

▶ **FILE #:** 3-B-14-UR

AGENDA ITEM #: 46

AGENDA DATE: 3/13/2014

▶ **APPLICANT:** AT&T WIRELESS

OWNER(S): Terry & Linda Hicks

TAX ID NUMBER: 60 13111

JURISDICTION: County Commission District 8

STREET ADDRESS: 0 Rutledge Pike

▶ **LOCATION:** Northwest side of Rutledge Pike, west of Rosewood Rd.

▶ **APPX. SIZE OF TRACT:** 1.81 acres

SECTOR PLAN: Northeast County

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

ACCESSIBILITY: Access is via Rutledge Pike, a major arterial street with a four lane / divided median section within a right-of-way with a width of over 200'.

UTILITIES: Water Source: Northeast Knox Utility District

Sewer Source: Knoxville Utilities Board

WATERSHED: Woods Creek

▶ **ZONING:** CB (Business and Manufacturing)

▶ **EXISTING LAND USE:** Vacant land

▶ **PROPOSED USE:** 141' monopole commercial telecommunications tower

HISTORY OF ZONING: None noted

SURROUNDING LAND USE AND ZONING: North: Vacant land / A (Agricultural)

South: Vacant land / A (Agricultural) & A-1 (General Agricultural)

East: Residence and vacant land / A (Agricultural)

West: Mixed businesses and residences / CB (Business and Manufacturing)

NEIGHBORHOOD CONTEXT: The site is located in an area along Rutledge Pike that includes a mix of commercial and residential development.

STAFF RECOMMENDATION:

▶ **APPROVE the request for a 141' monopole commercial telecommunications tower in the CB (Business and Manufacturing) zoning district subject to 6 conditions .**

1. Meeting all applicable requirements of the Knox County Zoning Ordinance.
2. Meeting the Utility Access Driveway standards and all other applicable requirements of the Knox County Fire Prevention Bureau.
3. Meeting all applicable requirements of the Knox County Department of Engineering and Public Works.
4. Installing the evergreen landscaping screen along the fenced enclosure, as identified on the tree planting plan, within six months of the tower becoming operational.
5. Since the FAA does not require any lighting for this facility, there shall be no lighting on the tower.

6. At the time of the request for a building permit, posting a bond or other approved financial surety that would ensure the removal of the tower if it is abandoned.

With the conditions noted above, this request meets all criteria for a use-on-review in the CB zoning district.

COMMENTS:

This is a request for a new 141' monopole commercial telecommunications tower to be located within a 10,000 square foot lease area located on a portion of a 1.81 acre tract. The subject property is zoned CB (Business and Manufacturing) and telecommunication towers are considered as a use on review in this district. Access to the site is by an easement off of Rutledge Pike, a major arterial street. The driveway is required to meet the Utility Access Driveway standards of the Knox County Fire Prevention Bureau which requires a 16' wide paved access driveway.

The proposed tower is required to be located 155.1 feet (110% of the tower height) from the nearest residence. The proposed tower exceeds that minimum standard since the nearest residence is approximately 312' 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 141' 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 the north side of a major arterial street in an area made up of a mix of commercial uses and primarily large residential tracts, should have minimal 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 CB (Business and Manufacturing) 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, Northeast County Sector Plan and Wireless Communications Facility Plan. The use is in harmony with the general purpose and intent of the Zoning Ordinance. Since this site is in a mixed use area, the use will not significantly injure the value of adjacent property. The use will not draw additional traffic through residential areas.

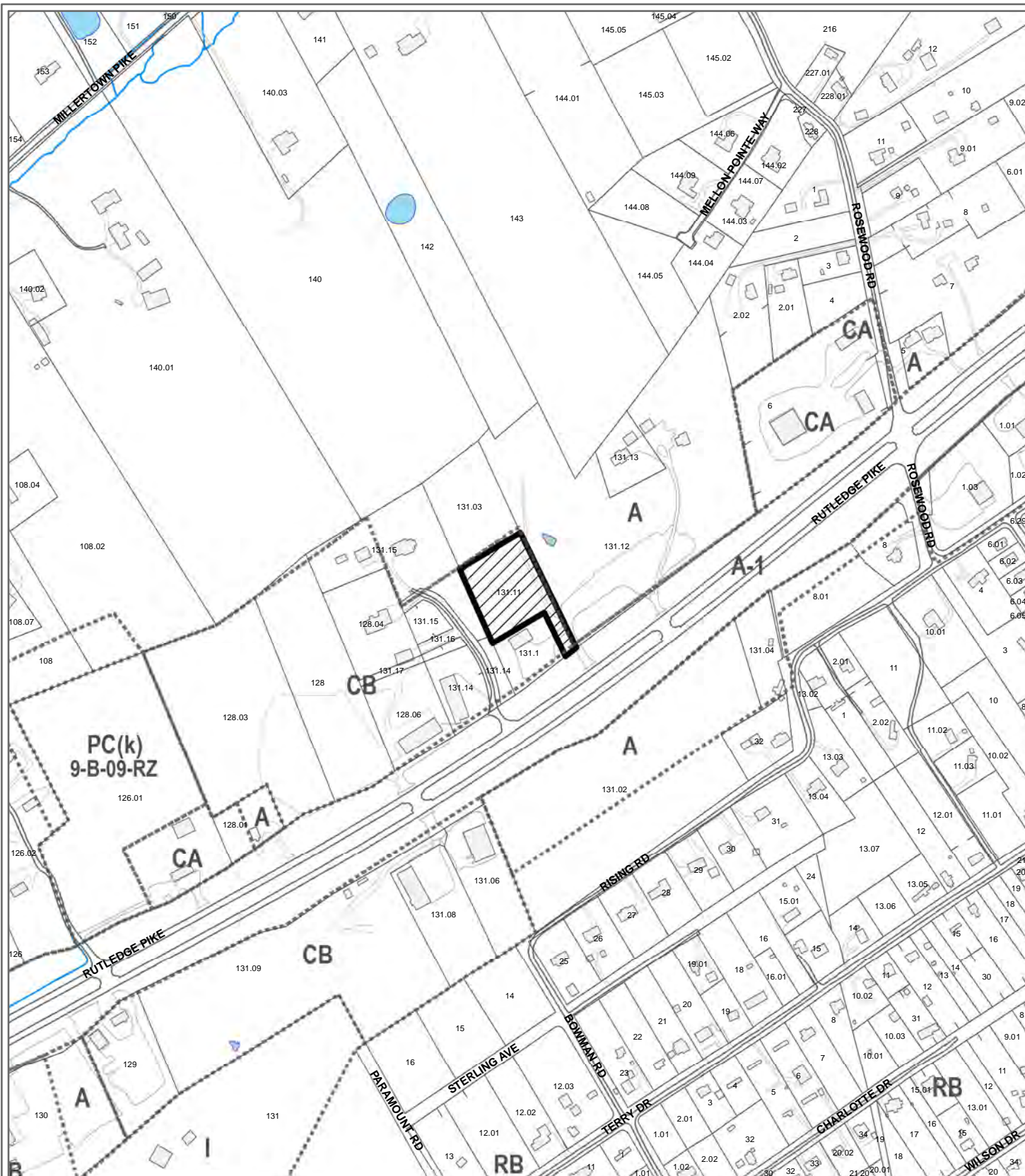
CONFORMITY OF THE PROPOSAL TO ADOPTED PLANS

1. The Northeast County Sector Plan proposes commercial uses on this property.
2. Under the guidelines for tower placement in the Wireless Communications Facility Plan this proposed tower falls within the "Opportunity Area" and "Sensitive Area". The proposed tower site is located in an office/commercial corridor which the Plan considers to be an "Opportunity Area" for the location of telecommunication towers. The Plan takes a neutral position on moderate monopole towers located in an office/commercial corridor. The proposed tower site is also located within 500' of a residence which the Plan considers to be a "Sensitive Area" for the location of telecommunication towers. The Plan takes a neutral position on moderate monopole towers located in this area.
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 Knox County Board of Zoning Appeals. The date of the Knox County Board of Zoning Appeals hearing will depend on when the appeal application is filed. Appellants have 30 days to appeal an MPC decision in the County.



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

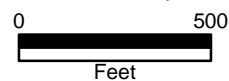


141' monopole commercial telecommunications tower in CB (Business and Manufacturing)

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

Petitioner: AT&T Wireless

Map No: 60
Jurisdiction: County



ATT WIRELESS

Telecommunications Tower Site Review

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

CONSULTANT'S SUMMARY

MILLERTOWN

Knox County

Location: 6415 Rutledge Pike between Rosewood Road and woods creek in Knox County.

Proposed Tower Height: 146 foot monopole

Address: 6415 Rutledge Pike
Knoxville, Tennessee

District: # 8 County **Parcel ID#:** 0660 13111

Use: Telecommunications antenna support structure

Zoning: CB (Commercial Business)

Land Planning Area: Commercial

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 146 foot monopole type support structure.

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

A handwritten signature in black ink, appearing to be 'J. G. ...', located at the bottom right of the page.

REPORT TO
METROPOLITAN PLANNING COMMISSION

for

Proposed Telecommunications Tower Site
Located at 6415 Rutledge Pike
Knoxville County, TN known as

MILLERTOWN

ATT WIRELESS

3-B-14-UR

COMPLIANCE WITH

THE MPC TELECOMMUNICATIONS FACILITY ORDINANCE
2/23/2014

The proposed site for the applicant is a 146 foot monopole antenna support structure (including antennas and lightning rod) to be located northwest of Rutledge Pike, near Rosewood Road in Knox County. 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 a new site. This means that there is little or no coverage at the site at the present.

