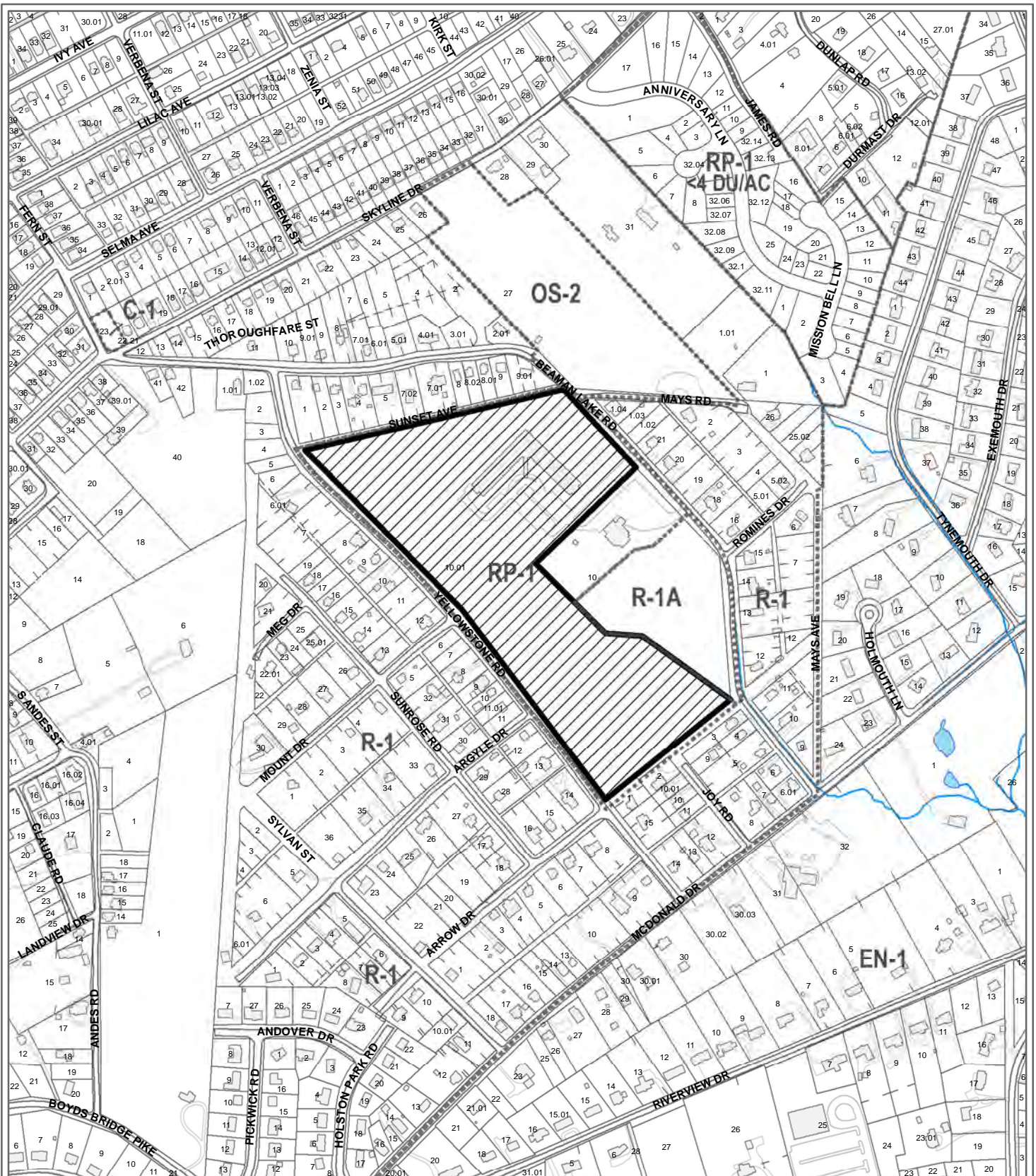
CONFORMITY OF THE PROPOSAL TO ADOPTED PLANS

1. The East City Sector Plan proposes low density residential uses on this property.
2. Under the guidelines for tower placement in the Wireless Communications Facility Plan this proposed tower falls within the "Sensitive Areas". The proposed tower site is located on a multi-family residential property and is located within 500' of a residence which the Plan considers to be "Sensitive Areas" for the location of telecommunication towers. The Plan takes a neutral position on moderate monopole towers located in these areas.
3. The site is located within the Urban Growth Area on the Knoxville-Knox County-Farragut Growth Policy Plan map.

ESTIMATED TRAFFIC IMPACT: Not required.

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.



**3-A-14-UR
USE ON REVIEW**



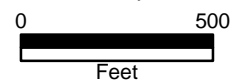
125' monopole commercial telecommunications tower in RP-1 (Planned Residential)

Original Print Date: 2/25/2014
Metropolitan Planning Commission * City / County Building * Knoxville, TN 37902

Revised:

Petitioner: AT&T Wireless

Map No: 83
Jurisdiction: City



ATT WIRELESS

Telecommunications Tower Site Review

USE ON REVIEW APPLICATION # 3-A-14-UR

CONSULTANT'S SUMMARY

SKYLINE

City of Knoxville

Location: 1109 Beaman Lake Road between Beaman Lake Road and Yellowstone Road City of Knoxville.

Proposed Tower Height: 130 foot monopole

Address: 1109 Beaman Lake
Knoxville, Tennessee

District: # 6 City **Parcel ID#:** 083HA01001
Deed Book: 1768 **Pages:** 385-386

Use: Telecommunications antenna support structure

Zoning: RP-1 (Planned Residential)

Land Planning Area: LDR **Growth Plan:** Urban Growth

Variances and waivers: None

Need: The applicant is AT&T Wireless a licensed cellular carrier by the Federal Communications Commission and possibly other users. The applicant has proven a need for the site for its coverage requirements for its 4G service.

Instant Proposal: Construct a 130 foot monopole type support structure.

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



**REPORT TO
METROPOLITAN PLANNING COMMISSION**

for

Proposed Telecommunications Tower Site
Located at 1109 Beaman Lake Road
Knoxville, TN known as

SKYLINE

ATT WIRELESS

3-A-14-UR

COMPLIANCE WITH

**THE MPC TELECOMMUNICATIONS FACILITY ORDINANCE
2/23/2014**

The proposed site for the applicant is a 130 foot monopole antenna support structure (including antennas and lightning rod) to be located southwest of Beaman Lake Road and northeast of Yellowstone Road in Knoxville (City). (Near the Golden Age Retirement Home). The supporting material from applicant has been reviewed for technical and Federal/State legal compliance As well as with the Knoxville Wireless Communication Facilities Plan from 2002. This is a new telecommunications site. This site is known as a fill site. This means that there is some coverage at the site at the present, but the coverage of the existing cellular signals does not provide sufficient signal levels for the new 4G (4th Generation) technology.

REQUESTED

1. **Location.** The location is within the **City of Knoxville in District 6**
Deed Book: 1768 **Pages:** 385-386
Parcel ID#: 083HA01001
2. **Zoning.** RP-1 (Planned Residential)
3. **Growth Policy Plan Designation:** Urban Growth
4. **Proposed Tower Height:** 130 foot monopole
5. **Address:** 1109 Beaman Lake Road
Knoxville, Tennessee

6. **Tower height.** The requested height is 130 feet above ground level should support up to 3 additional telecommunications carrier antennas for a total of 4 users. Lighting will **not** be required on this structure.

7. **Variiances.** The set back requirements in Article 5 Section 20 B(2) of the Ordinance for Knoxville City for "RP-1" sites requires that the structure be set back a minimum distance of 110% of the structure height or in this case 143 feet from the nearest dwelling unit (in this case a Retirement Home (275 feet to the northwest and a residential house 275 feet to the southeast). The proposed site meets that requirement and no variances are required as the nearest dwelling is more than 143 feet from the base of the monopole. Also, the setback from Beaman Lake Road is more than 250 feet and easily meets the Ordinance requirements. No variances are requested nor required.

8. **Site.** This application is for the construction of a new monopole type antenna support structure to be located in a field with woods on the north and west and northwest of the nearest residential house.

9. **Use.** This antenna support structure will be used for telecommunications with the present state of the art communications technology using (Personal Communication Service) PCS and cellular communication sources. The applicant is ATT Wireless and there are 3 possible additional telecommunications users for the facility according to the application.

10. **Setbacks.** The setback requirements are that the facility must be 110% height of the tower from any dwelling unit (143 feet in this case) and 50 feet from the centerline a roadway right of way. The applicant meets that requirement and no variances are required.

11. **Height.** The proposed structure is for 130 feet with no lighting required.

EVALUATION

The following is a list of items reviewed:

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

Knoxville Wireless Communications Facilities Plan dated 2002.

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

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

Review support structure drawings and specifications with applicant

Review FAA lighting and marking requirements and proposals

Review FCC requirements regarding signal coverage, towers and lighting

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

Review Site plan by applicant

Check Zoning

Check setbacks for building and antenna support structure

Check for compliance with Wireless Communication Facility Plan

Check proximity to other structures and district boundaries

Check nature of surrounding land uses

Check design of tower for esthetic changes

Check height requirements necessary for coverage

Check separation from other towers

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

DISCUSSION

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

The site elevation at this location is about 880 feet. It is located in the corner of a field south of a multi resident retirement home and north west of the nearest residential house.

The request is for a 130 foot monopole of which ATT will use the top 15 feet and the additional usable lower area is for other carriers' expansion.

This a "fill" site. By that is meant that there is a little coverage in this area, but that the signal level of the present coverage is not sufficient to allow for the use of the new 4G technology this is used with handheld devices that are so popular. The use of 4G technology reduces the signal coverage area somewhat while increasing the speed of the data that is

transmitted, thus the requirement for this additional site.

The applicant proposed to design the tower for 3 additional users for a total of 4. There are 7 carriers in the local area (of a total of 13 licensed by the FCC) and as the 4G technology becomes more popular, the other carriers are going to need similar coverage in the area and thus the recommendation for the added design capability of the monopole.

The proposed structure should not affect adjacent property as it is on a parcel of land that is zoned Planned Residential but is located in a wooded area surrounded on three sides by wood and is fairly isolated.

EMS access to the site would be via Beaman Lake Road on a relatively flat access road.

Using the MPC's Wireless Facilities Matrix the site qualifies as an NEUTRAL AREA site in that it is less than 150 feet in height and located in an planned residential area within 500 feet of a residence and backed by a heavily wooded area on three sides. It is NEUTRAL with regard to land use but in a SENSITIVE area. (See attached Exhibit 7 Chart)

There are no other antenna support structures within 1 mile of this site.

There is no water required or needed at the unmanned site that will be visited about 3 times a year by a technician.

DISCUSSION RE FACILITIES PLAN

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

(1) **View Protection**--The structure (130 feet) coupled with no lighting requirements and even though located in the woods between Beaman Lake Road and Yellowstone Road and being a monopole should have little impact on the view aesthetics of the area.

(2) **Land Use Compatibility**--The site will be unmanned and will have no impact on noise, traffic or air pollution.

(3) **Design Compatibility**---The new structure will be a monopole type structure less than 146 feet and which is one of the least obtrusive type antenna support structures from a visibility viewpoint.

(A) **Neutral**--This location is in a SENSITIVE AREA and is NEUTRAL land use by the Matrix due to its height.

SUMMARY

(1) The proposed antenna support structure is a 130 foot monopole including antennas. Lighting will NOT be required for this structure by the FAA due to its proposed height.

- (2) A review of the structure stress analysis on the proposed structure and specifications support the use of the monopole by three other potential users in the future, but the recommendation here is for four other users in the initial design of the structure.
- (3) The structure design meets or exceeds FCC and EIA requirements.
- (4) The area surrounding the site is zoned Planned Residential RP-1. There is a residence within 500 feet of the structure...approximately 275 feet Southeast, but there are light trees between the proposed site and the residential structure.
- (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 5 Section 20 B(2)(e) requires it to be removed.
- (6) The proposed equipment housing facility is an equipment shelter and will have no impact on the aesthetics of the adjacent land uses. The landscape plan indicates that the compound will be enclosed with a safety chain link fence with landscaping.
- (7) The applicant has received authorization from the various governmental agencies, including the Federal Communications Commission, to provide communication service to the citizens of Knoxville, Tennessee.
- (8) The requested site will have minimal impact on the community when considering the service it will provide for the immediate area in the use of handheld devices using the 4 LGT technology.
- (9) There are no other antenna support structures within 1 mile of the proposed site that are usable for the coverage required.
- (10) There is no waiver required or requested.
- (11) The proposed site and structure will have no environmental impact within the federal guidelines.
- (12) Assuming that there are 4 carriers operating cellular or PCS transmitters/receivers at this site and all are operating at the same time, the radiation produced by the combination of all the users at the same time using the standards and protocols proposed and used by the carriers today, will be considerably below that established by the Federal Communications Commission and the EPA as creating any danger to humans or animals.