REQUESTED

1. **Location.** The location is within the **County of Knox** in **District 8**

Parcel ID#: C60- 13111
2. **Zoning.** CB (Commercial Business) (surrounded by A zoned property)
3. **Growth Policy Plan Designation:** Commercial
4. **Proposed Tower Height:** 146 foot monopole
5. **Address:** 6415 Rutledge Pike
Knoxville, Tennessee
6. **Tower height.** The requested height is 146 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. **Variances.** The set back requirements in Article 4.92.02(4)(b) of the Ordinance for Knox County for "A" sites requires that the structure be set back a minimum distance of 110% of the structure height or in this case 161 feet from the nearest dwelling unit (residence). The proposed site meets that requirement and no variances are required as the nearest dwelling is more than 300 feet from the base of the tower (west). Also the setback from Rutledge Pike is more than 100 feet and 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 (161 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 146 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 1028 feet. It is located in the corner of a field northwest of Rutledge Pike behind a commercial business and east of the nearest residential house.

The request is for a 146 foot monopole of which ATT will use the top 15 feet and the additional usable lower area is for other carriers' expansion.

This a new site. By that is meant that there is little coverage or no coverage in this area, and 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 Commercial Business but is located in a wooded area surrounded on two sides by woods and is fairly isolated.

EMS access to the site would be via Rutledge Pike on fairly steep access road...approximately 15% grade in one section. Others will have to determine the Utility Access Driveway requirement in section 503.1.4 of the Ordinance as to EMS access and turnaround requirement. It should be noted that this site is unmanned and visited by technician only a few times area for preventive maintenance.

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 (146 feet) coupled with no lighting requirements and even though located in the woods behind a commercial business off Rutledge Pike 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 146 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 CB. There is a residence within 500 feet of the structure...approximately 275 feet west, 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 4.92 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 LTG 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 Rutledge Pike Road. However, the site is an unmanned site. Access road is fairly steep in one section and EMS and others should determine the safe accessibility to the site that will be unmanned.

RECOMMENDATION

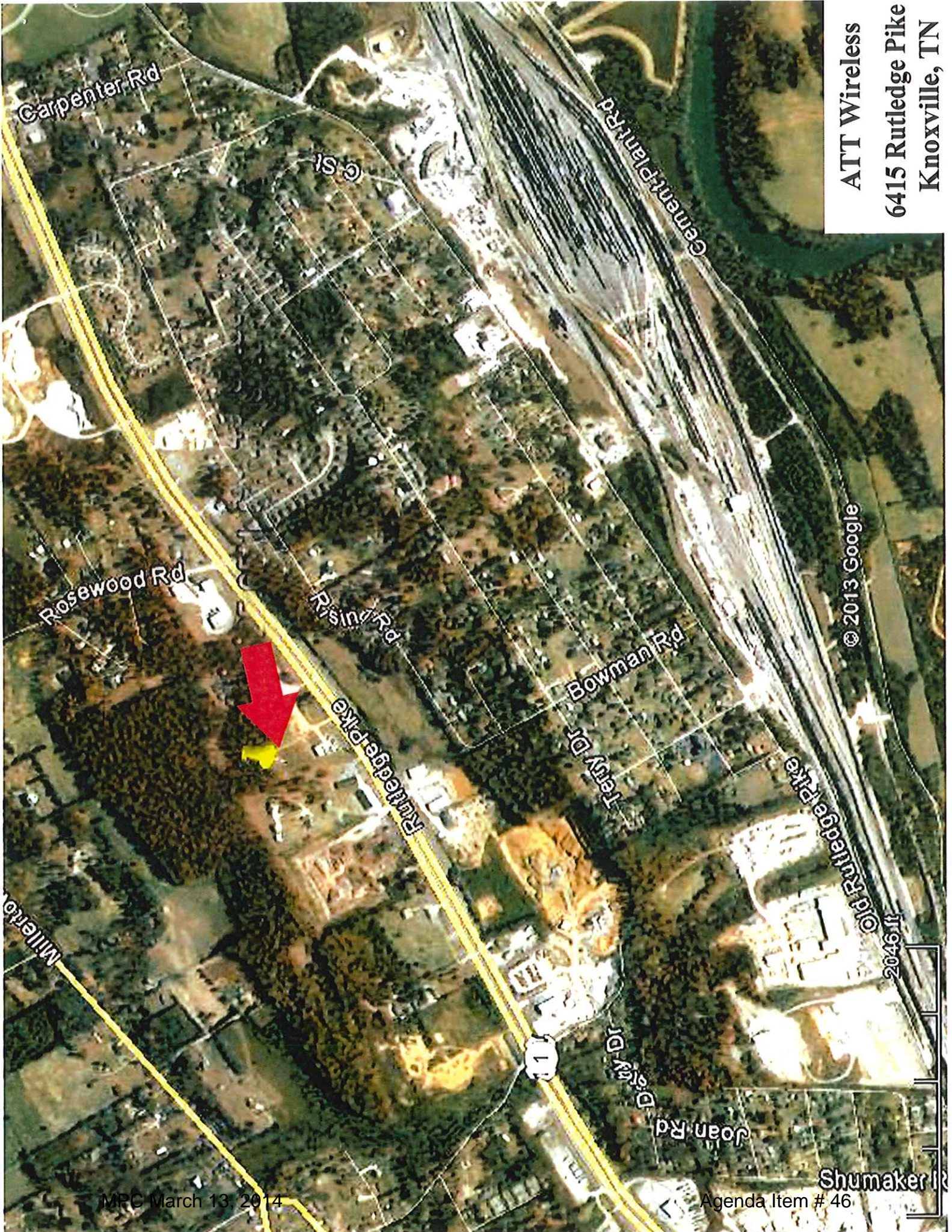
In light of the analysis and review of documents, it is my professional opinion that the applicant meets all requirements of the Ordinance and the federal requirements.

Respectfully submitted,



Larry Perry
Consultant to MPC

ATT Wireless
6415 Rutledge Pike
Knoxville, TN



© 2013 Google

**ATT Wireless
6415 Rutlege Pike
Knoxville, TN**



LAND USE/WIRELESS FACILITIES MATRIX							Lattice Tower	Guyed Tower
OPPORTUNITY AREAS	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				X				
Shopping Center								

MPC March 13, 2014

SENSITIVE AREAS							Lattice Tower	Guyed Tower
SENSITIVE AREAS	Co-Location	Stealth Structure	Low Monopole Below 90'	Moderate Monopole 90' - 150'	Tall Monopole 150' - 199'	Lattice Tower	Guyed Tower	
Within 500' of a Residence				X				
Rural Residential								
Non-residential Property in Residential Area (church, cemetery, library, etc.)								
Multi-family Residential								
On Hill below Ridgeline								

AVOIDANCE AREAS							Lattice Tower	Guyed Tower
AVOIDANCE AREAS	Co-Location	Stealth Structure	Low Monopole Below 90'	Moderate Monopole 90' - 150'	Tall Monopole 150' - 199'	Lattice Tower	Guyed Tower	
Conservation Open Space								
Scenic Highway								
Public Park								
Ridgetop/Ridgeline								
Scenic Vista								
Historic District/Site								
Single-family Residential								
Vacant Residential Lot								