(13) There is a need for the structure in this area to provide for the 4G wide spectrum wireless data service and for other wireless voice and data services to be provided under government regulation by the various proposed carriers who plan to use the site.

(14) Access road for emergency personnel will be via Beaman Lake Road. However, the site is an unmanned site. Access road is fairly flat

RECOMMENDATION

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

Respectfully submitted,



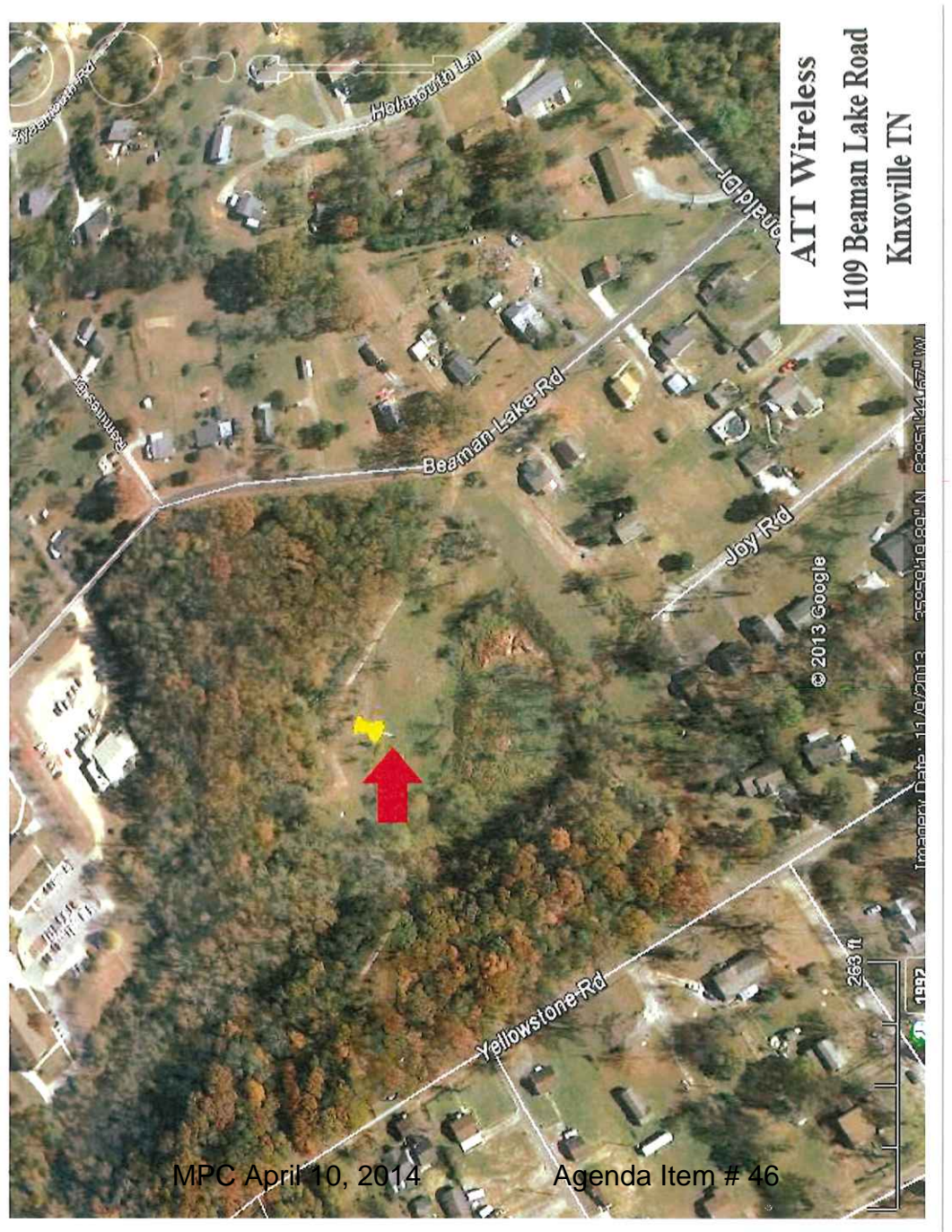
Larry Perry
Consultant to MPC

ATT WIRELESS
1109 Beaman Lake Road
Knoxville, TN
Tower Site



MPC April 10, 2014

Agenda Item # 46



ATT Wireless
1109 Beaman Lake Road
Knoxville TN

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Imagery Date: 11/07/2013 3505010.00° N 82051141.67° W

MPC April 10, 2014

Agenda Item # 46

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
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							

Within 500' of a Residence							
Rural Residential							
Non-residential Property in Residential Area (church, cemetery, library, etc)							
Multi-family Residential							
On Hill below Ridgeline							

Conservation Open Space							
Scenic Highway							
Public Park							
Ridgetop/Ridgeline							
Scenic Vista							
Historic District/Site							
Single-family Residential							
Vacant Residential Lot							

Encouraged

Neutral

Discouraged



Knox MPC
400 Main Street, Suite 403
Knoxville, TN 37902
Attn: Tom Brechko

*Application of American Towers LLC to construct a new Wireless
Telecommunications Tower for the following site:*

American Tower Site Name: Skyline TN; American Tower Site Number: 282017
Site Address: 1269 Beaman Lake Road, Knoxville, Tennessee, 37914

AMERICAN TOWERS LLC

American Towers LLC ("AT") is one of the leading independent owners and operators of shared wireless infrastructure. The core business of American Towers LLC involves the engineering, deployment, marketing, ownership, operation and leasing of shared wireless communications sites. The sharing of infrastructure among multiple services lies at the heart of American Tower's business philosophy. Our portfolio of wireless communication sites, including existing towers and rooftops, enables our customers to serve their markets more efficiently and with sensitivity to local planning and zoning jurisdictions. American Towers LLC designs all of our facilities for multiple collocation opportunities for our customers. We endeavor to assist communities in reducing the number of towers in a given jurisdiction by supplying our customers with locations that are ready for them "Just in Time" for their coverage design and wireless performance needs. As one of the largest tower companies in the world, American Towers LLC has master lease agreements, negotiated at arms-length, with all major wireless carriers licensed to operate in Tennessee. In negotiating the rental rates of these master lease agreements, American Towers LLC considers the competitive environment of its business and the presence of other major tower companies such as Crown Castle and SBA. This ensures that American Towers LLC charges only reasonable rates to service providers.