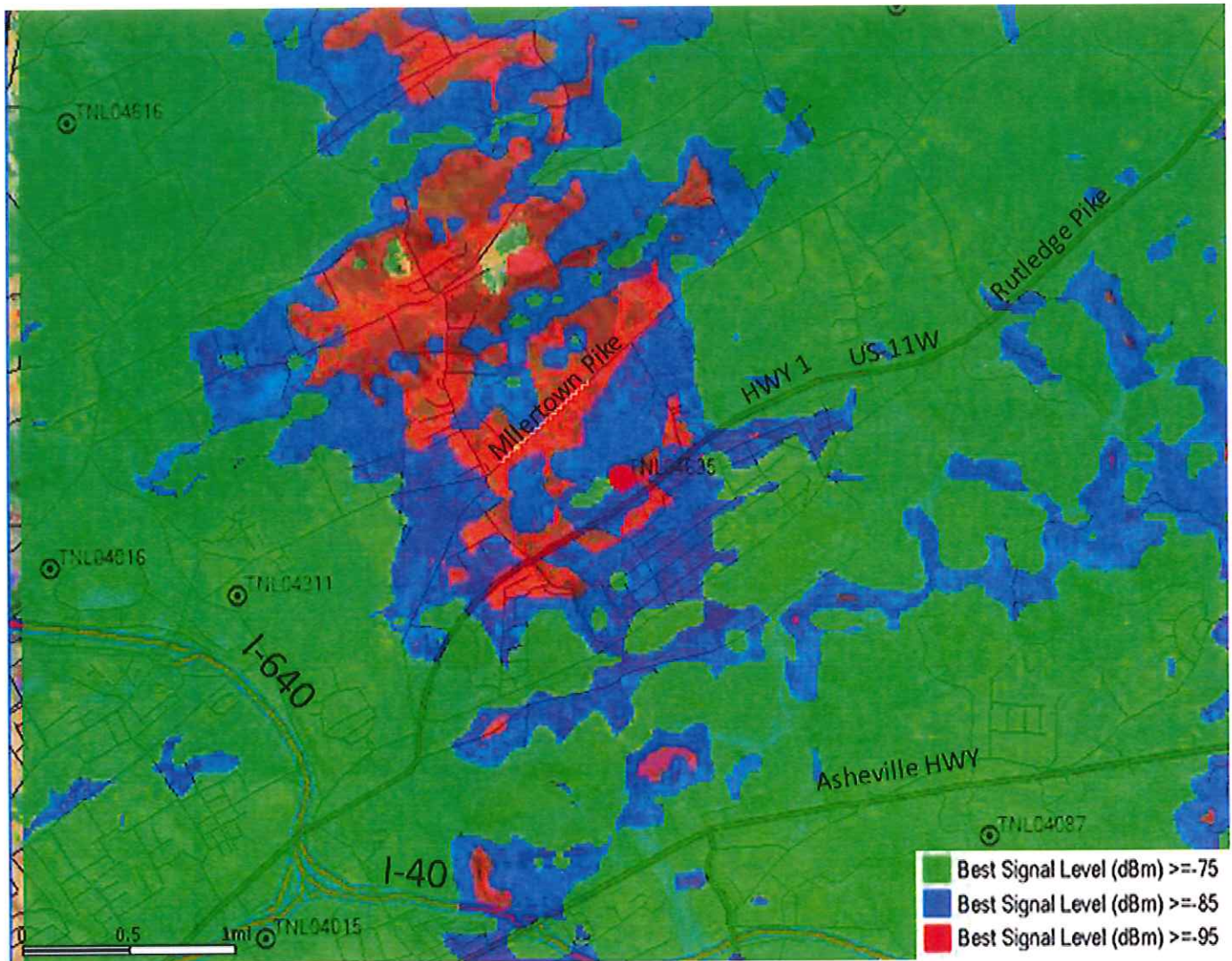
3-B-14-UR

Encouraged

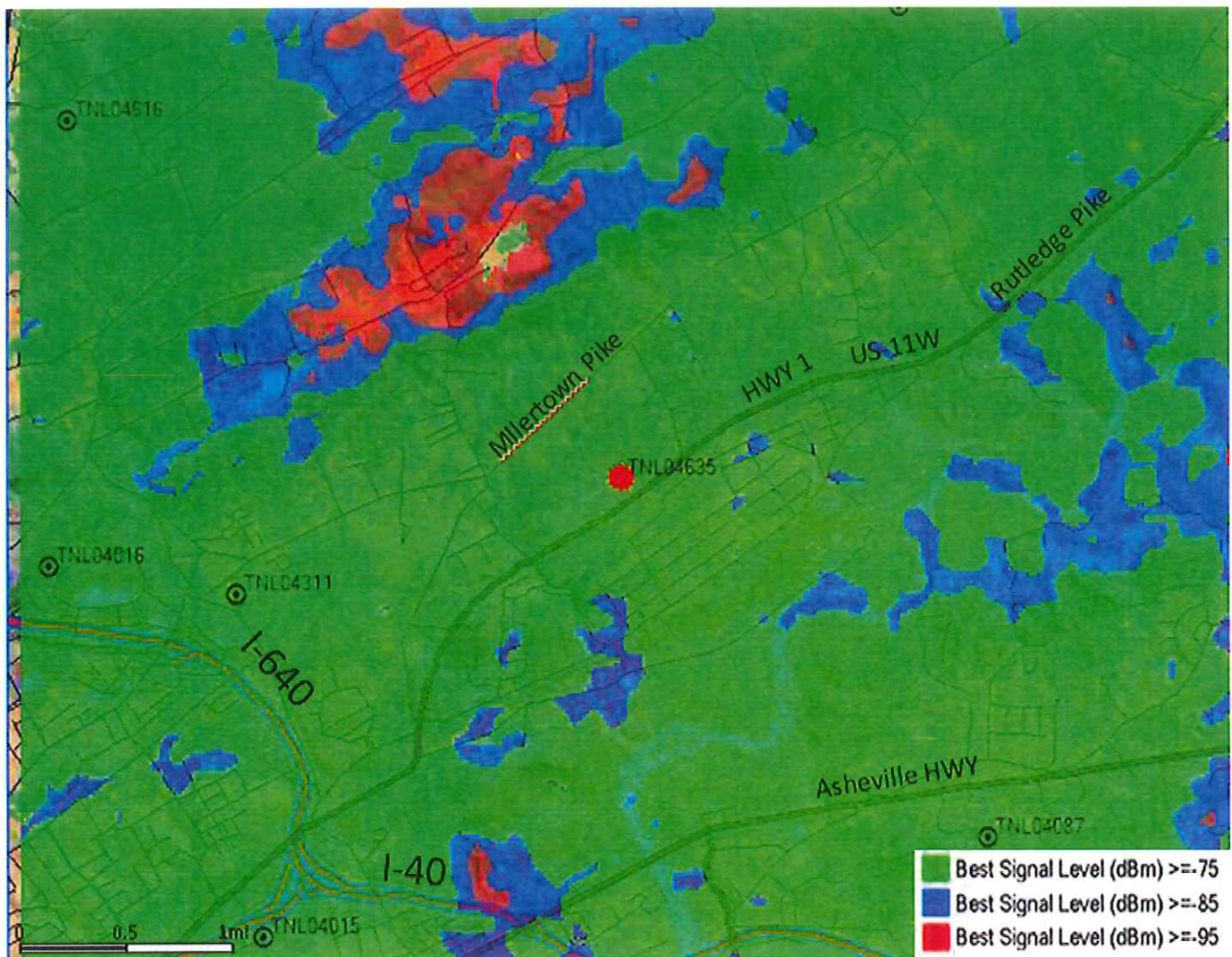
Neutral

Discouraged

Millertown Before



Millertown After



LETTER OF OWNER AUTHORIZATION
APPLICATIONS FOR ZONING/LAND USE/BUILDING PERMITS

TO (Jurisdiction): Knoxville - Knox County
Metropolitan Planning Commission
RE (Prop.address, tax map #, project desc):
0 Rutledge Pike / New Communications
Knoxville, TN / Tower Build
37924

I/We, the owner(s) of the above described real property, authorize Jacobs to act as an agent on my/our behalf for the purpose of performing all and every act that is required, necessary or appropriate to prepare, sign, submit, file and present on my/our behalf building, permitting, zoning and/or land use applications to obtain land use changes, special exceptions, zoning variances, zoning permits, conditional use permits, special use permits, administrative permits, construction permits, operation permits, building permits, and other approvals or permits related to the above described real property.

The undersigned hereby certifies to being the fee owner(s) of the real property described above and that to the best of my/our knowledge the information contained within this authorization is true and correct.

Linda S. Hicks
(Signature)

12/13/13
(Date)

Linda S. Hicks
(Print name)

ACKNOWLEDGEMENT

State of TN
County of KNOX)

On Dec 13, 2013 before me, Linda S. Hicks
personally appeared Linda S. Hicks who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity, and that by his/her/their signature on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature Karen A. Daniels (Seal)

My Commission Expires: 3/29/14



LETTER OF OWNER AUTHORIZATION
APPLICATIONS FOR ZONING/LAND USE/BUILDING PERMITS

TO (Jurisdiction): Knoxville - Knox County
Metropolitan Planning Commission
RE (Prop.address, tax map #, project desc):
0 Rutledge Pike / New Communications
Knoxville, TN / Tower Build
37924

I/We, the owner(s) of the above described real property, authorize Jacobs to act as an agent on my/our behalf for the purpose of performing all and every act that is required, necessary or appropriate to prepare, sign, submit, file and present on my/our behalf building, permitting, zoning and/or land use applications to obtain land use changes, special exceptions, zoning variances, zoning permits, conditional use permits, special use permits, administrative permits, construction permits, operation permits, building permits, and other approvals or permits related to the above described real property.

The undersigned hereby certifies to being the fee owner(s) of the real property described above and that to the best of my/our knowledge the information contained within this authorization is true and correct.

Terry L. Hicks
(Signature)

12/13/13
(Date)

Terry L. Hicks
(Print name)

ACKNOWLEDGEMENT

State of TN
County of KNOX

On Dec 13, 2013 before me, Karen A. Daniels
personally appeared Terry L. Hicks who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity, and that by his/her/their signature on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature Karen A. Daniels (Seal)

My Commission Expires: 3/29/14





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: Millertown TN
Site Address: 6419 Rutledge Pike, Knoxville, Tennessee, 37924


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

December 18, 2013

Re: Millertown Cell Site

AT&T has determined that a new Wireless Communications Facility is required in Knox County, TN. A property candidate at 6419 Rutledge Pike, Knoxville, TN 37924 has been accepted by RF Engineering. The primary focus of this facility is to cover Rutledge Pike, Millertown Pike, and Asheville Pike, as well as the surrounding roads and neighborhoods. These roads and highways are important thoroughfares for those traveling in Knox County.

RF Propagation plots are attached showing predicted before and after coverage levels. The attached maps show the pre and post coverage for the area affected for the spectrum bands that will be improved.

The proposed site meets AT&T's radio frequency and network design requirements for improving its coverage and capacity needs at 195 ft. AGL. There are no facilities that exist to provide the needed coverage of the area. AT&T is collocated on all the adjacent sites.

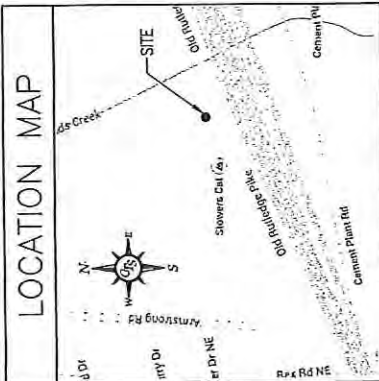
The closest existing AT&T sites that would hand off to this proposed site are, on average, 2.6 miles away from the needed coverage zone.

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 transmitter/Receiver equipment, will not interfere with the usual and customary transmission or reception of radio, television, and general public use communications equipment.

Submitted by:

Gerald M. Winters Jr. – RAN Design Engineer – AT&T Mobility

NOTES: This drawing and the design shown are the property of Compass Technology Services, Inc. The reproduction, copying, or use of this drawing without written consent is prohibited and any infringement will be subject to legal action.



DIRECTIONS TO THE SITE
 FROM KNOXVILLE: TAKE ROUTE 100 WEST ON CHICKASAW AVE. FROM CHICKASAW AVE. TURN RIGHT ON AMSTRING PIKE. TAKE EXIT 303 TO MERGE LEFT ON OLD RUTLEDGE PIKE. MERGE RIGHT ON MILLERTOWN PIKE. MERGE RIGHT ONTO MILLERTOWN PIKE. TURN RIGHT ONTO ROOSEVELT RD. TURN RIGHT ONTO RUTLEDGE PIKE. DESTINATION WILL BE ON THE RIGHT.



AT&T SITE NAME: MILLERTOWN PROPOSED RAWLAND SITE

6415 RUTLEDGE PIKE
 KNOXVILLE, TN 37924
 KNOX COUNTY, TN

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

COMPASS TECHNOLOGY SERVICES
 5449 BELLS FERRY ROAD
 ACWORTH, GA 30102
 PHONE: 770-972-1000
 FAX: 770-972-1050
 WALTER MATHEWS PRATHER, P.E.
 PROFESSIONAL ENGINEERING

ISSUED FOR: CONTRIBUTION DMB
 1 02/27/14
 0 DIVERSITY CONTRIBUTION ICA
 NO. DATE REVISIONS BY
 ANY VALUE WITHOUT SIGNATURE AND DATE
 PROFESSIONAL SEAL

WALTER M. PRATHER
 REGISTERED ENGINEER
 STATE OF TENNESSEE
 NO. 30065
 EXPIRES 12/31/14

at&t
 400 FRONT ST. 10TH FLOOR
 COLUMBIA, SC 29201
 803.733.1000

STATE NAME: MILLERTOWN
 APPROVED BY: M. PRATHER
 DESIGNED BY: 100006
 DATE: 1-17-14
 SHEET NAME: 1-17-14
 TITLE SHEET
 SHEET NUMBER: T-1

SITE SUMMARY

SITE TYPE:	PROPOSED RAWLAND GROUND BUILD
TOWER TYPE:	MONOPOLE
PROPOSED RAD CENTER:	141'
PROPOSED LEASE AREA:	100' x 100' (10,000sf)
TOWER LATITUDE:	N 36 02' 25.65" (NAD 83)
TOWER LONGITUDE:	W 83 45' 57.63" (NAD 83)
GROUND ELEVATION:	1028.0' A.M.S.L.
ZONING JURISDICTION:	KNOX COUNTY
ZONING CLASSIFICATION:	CB
PARCEL TAX I.D.:	080 13111
POWER COMPANY:	KNOXVILLE UTILITY BOARD (865) 524-2911
TELEPHONE COMPANY:	AT&T (877) 737-2478
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAP ACCESS IS NOT REQUIRED.
PLUMBING REQUIREMENTS:	FACILITY HAS NO SANITARY OR POTABLE WATER.

UNIVERSITY MICROFILMS
 CALL TOLL FREE
 1-800-521-1111
 THREE WORKING DAYS BEFORE 1001 340

PROJECT DIRECTORY

LAND OWNER:	TERRY L. & LINDA S. HICKS 6501 RUTLEDGE PIKE KNOXVILLE, TN 37924 (865) 388-1542
APPLICANT:	AT&T WIRELESS PCS, LLC 402 FRANKLIN ROAD BRENTWOOD, TN 37027 CONTACT: KEVIN LEE (770) 363-7848
SITE DESIGN:	COMPASS TECHNOLOGY SERVICE 5449 BELLS FERRY ROAD ACWORTH, GEORGIA 30102 DESIGN MANAGER: JOHN CUNNINGHAM (770) 701-2500 EXT. 141
SURVEYOR:	POINT TO POINT LAND SURVEYORS 810 JACKSON STREET LOCUST GROVE, GA 30248 (866) 706-9114

SHEET INDEX

TITLE SHEET	REV.	DATE
T-1	1	02/27/14
T-2	0	01/20/14
1	2	12/20/13
2	2	12/20/13
C-1	1	02/27/14
C-2	1	02/27/14
C-3	1	02/27/14
C-4	1	02/27/14
C-5	0	01/20/14
C-6	0	01/20/14
C-7	0	01/20/14
L-1	0	01/20/14
S-1	0	01/20/14
S-2	0	01/20/14
S-3	0	01/20/14
S-4	0	01/20/14
S-5	0	01/20/14
S-6	0	01/20/14
E-1	0	01/20/14
E-2	1	02/27/14
E-3	0	02/27/14
E-4	0	01/20/14
E-5	0	01/20/14
E-6	0	01/20/14
E-7	0	01/20/14
E-8	0	01/20/14

3-B-14-UR
REVISED
 2-27-14

POINTS PLOTTED TO SCALE ON 11x17 SHEETS

POINT TO POINT LAND SURVEYORS
 810 Jackson Street
 Locust Grove, Georgia 30248
 (p) 678.565.4440 (f) 678.565.4497
 (w) pointtopointsurvey.com

ESASMENT SURVEY PREPARED BY:

NO. DATE REASON
 1- 11/07/2013 DURNING EASEMENT
 2- 12/20/2013 IMPROVED ACCESS EASEMENT

REGISTERED LAND SURVEYOR OF
 THE STATE OF TENNESSEE
 CHARLES LEB WEBB
 000153

POINT TO POINT LAND SURVEYORS

ESASMENT SURVEY PREPARED FOR:

at&t

"MILLERTOWN"

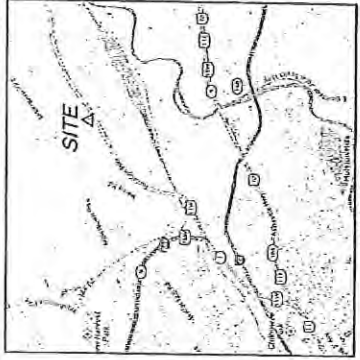
8TH DISTRICT, TENNESSEE
 HICKORY COUNTY, TENNESSEE

DRAWN BY: GAW
 CHECKED BY: CMC
 APPROVED BY: MGR

DATE: 03 SEPT., 2013
 P.P. JOB #: 2013.809

SHEET: **1**

OF 2



VICINITY MAP
 NOT TO SCALE

GENERAL NOTES

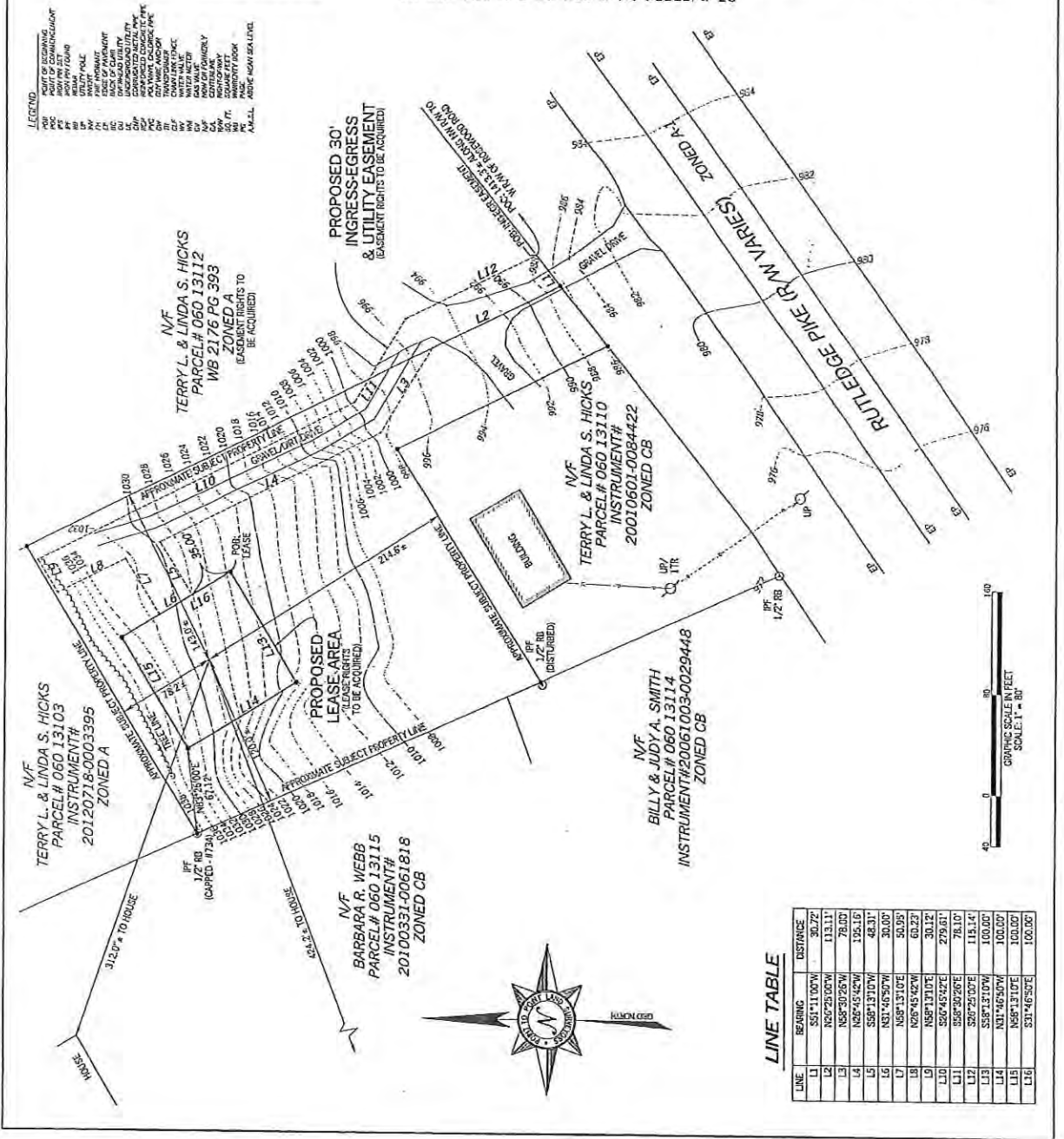
THIS EASEMENT SURVEY WAS PREPARED FOR THE PURPOSES OF THE USE OF THE EASEMENT FOR THE TRANSFER OF THE EASEMENT AND THE RIGHTS OF THE EASEMENTOR AND SHALL NOT BE USED AS AN EVIDENCE OF TITLE OR AS A BASIS FOR A CLAIM OF TITLE OR AS A BASIS FOR A CLAIM OF EASEMENT. THE SURVEYOR HAS CONDUCTED A VISUAL SURVEY OF THE PROPERTY AND HAS FOUND NO EVIDENCE OF EASEMENT OR OF ANY OTHER INTEREST IN THE PROPERTY. THE SURVEYOR HAS CONDUCTED A VISUAL SURVEY OF THE PROPERTY AND HAS FOUND NO EVIDENCE OF EASEMENT OR OF ANY OTHER INTEREST IN THE PROPERTY. THE SURVEYOR HAS CONDUCTED A VISUAL SURVEY OF THE PROPERTY AND HAS FOUND NO EVIDENCE OF EASEMENT OR OF ANY OTHER INTEREST IN THE PROPERTY.