Collocation Certification

American Towers LLC agrees to comply with the Zoning Ordinance for Knox County, Tennessee or the Zoning Ordinance for the City of Knoxville, as applicable, and is willing to permit other user(s) to attach communication equipment which do not interfere with the primary purpose of the tower, provided that such other users agree to negotiate a reasonable compensation to the owner from such liability as may result from such attachment.

American Towers LLC

By: 

Michael S. Queenan
Zoning Attorney



RF Affidavit

March 27, 2014

Re: Skyline Cell Site

AT&T Mobility ("AT&T") has determined that a new Wireless Communications Facility is required in Knox County, Tennessee. A property candidate at 1109 Beaman Lake Road, Knoxville, TN 37914 has been evaluated by AT&T for compatibility with leasing, land use, and constructability and this candidate has been accepted by AT&T's Radio Access Network Engineering Department. The primary focus of this new facility is to improve coverage at the vicinity of McDonald Drive and Boyd's Bridge Pike, in addition to the surrounding roads, commercial areas, and residential neighborhoods. These roads are important thoroughfares in Knox County.

Search Area Size: Each search area is designed to identify appropriate property candidates to meet AT&T's network system needs. Search area size may vary from site to site. They are sized such that, given local terrain and clutter topologies, a property candidate lying within that search area has a high probability of achieving the required system objectives, given a minimum height for antenna mounting. If made smaller, the search area may limit alternatives, thus precluding AT&T from selecting the least intrusive site option. If made larger, outlying property candidates found within the search area will likely have a much lower chance of meeting coverage objectives. Sites that are improperly placed can introduce radio frequency interference into the existing network, and in some cases, may require additional sites to meet the objectives.

Search Area Location: Search areas are located such that their "centers" are the ideal location for a site to meet system objectives. In general, the further away from the center of a search area, the less likely the site is to meet system objectives. Search areas are very carefully centered given the local terrain and clutter topologies, both of which can impact site constructability as well as signal propagation and, thus, system performance. For this reason, it is possible to have candidate locations within a search area that will not meet coverage objectives. A detailed engineering analysis is always required of candidate locations.

Extensive site acquisition efforts were conducted to determine if collocation on an existing tower or other structure would be possible, and no adequate structure could be found. There are no existing structures in the area that could provide the required antenna mounting height of 125' (above ground level) or more to support the load of antennas, lines, and related equipment needed for AT&T to successfully deploy a facility that can utilize existing and future wireless technologies. The proposed location for the new facility was based on a comprehensive analysis of the search ring. Factors considered included RF propagation objectives, constructability, and willingness of a landowner to provide property for a lease or easement.

The closest existing AT&T sites that would hand off to this proposed site are, on average, 1.62 miles away from the needed coverage zone.

Radio Frequency ("RF") Propagation plots are attached showing the predicted before and after coverage levels for a given frequency band. The attached plots show the pre and post coverage for the area affected for the spectrum bands that will be improved.

AT&T certifies that all of its equipment will be installed and operated in keeping with applicable FAA and FCC rules and regulations, as well as appropriate industry standards. The construction of this facility, including

AT&T's installation of radio equipment, will not interfere with the usual and customary transmission or reception of radio, television, and general public use communications equipment.

3G Service Coverage Gap

AT&T uses industry standard propagation tools to identify the areas in its network where signal strength is too weak to provide reliable in-building service quality. This information is developed from many sources, including terrain and clutter databases which simulate the environment and propagation models that simulate signal propagation in the presence of terrain and clutter variations.

The extent of service coverage provided by existing AT&T sites in the subject area is shown on the map included as Exhibit A (page 4) with this Report. The green shading indicates areas with a signal strength level that provides acceptable in-building service coverage (i.e., where users are able to place or receive a call on the ground floor of a building). The blue shading indicates areas with a signal strength level that provides acceptable in-transit service coverage (i.e., where users should be able to place or receive a call from within a vehicle). The red shading indicates areas with a signal strength level where a customer might have difficulty receiving consistently acceptable service.

The quality of service experienced by any individual customer can differ greatly depending on whether the user is indoors, outdoors, stationary, or in transit. AT&T strives to provide consistent service to all users within a coverage area. Accordingly, the blue and red areas on Exhibit A are areas where there is currently inadequate service coverage, and a new facility is needed to close the coverage gaps that affect these areas.

AT&T proposes to construct the Proposed Facility to remedy the service issues and close the coverage gaps illustrated by Exhibit A. The map attached as Exhibit B (page 5) depicts coverage in the subject area once the Proposed Facility is built and integrated into AT&T's existing network. A comparison of Exhibit A (i.e., existing coverage) with Exhibit B (i.e., proposed coverage) clearly shows that gap areas will be significantly reduced once the Proposed Facility is operational, and this will expand coverage and improve service quality and availability in the subject area.

BENEFIT TO COMMUNITY

As wireless communications carriers have evolved, they have become a vital link as a wireless data provider in addition to voice communications. Phones, tablets and even laptop computers can now access the internet quickly and efficiently without the need to be connected to a cable or restricted to a small Wi-Fi hotspot as was the case in the past. This has brought about many new innovations, including devices such as parking meters that can report their status, vending machines that can report their inventory levels, delivery vehicles that report package delivery and receipt and, eventually, the "connected car," which will not only stream audio but also be able to share diagnostic information, report accidents or caution its owner about speeding or aggressive driving.

Wireless carriers also provide real-time internet access for law enforcement, fire and medical transport vehicles, which not only allows immediate access to information when needed, but can also help determine the closest unit to an area of need and help determine the fastest route to the site of an emergency based on current conditions.

In addition to expanding capacity for the 3G network in the subject area, AT&T is also expanding 4G LTE high speed data service with the goal of providing the most advanced personal wireless experience available to AT&T customers. 4G LTE is capable of delivering speeds up to 10 times faster than industry-average 3G speeds. LTE technology also offers lower latency (i.e., the processing time it takes to move data through a network), which will shorten the time it takes to start downloading a webpage or file once a customer has sent the request and help to improve the quality of personal wireless services. Additionally, LTE uses spectrum more efficiently than other technologies, creating more space to carry data traffic and services and to deliver a better overall network experience.

After the proposed facility is on air, 4G LTE service will be available both indoors and outdoors in the targeted service area. One reason this is important is that as existing customers migrate to 4G LTE, 3G data traffic will be reduced. This will alleviate capacity demands on the UMTS (3G) network and allow this spectrum to be redeployed more efficiently utilizing LTE technology.