SUBJECT PROPERTY

OWNER: TERRY L. & LINDA S. HICKS
 PARCEL ID: 060 13111
 AREA: 1.81 ACRES
 ZONED: C1
 REFERENCES: DEED 0064 20010601 PARCEL 0084422;
 PLAT BOOK 30080222 PAGE 0020313

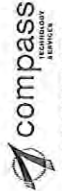
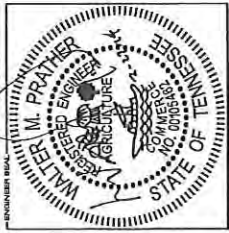

SITE INFORMATION

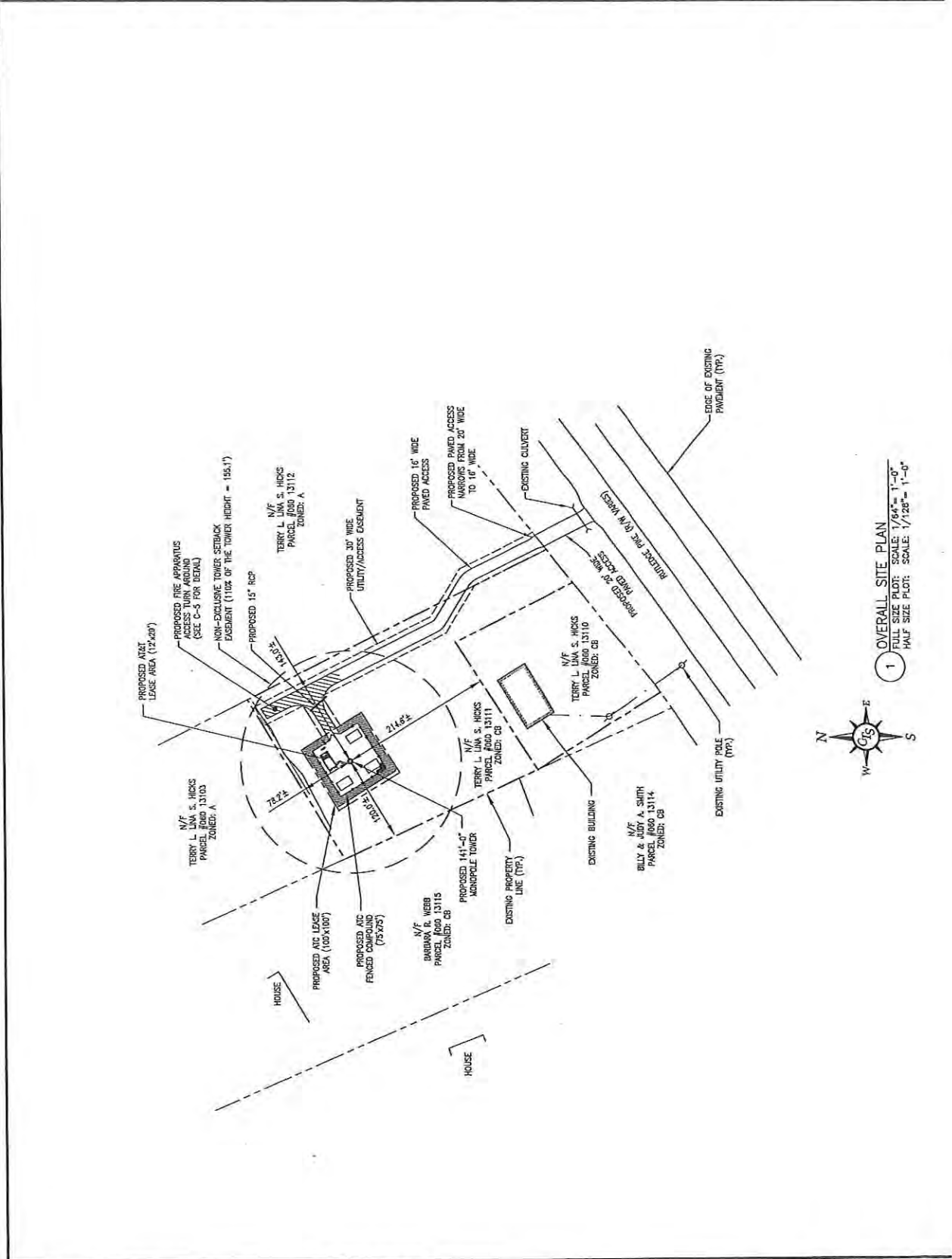
PROPOSED LEASE AREA = 10,000 SQUARE FEET (0.2295 ACRES)
 LATITUDE = 36°02'25.65" (NAD 83)
 AT CENTER PROPOSED LEASE AREA
 LONGITUDE = -83°49'57.63" (NAD 83)
 ELEVATION AT CENTER OF PROPOSED LEASE AREA = 1028.0' A.M.S.L.

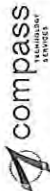




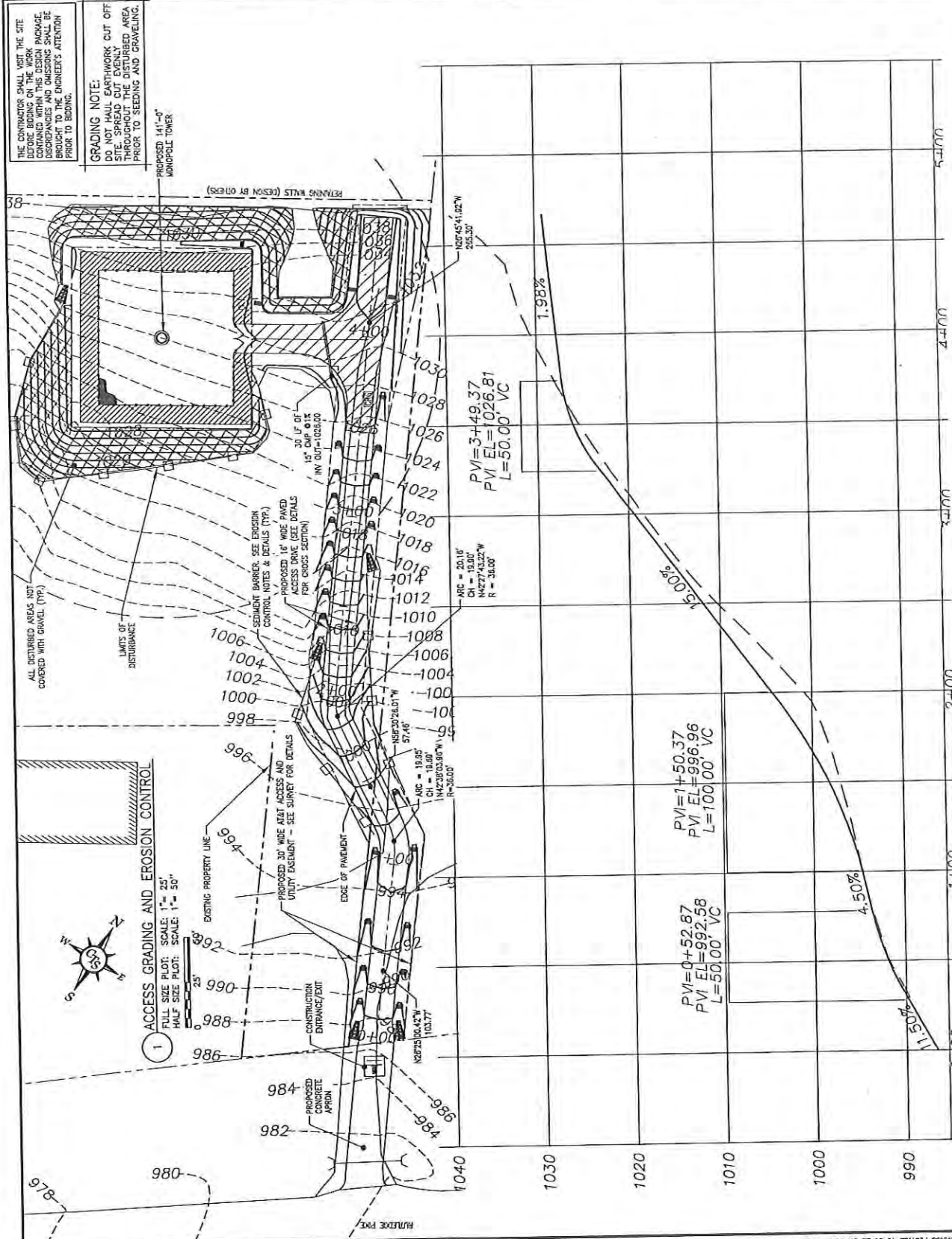
LINE TABLE

LINE	BEARING	DISTANCE
L1	S51°11'00"W	30.72'
L2	N50°25'00"W	13.11'
L3	N58°30'26"W	78.00'
L4	N26°45'42"W	195.16'
L5	S58°13'10"W	48.31'
L6	N31°46'50"W	30.00'
L7	N59°13'10"E	50.95'
L8	N26°45'42"W	60.23'
L9	N58°13'10"E	30.12'
L10	S50°45'42"E	279.61'
L11	S58°30'26"E	78.10'
L12	S26°25'00"E	115.14'
L13	S58°13'10"W	100.00'
L14	N31°46'50"W	100.00'
L15	N58°13'10"E	100.00'
L16	S31°46'50"E	100.00'

 <p>5448 BELLS FERRY ROAD ACWORTH, GA 30102 PHONE: 770-912-5000 FAX: 770-912-5001 WALTER MATHEWS PRATNER, P.E.</p>				 <p>402 WINDY ROAD COMMERCIAL BUILDING 200 ALCOH BENTONWOOD, TN 38027</p>	
PREPARED BY:		MILLERTOWN		PREPARED BY:	
DATE:		MILLERTOWN		APPROVED BY:	
NO. DATE REVISIONS BY		M. PRATNER		DESIGNED BY:	
1 02/27/14 INSTALLATION CONSTRUCTION DAB		K. H.		PROJECT NO:	
0 01/08/14 REVISED FOR CONSTRUCTION H.F.		1011018		SHEET NAME:	
NOT VALID WITHOUT SIGNATURE AND SEAL		OVERALL SITE PLAN		SHEET NUMBER:	
MILLERTOWN		OVERALL SITE PLAN		SHEET NUMBER:	