Expanded wireless communications services are also important to businesses that use these services to support their operations. It is becoming common for AT&T to receive service quality inquiries from businesses when they are planning to locate to a new area. They want to know what infrastructure and technology is in place prior to making a move decision. This has also been the case with convention groups when planning future meetings and expositions.

Submitted by:

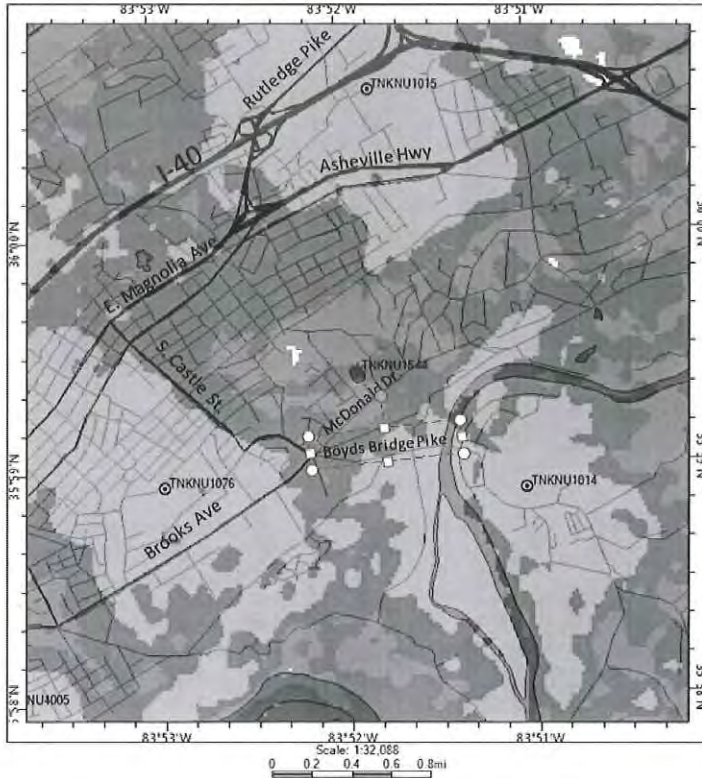
Gerald Winters – RAN Design Engineer – AT&T Mobility

EXHIBIT A

Existing 3G Service Coverage Without Proposed Site

This map illustrates existing coverage in the subject area. Note the clear gap in coverage in the vicinity of the proposed Site Location.

Skyline Before

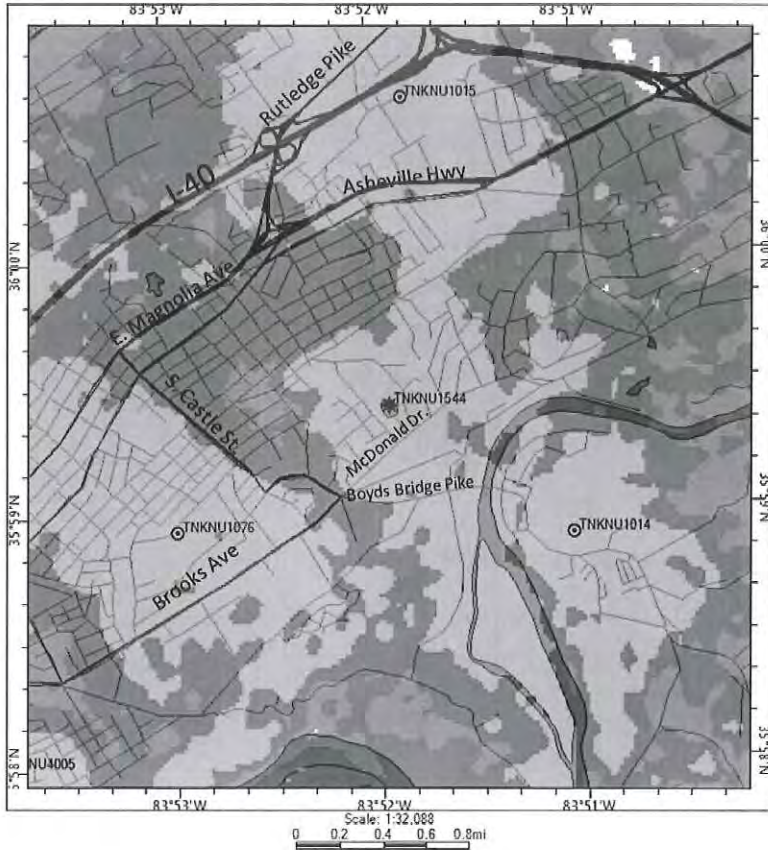


- Best Signal Level (dBm) ≥ -75
- Best Signal Level (dBm) ≥ -85
- Best Signal Level (dBm) ≥ -95

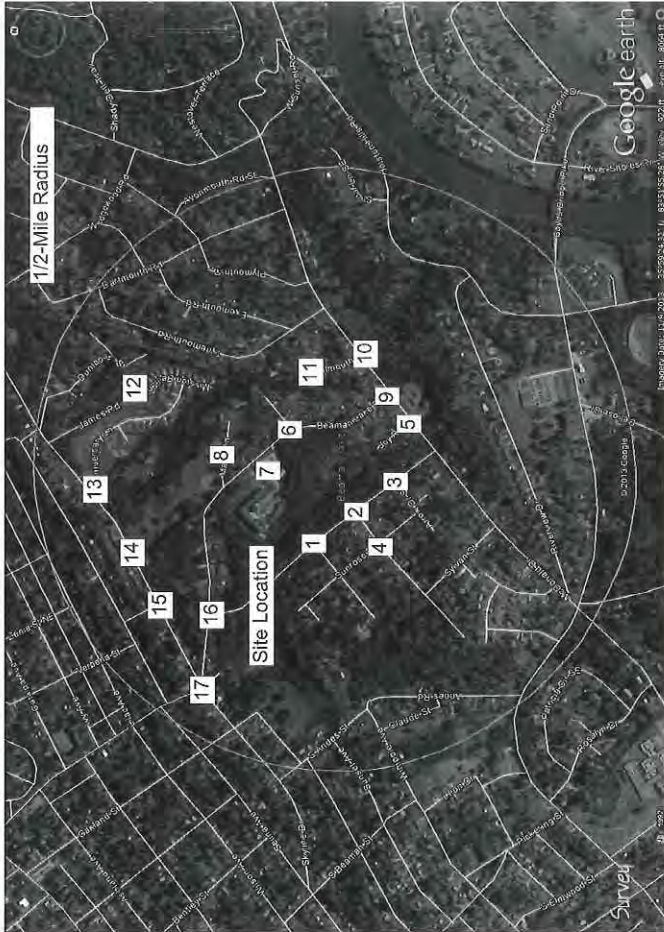
EXHIBIT B
Proposed 3G Service Coverage With Proposed Site

This map illustrates coverage improvements that will be realized with the additional of the Proposed Facility.