 <p>6448 BELLS FERRY ROAD ADWORTH, GA 30102 PHONE: 770-701-2500 FAX: 770-701-2501 WALTER MATHEWS PRATHER, P.E.</p>	<p>DESIGN REVISIONS</p>	<p>1. REVERT TO BELIEVED FOR CONSTRUCTION, DAG</p> <p>2. REVERT TO BELIEVED FOR CONSTRUCTION, K-F, H</p> <p>NO. DATE REVISIONS BY</p> <p>NOT VALID WITHOUT SIGNATURE AND DATE</p>		 <p>400 FRANKLIN ROAD CONSTRUCTION & ENGINEERING MILLERTOWN, TN 37057</p>	<p>PROJECT NUMBER: MILLERTOWN</p> <p>PREPARED BY: M. PRATHER</p> <p>DESIGNED BY: K. H. TOMAR</p> <p>DATE: 11/11/19</p> <p>SHEET NAME: ACCESS DRIVE GRADING & EROSION CONTROL PLAN</p>	<p>C-2</p>
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THE CONTRACTOR SHALL VISIT THE SITE BEFORE BEGINS ON THE WORK. DISCREPANCIES AND OMISSIONS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO BEGINS.

GRADING NOTE:
DO NOT HAUL EARTHWORK CUT OFF SITE. REPAIR THE DISTURBED AREA PRIOR TO SEEDING AND GRAVELING.

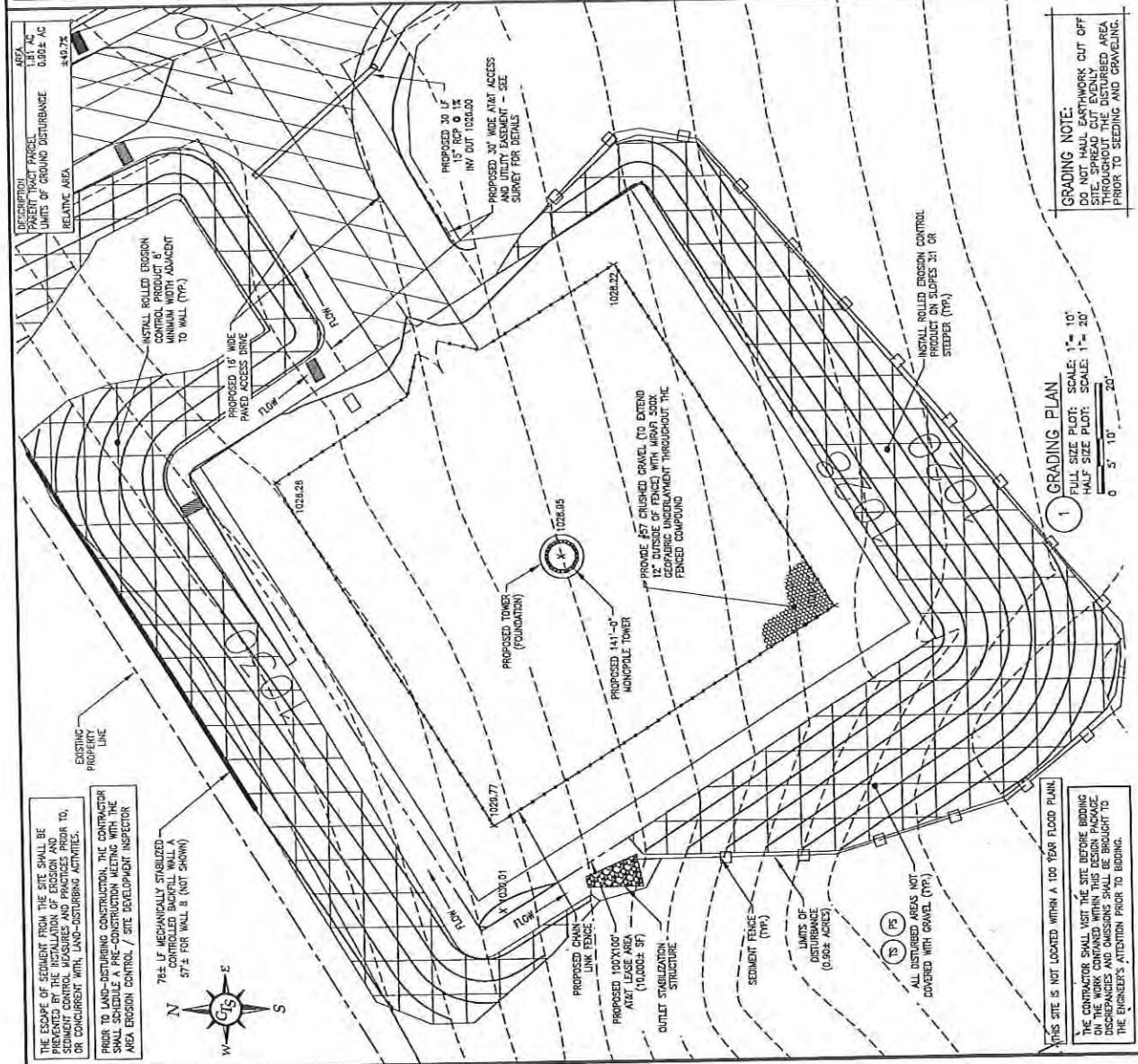
1 ACCESS GRADING AND EROSION CONTROL
FULL SIZE PLOT: SCALE: 1" = 25'
HALF SIZE PLOT: SCALE: 1" = 50'

COMPASS TECHNOLOGY
5448 BELLS FERRY ROAD
DUBLIN, OHIO 43017
PHONE: 773-791-2500
FAX: 773-701-2501
WALTER MATHEWS PRATHER, P.E.
DESIGN IN CHARGE



1	08/27/14	ISSUED FOR CONSTRUCTION	DWG
0	01/09/14	ISSUED FOR CONSTRUCTION	K.H.
NO.	DATE	REVISIONS	BY
NOT VALID WITHOUT SIGNATURE AND DATE			

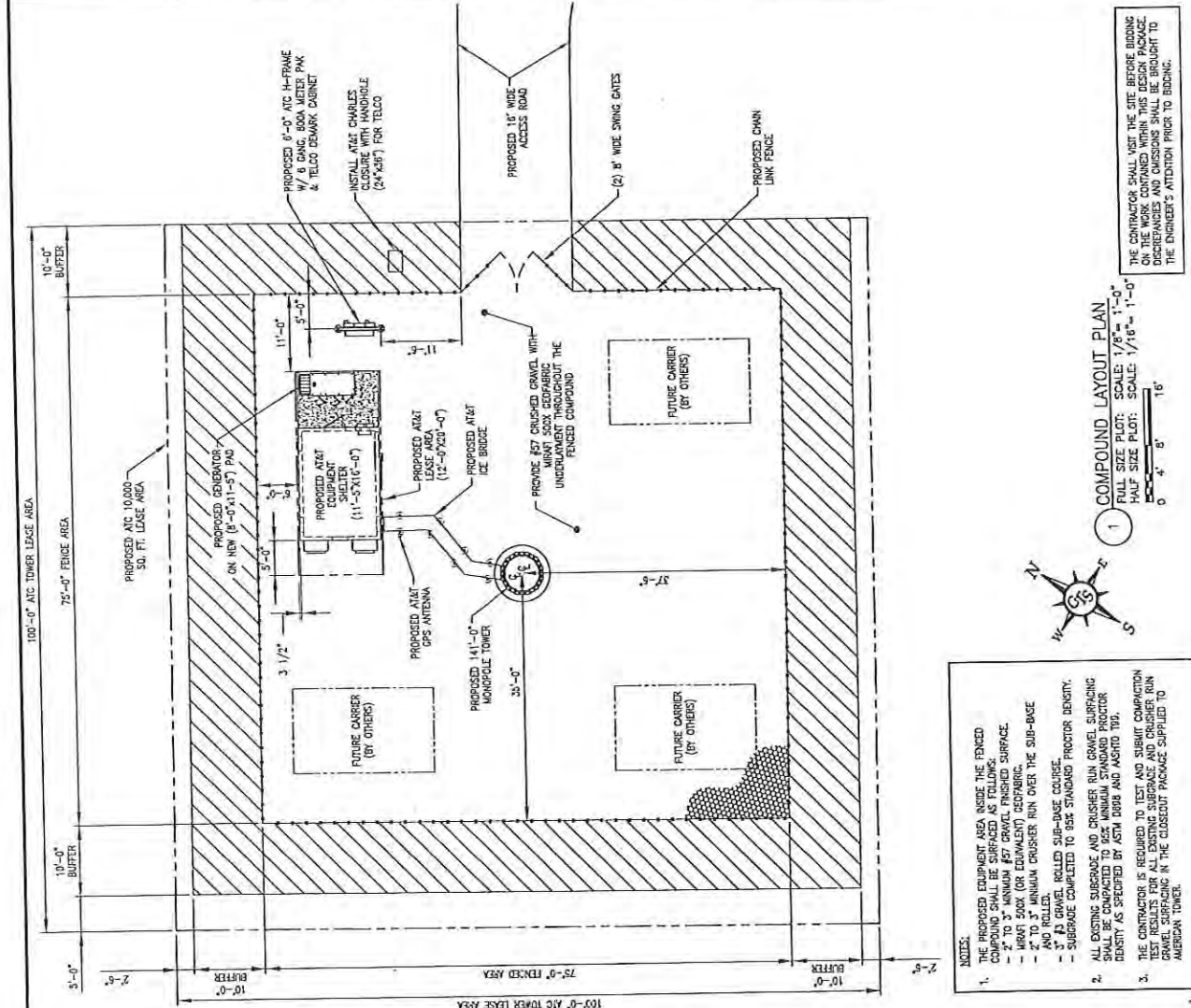
AT&T
CONSTRUCTION LEADERSHIP
PROGRAM TO 2020