Skyline After



- Best Signal Level (dBm) >= 75
- Best Signal Level (dBm) >= 85
- Best Signal Level (dBm) >= 95



Skyline
1109 Beaman Lake Road SE
Knoxville, Knox County, Tennessee
Figure 1: Photograph Locations



Skyline

1109 Beaman Lake Road SE
Knoxville, Knox County, Tennessee

Proposed Tower from Photo Location 2



ECA Proj. #: 00440



Skyline

1109 Beaman Lake Road SE
Knoxville, Knox County, Tennessee

Proposed Tower from Photo Location 5



ECA Proj. #: 00440



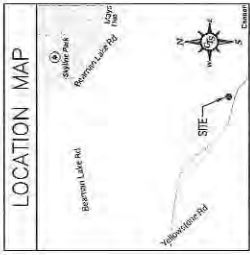
ECA Proj. #: 00440

Skyline

1109 Beaman Lake Road SE
Knoxville, Knox County, Tennessee

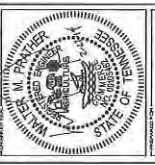
Proposed Tower from Photo Location 9





**AT&T SITE NAME:
SKYLINE
PROPOSED RAWLAND SITE**
 1109 BEAMAN LAKE ROAD SE
 KNOXVILLE, TN 37914
 KNOX COUNTY, TN

COMPASS TECHNOLOGY SERVICES, INC.
 5448 BELLS FERRY ROAD
 KNOXVILLE, TN 37912-2800
 PHONE: 770-521-2500
 FAX: 770-521-2501
 WALTER MATTHEW PRATER, P.E., P.L.
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF TENNESSEE



PROJECT NO.: _____
 SHEET NO.: _____ OF _____
 TITLE: _____
 DATE: _____

RF ENGINEER	DATE
SIGNATURE	DATE
CONSTRUCTION MANAGER	DATE
SIGNATURE	DATE
SITE ACQUISITION AGENT	DATE
SIGNATURE	DATE
LANDOWNER	DATE
SIGNATURE	DATE
PROGRAM MANAGER	DATE
SIGNATURE	DATE
ZONING/PERMITTING	DATE
SIGNATURE	DATE

SHEET INDEX

SHEET	DESCRIPTION	REV.	DATE
T-1	TITLE SHEET	1	02/27/14
1-2	UTILITIES, SPECIFICATIONS AND SCHEDULES	1	12/20/13
2	PROPOSED SURFACE BY OTHERS	2	12/20/13
3	PROPOSED LEASE AREA SURVEY (BY OTHERS)	2	12/20/13
4	LEGAL DESCRIPTIONS (BY OTHERS)	2	12/20/13
C-1	ACCESS, EASE, GRADING AND EROSION CONTROL PLAN	1	02/27/14
C-2	TOWER SITE GRADING AND EROSION CONTROL PLAN	1	02/27/14
C-3	GENERAL CONSTRUCTION NOTES & SITE PLAN	1	02/27/14
C-4	EROSION CONTROL AND GRADING DETAILS	1	02/27/14
C-5	FOUNDATION DETAILS	1	02/27/14
C-6	FOUNDATION AND GRADING NOTES	0	12/31/13
C-7	EROSION CONTROL AND GRADING NOTES	0	12/31/13
L-1	LANDSCAPING PLAN AND DETAILS	0	12/31/13
S-1	TOWER ELEVATION & ANTENNA ORIENTATION	0	12/31/13
S-2	FOUNDATION FOUNDATIONS	0	12/31/13
S-3	PILE BRIDGE DETAILS	0	12/31/13
S-4	PILE BRIDGE DETAILS	0	12/31/13
S-5	FOUNDATION DETAILS	0	12/31/13
S-6	FOUNDATION AND GRADING NOTES AND SYMBOLS	0	12/31/13
E-1	GENERAL ELECTRICAL NOTES AND SYMBOLS	0	12/31/13
E-2	ELECTRICAL SITE PLAN	1	02/27/14
E-3	GROUNDING PLAN	1	02/27/14
E-4	ONE-LINE DIAGRAM	0	12/31/13
E-5	FOUNDATION AND GRADING DETAILS	0	12/31/13
E-6	ELECTRICAL DETAILS	0	12/31/13
E-7	ELECTRICAL DETAILS	0	12/31/13
E-8	ELECTRICAL DETAILS	0	12/31/13
E-9	H-FRAME DETAILS	0	12/31/13

3-A-14-OR
REVISED
4-2-14

PROJECT DIRECTORY

LAND OWNER:	CAMAK BAPTIST HOUSING CORPORATION C/O AMERICAN APARTMENT MANAGEMENT, INC. 800 SOUTH GRAY STREET, SUITE 800 KNOXVILLE, TN 37902 CONTACT: JIM CUNNINGHAM (865) 504-4355
APPLICANT:	AT&T WIRELESS PCS, LLC 407 FRANKLIN ROAD BRENTWOOD, TN 37027 CONTACT: JIM CUNNINGHAM (770) 701-7046
SITE DESIGN:	COMPASS TECHNOLOGY SERVICES 5448 BELLS FERRY ROAD KNOXVILLE, TN 37912 DESIGN MANAGER: JIM CUNNINGHAM (770) 701-2500 EXT. 141
SURVEYOR:	POINT TO POINT LAND SURVEYORS 810 JACKSON STREET KNOXVILLE, TN 37904 (865) 708-1114

SITE SUMMARY

SITE TYPE:	PROPOSED RAWLAND GROUND BUILD
TOWER TYPE:	MONOPOLE
PROPOSED TOWER CENTER:	125'
PROPOSED LEASE AREA:	100' x 100' (10,000sq ft)
TOWER LOCATIONS:	N 25° 50' 24.32" (NAD 83)
TOWER LONGITUDE:	W 83° 51' 55.29" (NAD 83)
FOUND ELEVATION:	878.73 A.M.S.L.
ZONING JURISDICTION:	KNOX COUNTY
ZONING CLASSIFICATION:	RP-1 (PLANNED RESIDORIAL)
PARCEL TAX I.D.:	038340001
POWER COMPANY:	KNOXVILLE UTILITIES BOARD (865) 584-2811
TELEPHONE COMPANY:	AT&T (865) 820-4000

HANDICAP REQUIREMENTS:
 FACILITY IS UNHANDICAPED AND NOT FOR HUMAN HABITATION.
 HANDICAP ACCESS IS NOT REQUIRED.

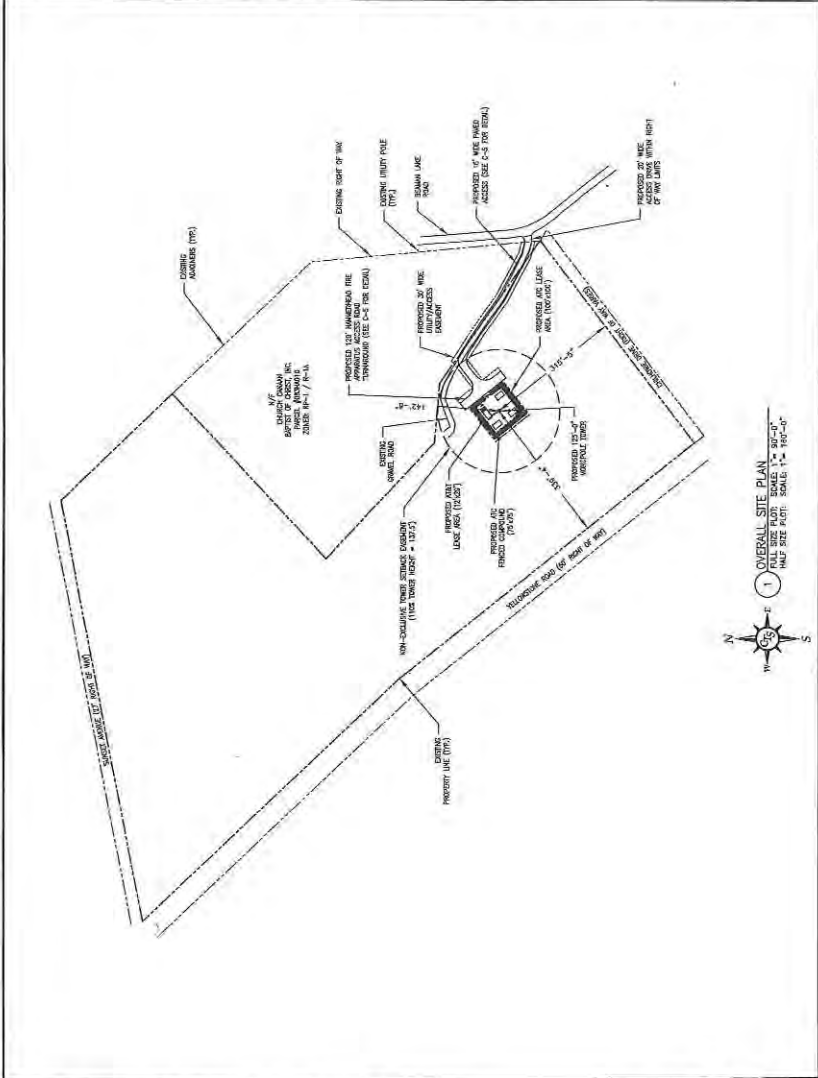
PLUMBING REQUIREMENTS:
 FACILITY HAS NO SANITARY OR POTABLE WATER.

NO SMOKING SIGN
 SERVICE ALIANT
 CALL TOLL FREE
 1-800-368-5533
 10/2015

NO.	DATE	DESCRIPTION
1	02/27/14	FINAL/ISSUED
2	07/27/13	REVISIONS
3	07/27/13	REVISIONS
4	07/27/13	REVISIONS
5	07/27/13	REVISIONS
6	07/27/13	REVISIONS
7	07/27/13	REVISIONS
8	07/27/13	REVISIONS
9	07/27/13	REVISIONS
10	07/27/13	REVISIONS
11	07/27/13	REVISIONS
12	07/27/13	REVISIONS
13	07/27/13	REVISIONS
14	07/27/13	REVISIONS
15	07/27/13	REVISIONS
16	07/27/13	REVISIONS
17	07/27/13	REVISIONS
18	07/27/13	REVISIONS
19	07/27/13	REVISIONS
20	07/27/13	REVISIONS



PROJECT NO.	000174
CITY/STATE	DALLAS, TEXAS
PROJECT NAME	11535 M. PRATHER LICENSED MECHANICAL ENGINEER STATE OF TEXAS
OVERALL SITE PLAN	
SHEET NUMBER	C-1



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MPC April 10, 2014

Agenda Item # 46



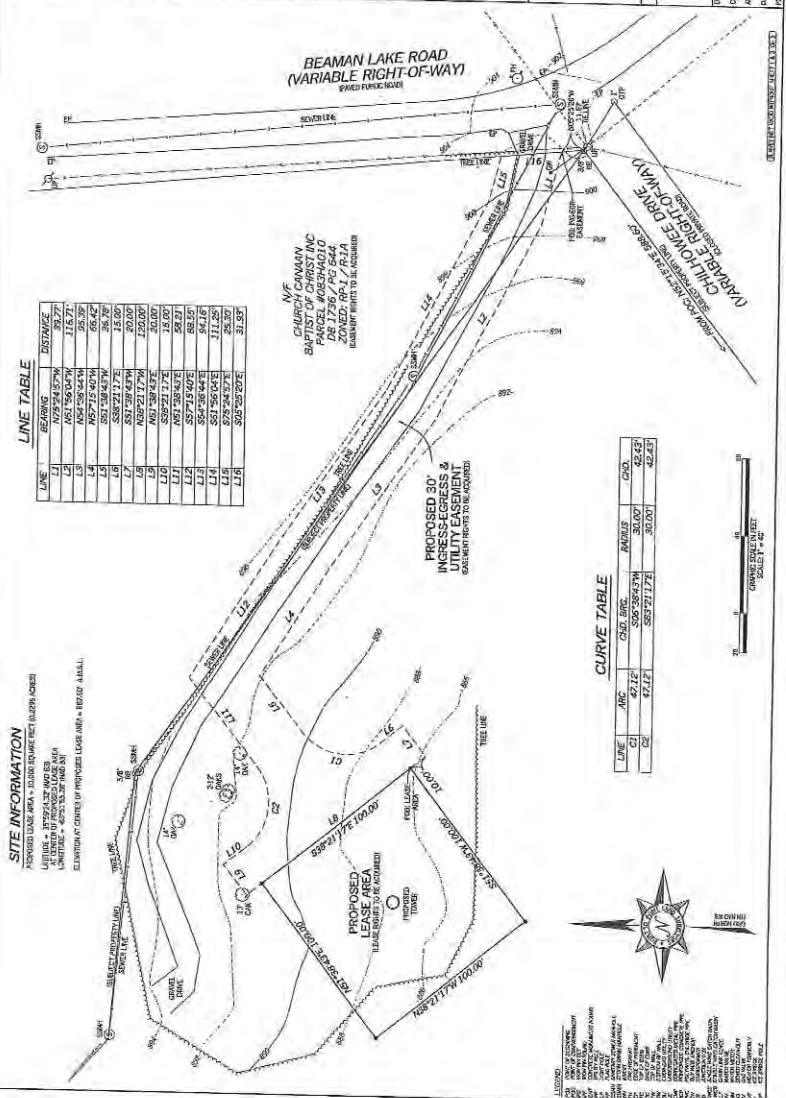
NO. DATE UTILIZATION
 17111 12/31/2014
 17111 12/31/2014
 17111 12/31/2014
 17111 12/31/2014