PROJECT NAME: MILLERTOWN
DESIGNED BY: M. PRATHER
CHECKED BY: K.H.
PROJECT NO.: 10048
DATE: 1/9/14
SHEET NAME: TOWER SITE GRADING & EROSION CONTROL PLAN
SHEET NUMBER: C-3



- GRADING NOTES:**
- THIS PLAN WAS PREPARED FOR THE EXCLUSIVE USE OF AT&T, AND EXCLUSIVELY FOR THE TRANSFER OF THE LEASEHOLD AND THE RIGHT OF EASEMENT SHOWN HEREON AND SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE TRANSFER OF THE SUBJECT PROPERTY NOR ANY PORTION OR PORTIONS THEREOF.
 - THE CONTOURS SHOWN ON THIS PLAN ARE BASED ON USGS DATUM AND HAVE A VERTICAL ACCURACY OF ±2". CONTOURS OUTSIDE THE IMMEDIATE SITE AREA ARE APPROXIMATE.
 - THE UTILITIES SHOWN HEREON ARE BASED UPON AN AERIAL-GROUND FIELD SURVEY. THE ACTUAL UTILITIES LOCATIONS SHOULD BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ANY CONSTRUCTION BEGINS.
 - THERE ARE NO WETLANDS WITHIN THE PROPOSED LIMITS OF CONSTRUCTION FOR THIS PROJECT.
 - THE CONTRACTOR SHALL REMOVE ANY ROCK AND/OR UNSUITABLE MATERIAL TO A DEPTH OF 6" ON THE FINISHED GRADE OR AS DIRECTED BY THE SOILS ENGINEER ON THE DEVELOPER.
 - EARTHWORK IN PERMANENT STRUCTURE AREAS SHALL BE COMPACTED TO A MINIMUM OF 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) OR AS DIRECTED BY THE SOILS ENGINEER.
- EROSION CONTROL NOTES:**
- EROSION CONTROL DEVICES SHALL BE INSTALLED, INSPECTED, AND FULLY OPERATIONAL PRIOR TO CLEARING AND SHALL BE MAINTAINED DAILY THROUGHOUT CONSTRUCTION AND UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
 - ALL EROSION CONTROL MEASURES SHALL CONFORM TO LOCAL, STATE AND COUNTY STANDARDS.
 - EROSION CONTROL MEASURES INDICATED ON THESE PLANS MEET THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED AS DETERMINED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES AND REINFORCEMENT MAY BE REQUIRED WHEN FAILURE OF THE EROSION CONTROL MEASURES PERSISTS.
 - CONTRACTOR SHALL PROVIDE DUST CONTROL AND SHALL PROTECT ADJACENT STREETS FROM ACCUMULATION OF SOIL.
 - CONTRACTOR IS RESPONSIBLE FOR MONITORING DOWNSTREAM CONDITIONS WITHIN THE CONSTRUCTION PERIOD AND CLEARING ANY DEBRIS AND/OR SEDIMENT CAUSED BY CONSTRUCTION.
 - CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES AT ALL TIMES. CONTRACTOR SHALL INSPECT AND REPAIR ALL EROSION CONTROL MEASURES AT THE END OF EACH DAY AND AFTER EACH RAIN EVENT.
 - CONTRACTOR SHALL CLEAN OUT ALL EROSION CONTROL MEASURES BEFORE THEY ARE TWO-THIRDS FULL OR AS SPECIFIED BY THE INSPECTOR OR ENGINEER.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY DIRT OR MUD FROM THE TIRES OF ANY CONSTRUCTION VEHICLES PRIOR TO THEIR LEAVING THE SITE.
- LEGEND:**
- TEMPORARY STREAM CROSSING
 - CHECK DAM
 - OUTLET PROTECTION
 - CONCRETE WAHOUT
 - ENCLOSED AREA STABILIZATION WITH STRAW MULCH
 - DISTURBED AREA STABILIZATION WITH OTHER MULCHES
 - DISTURBED AREA STABILIZATION WITH PERMANENT VEGETATION
 - DISTURBED AREA STABILIZATION WITH SO2
 - DISTURBED AREA STABILIZATION WITH TEMPORARY VEGETATION
 - ROLLED EROSION CONTROL PRODUCTS
 - CONSTRUCTION EXIT
 - SEEDING FENCE
 - CONSTRUCTION ROAD STABILIZATION
 - CONSTRUCTION ROAD STABILIZATION

<p>COMPASS ENGINEERS 5440 BELLS FERRY ROAD ACWORTH, GA 30102 PHONE: 770-701-2500 FAX: 770-701-2501 WALTER MATHEWS PRATHER, P.E.</p>	<p>DESIGNED FOR CONSTRUCTION D.B. 1/22/14</p> <p>DESIGNED BY CONSTRUCTION D.B. 1/22/14</p> <p>NO. DATE REVISIONS ANY NOT VALID WITHOUT SIGNATURE AND DATE</p>			<p>STATE OF TENNESSEE MILLERTOWN</p> <p>DESIGNED BY CONSTRUCTION N. PRATHER</p> <p>APPROVED BY CONSTRUCTION K. H. [Signature]</p> <p>PROJECT NO. CONSTRUCTION 10648</p> <p>DATE CONSTRUCTION 1/17/14</p>	<p>GENERAL CONSTRUCTION NOTES & SITE PLAN</p> <p style="font-size: 2em; font-weight: bold;">C-4</p>
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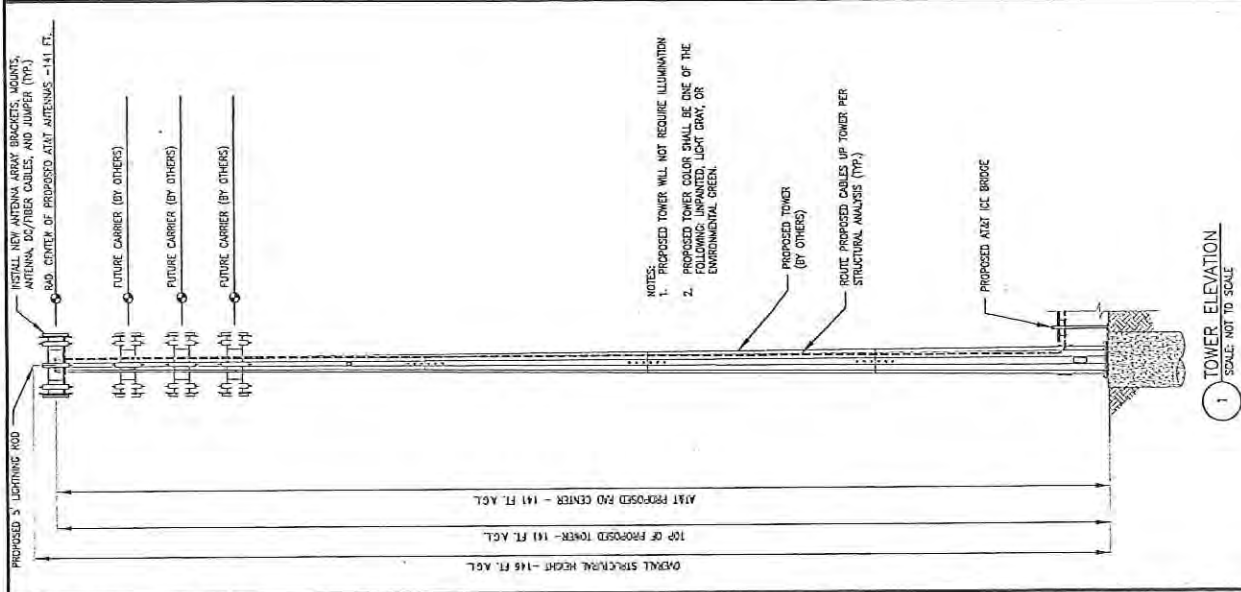