POINT TO POINT LAND SURVEYORS
 LAND SURVEYORS
 810 Jackson Street
 Locust Grove, Georgia 30248
 (678) 565-4440 (f) 678-565-4497
 (w) porttopsurvey.com



PROJECT: 7 JOHN ROAD
 PARCEL: 00854010
 PROJECT LOCATION:
 PARK COUNTY, GEORGIA
 PARCEL: 00854010

DATE: 12/23/13
 SHEET: 2
 DRAWN BY: CJC
 PROJECT NO.: 00854010
 JOB NO.: 13013



LINE TABLE

LINE	BEARING	DISTANCE
L1	S 67° 02' 58.75" W	11.6771
L2	S 61° 58' 04.74" W	25.929
L3	S 65° 59' 44.54" W	66.467
L4	S 67° 15' 40.74" W	66.467
L5	S 67° 15' 40.74" W	15.000
L6	S 68° 21' 17.74" W	15.000
L7	S 68° 21' 17.74" W	20.000
L8	S 69° 21' 17.74" W	20.000
L9	S 69° 21' 17.74" W	15.000
L10	S 69° 21' 17.74" W	15.000
L11	N 67° 29' 45.74" E	58.871
L12	N 67° 15' 40.74" E	66.507
L13	N 67° 15' 40.74" E	66.507
L14	N 67° 15' 40.74" E	11.262
L15	S 61° 58' 04.74" E	25.929
L16	S 67° 02' 58.75" E	11.677
L17	S 67° 02' 58.75" E	31.929
L18	S 67° 02' 58.75" E	31.929

CURVE TABLE

LINE	ARC	CHD. BRC.	RADIUS	CHD.
C1	67.12	589211.74	30.00	42.43
C2	67.12	589211.74	30.00	42.43

SITE INFORMATION
 PROPOSED LEASE AREA = 33,600 SQUARE FEET (SLASH) ACRES
 UTILIZATION = 0.7725232 ACRES
 TOTAL AREA = 43,300 SQUARE FEET (SLASH) ACRES
 ELEVATION AT CENTER OF PROPOSED LEASE AREA = 102.62' A.S.L.



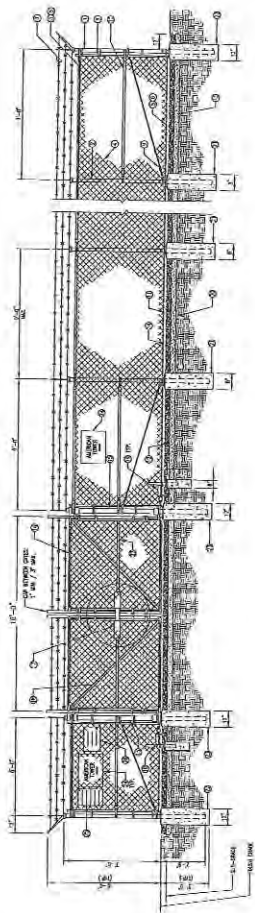
NOTES:
 1. ALL DISTANCES ARE IN FEET AND DECIMALS THEREOF.
 2. ALL BEARINGS ARE TRUE BEARINGS.
 3. ALL CURVES ARE CIRCULAR.
 4. ALL EASEMENTS ARE AS SHOWN.
 5. ALL RIGHTS RESERVED.
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 9. ALL RIGHTS RESERVED.
 10. ALL RIGHTS RESERVED.

REVISIONS	
NO.	DATE
1	08/20/13
2	08/20/13
3	08/20/13
4	08/20/13
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8	08/20/13
9	08/20/13
10	08/20/13



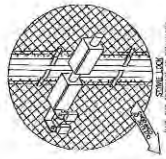
PROJECT NO.	50001343
DATE OF ISSUE	08/20/13
ISSUED BY	COMPASS
DESIGNED BY	COMPASS
CHECKED BY	COMPASS
DATE CHECKED	08/20/13
REVISIONS	
ISSUED BY	COMPASS
DATE ISSUED	08/20/13
PROJECT NO.	50001343

S-6



- GENERAL NOTES:**
1. VERIFY WORK FOR CORRECTNESS.
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 18. VERIFY WORK FOR CORRECTNESS.
 19. VERIFY WORK FOR CORRECTNESS.
 20. VERIFY WORK FOR CORRECTNESS.

- REFERENCE NOTES:**
1. SEE PART 1.17 FOR GENERAL NOTES FOR CABINETS.
 2. SEE PART 1.17 FOR GENERAL NOTES FOR CABINETS.
 3. SEE PART 1.17 FOR GENERAL NOTES FOR CABINETS.
 4. SEE PART 1.17 FOR GENERAL NOTES FOR CABINETS.
 5. SEE PART 1.17 FOR GENERAL NOTES FOR CABINETS.
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 19. SEE PART 1.17 FOR GENERAL NOTES FOR CABINETS.
 20. SEE PART 1.17 FOR GENERAL NOTES FOR CABINETS.



STORE EXTRA PARTS OF MULTI-LOCK DEVICE IN TELCO CABINET.

NO BLINGER OR MUSHROOM REQUIRED.

NOTES: This drawing is a technical drawing and should be used in accordance with the specifications. The contractor shall be responsible for providing any information not shown in this drawing.