- GENERAL CONSTRUCTION NOTES:**
1. SEE SURVEY FOR LEASE AREA BOUNDARY, LEGAL DESCRIPTION, EXISTING CONTOURS, AND ADDITIONAL SITE INFORMATION.
 2. DAMAGES TO ALL UTILITIES, LAND, ACCESS AREAS, AND PROPERTY OF OTHERS DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO THE ORIGINAL CONDITION AT THE COMPLETION OF THE WORK.
 3. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL POWER AND TELEPHONE UTILITIES AND THE CONSTRUCTION MANAGER TO CONFIRM THE SOURCE OF SERVICE, PRIOR TO THE INSTALLATION OF ANY CONDUITS.
 4. THE CONTRACTOR SHALL INSTALL THE POWER AND TELEPHONE SERVICE UNDERGROUND TO THE EQUIPMENT AS SHOWN ON THE ELECTRICAL PLAN.
 5. REMOVE ANY EXISTING VEGETATION AND ORGANIC MATERIALS FROM THE TOWER COMPOUND.
 6. REPAIRS ARISING FROM THE BURSTER AS REQUIRED TO ALLOW A MAXIMUM 4" OF PAD THICKNESS TO BE MAINTAINED AROUND THE BURSTER. REPLACE GRAVEL SURFACE. REPLACE GRAVEL AROUND SLAB AT THE COMPLETION OF INSTALLATION.
 7. ALL WORK SHALL BE DONE IN A SATISFACTORY AND PROFESSIONAL WORKMANLIKE MANNER. ALL WORK SHALL BE SUBJECT TO INSPECTION DURING CONSTRUCTION AND FINAL APPROVAL BY THE CONSTRUCTION MANAGER.
 8. ANY SUBSTITUTIONS OF MATERIALS, EQUIPMENT, OR DEVIATIONS FROM THE DESIGN PLANS OR SPECIFICATIONS SHALL BE COORDINATED AND APPROVED BY THE CONSTRUCTION MANAGER.
 9. COLOR SELECTION FOR PAINTED ITEMS SHALL BE MADE BY THE CONSTRUCTION MANAGER.
 10. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS SHOWN PRIOR TO BID SUBMITTAL. ANY CONFLICTS, DISCREPANCIES, ERRORS, AND/OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER.
 11. CONTRACTOR SHALL CONTACT A SUBSURFACE UTILITIES LOCATOR FOR EXACT LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL VERIFY THE LOCATIONS OF EXISTING UTILITIES BY DIGGING A TEST PIT, AS NECESSARY. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND ARE FOR PLANNING PURPOSES ONLY.
 12. THE CONTRACTOR SHALL PROVIDE ANY NECESSARY PROTECTION FOR EXISTING UTILITIES DURING CONSTRUCTION.
 13. THE CONTRACTOR SHALL MAINTAIN A CLEAN SET OF CONSTRUCTION DRAWINGS AT THE SITE FOR THE PURPOSE OF DOCUMENTING "AS-BUILT" CONDITIONS AND DEVIATIONS FROM THE ORIGINAL DESIGN. THE REVISIONS DRAWINGS SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER AT THE COMPLETION OF THE PROJECT.
 14. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS FOR THIS PROJECT FROM ALL APPLICABLE GOVERNMENT AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL THE CONDITIONS AND REQUIREMENTS OF THE PERMITS.
 15. THE CONTRACTOR SHALL PROTECT ALL SURVEY STATIONS AND CONTROL POINTS DURING CONSTRUCTION AND SHALL RE-ESTABLISH ANY DISTURBED CONTROL POINTS.
 16. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE GOVERNING LOCAL BUILDING CODE AND ALL APPLICABLE AMENDMENTS. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL GOVERNING OFFICIAL FOR LOCAL BUILD CODE REQUIREMENTS.
 17. THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS INCLUDING SITE ACCESS PRIOR TO BID SUBMITTAL. ANY CHANGES DURING CONSTRUCTION DUE TO AN EXISTING CONDITION WHICH IS VISUALLY ASCERTAINABLE PRIOR TO BID SUBMITTAL, CANNOT BE USED AS THE BASIS FOR A CHANGE ORDER.
 18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL WASTE DEBRIS AND VEGETATION FROM THE SITE. BURIAL AND/OR BURNING OF WASTE MATERIALS IS NOT ACCEPTABLE.
 19. TOWER AND TOWER FOUNDATIONS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. BEFORE THE ANTI-TANK, ANTI-TANK, OR CABLES ARE PLACED, THE TOWER MUST BE ANALYZED FOR THE PROPOSED LOADS BY A LICENSED STRUCTURAL ENGINEER (BY OTHERS). INSTALL ALL SYSTEMS AND OTHER TOWER-MOUNTED EQUIPMENT IN ACCORDANCE WITH THE TOWER ANALYSIS REPORT.
 20. CONTRACTOR SHALL NOT USE THE EQUIPMENT SHELTERS FOR STORAGE OF TOOLS OR CONSTRUCTION MATERIALS.
 21. CONTRACTOR SHALL STRIP, WAX, AND POLISH/BUFF THE FLOORS AT COMPLETION OF JOB, PRIOR TO THE PUNCH.
 22. PROVIDE TWO (2) 8" x 12", WHITE BACKGROUND WITH 4" BLACK LETTERS ON SHELTER DOOR WITH WORDS AS FOLLOWS:
1. SITE NUMBER (ATAK SITE NUMBER)
2. IN CASE OF EMERGENCY CALL (PHONE NUMBER)
OWNER MAY FURNISH AND CONTRACTOR SHALL INSTALL ADDITIONAL STORAGE AS REQUIRED. COORDINATE WITH CONSTRUCTION MANAGER FOR SITE NUMBERS AND EXACT PLACEMENT LOCATIONS.
 23. PROVIDE ONE (1) 8" x 12", WHITE BACKGROUND WITH 4" BLACK LETTERS TO INCLUDE:
INSTALL SIGN ON SITE MAIN GATE USING ALUMINUM HOG RINGS. FURNISH AND INSTALL ADDITIONAL STORAGE AS REQUIRED BY CONSTRUCTION MANAGER. REFER TO AT&T SPEC. SECTION 10.

- NOTES:**
1. THE PROPOSED EQUIPMENT AREA INSIDE THE FENCED COMPOUND SHALL BE SURFACED AS FOLLOWS:
- 2" TO 3" GRAVEL OVER EXISTING SURFACE.
- 4" TO 6" 3/4" MANUAL CRUSHER RUN OVER THE SUB-BASE AND ROLLED.
- 3" #3 GRAVEL ROLLED SUB-BASE COURSE.
- SUBGRADE COMPLETED TO 98% STANDARD PROCTOR DENSITY.
ALL EXISTING SUBGRADE AND CRUSHER RUN GRAVEL SURFACING SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY AS SPECIFIED BY ASTM D883 AND M810 TYP.
 2. THE CONTRACTOR IS REQUIRED TO TEST AND SUBMIT COMPACTION TEST RESULTS FOR ALL EXISTING SUBGRADE AND CRUSHER RUN GRAVEL SURFACING IN THE CLOSEOUT PACKAGE SUPPLIED TO AMERICAN TOWER.

1 COMPOUND LAYOUT PLAN
FULL SIZE PLOT: SCALE: 1/8" = 1'-0"
HALF SIZE PLOT: SCALE: 1/16" = 1'-0"

THE CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING ON THE WORK CONTAINED WITHIN THIS DESIGN PACKAGE. DISCREPANCIES AND OMISSIONS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO BIDDING.



COMPASS
5449 BELLS FERRY ROAD
ACWORTH, GA 30103
PHONE: 770-701-2500
FAX: 770-701-2501
WALTER MATHEWS PRATHER, P.E.

DESIGNATION: _____
NO. _____
DATE _____
REVISIONS BY _____
NOT VALID WITHOUT SIGNATURE AND DATE _____

WALTER M. PRATHER
REGISTERED ENGINEER
COMMERCIAL
NO. 00105-989
STATE OF TENNESSEE

PREPARED FOR: _____
DATE: _____

APPROVED BY: _____
DESIGNED BY: _____
CHECKED BY: _____
DATE: _____

PROJECT NAME: MILLERTOWN

TOWER ELEVATION & ANTENNA ORIENTATION

S-1

ANTENNA AND CABLE SCHEDULE

ANTENNA MARK	ANTENNA SECTOR	ANTENNA MODEL #	AZIMUTH (°-MEAN)	MAGNETIC UPLIFT	SHIELD PROTECTION	CABLE FIBER	RAO CENTER	RFO COUNT	AC MIDDLE	ELEC. TILT
A1	ALPHA	SBNH-1055C	20°	23°	(2) BAY CAP DC-48-10-18-4F	141'	5	1	0	0
A2	ALPHA	HBY-45175-RM	20°	23°	(2) BAY CAP DC-48-10-18-4F	141'	5	1	0	0
A3	ALPHA	SBNH-1055C	20°	23°	(2) BAY CAP DC-48-10-18-4F	141'	5	1	0	0
B1	BETA	SBNH-1055C	140°	143°	(2) BAY CAP DC-48-10-18-4F	141'	5	1	0	2
B2	BETA	HBY-45175-RM	140°	143°	(2) BAY CAP DC-48-10-18-4F	141'	5	1	0	2
B3	BETA	SBNH-1055C	140°	143°	(2) BAY CAP DC-48-10-18-4F	141'	5	1	0	2
C1	GAHHA	SBNH-1055C	200°	203°	(2) BAY CAP DC-48-10-18-4F	141'	5	1	0	2
C2	GAHHA	HBY-45175-RM	200°	203°	(2) BAY CAP DC-48-10-18-4F	141'	5	1	0	2
C3	GAHHA	SBNH-1055C	200°	203°	(2) BAY CAP DC-48-10-18-4F	141'	5	1	0	2

2 ANTENNA ORIENTATION
SCALE: NOT TO SCALE

3 ANTENNA & DC/FIBER CABLE SCHEDULE
SCALE: N/A

*NET CABLE TO BE INSTALLED FROM LITE RAO ROD TO LITE ANTENNA AND FROM LITE ANTENNA TO LITE ANTENNA (TYP. EACH SECTOR)

NOTES:

- ANTENNA CENTERLINE HEIGHT BASED ON TOP OF FOOTING ELEVATION.
- ALL ANTENNA BRACKETS PER ANTENNA MANUFACTURER, OR EQUAL.
- ALL ANTENNA INFORMATION TO BE CORROBORATED BY ANTENNA INSTALLATION.
- ALL ANTENNA INFORMATION BASED ON RF CONFIGURATION FORM FOR RFS NAME: TMRN1335, DATED 01/08/2014

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COMPASS TECHNOLOGY SERVICES
5445 BELLS FERRY ROAD
ACKERSVILLE, TN 37016
PHONE: 770-701-5200
FAX: 770-701-5201
WALTER MATHEWS PRATHER, P.E.
DESIGN NOTATIONS

DATE: 01/20/14
DRAWN BY: M.H.
CHECKED BY: M.H.
DATE: 01/20/14

42 TRAVELWOOD
CONSTRUCTION ENGINEERING
PRACTICES, INC. 31527
MILLERTOWN
APPROVED BY: M. PRATHER
DESIGNED BY: M. H.
DATE: 01/20/14
PROJECT NAME: FENCING DETAILS
SHEET NUMBER: S-6

REFERENCE NOTES:

1. CORNER END OR BALL POST: 4" SCHEDULE 40 PIPE.
2. LINE POSTS: 2 1/2" SCHEDULE 40 PIPE PER ASTM-F1624.
3. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 8'-0" O.C.
4. TOP RAIL & BRACE RAIL: 1 1/2" PIPE PER ASTM-F1624.
5. FABRIC: 8 GA CORN WIRE STEEL, 2" MESH, CONFORMING TO ASTM-A101.
6. TENSILE WIRE: 8 GA GALVANIZED STEEL AT POSTS AND BALLS.
7. A SINGLE ROW OF FABRIC TIE AND AT TENSION WIRE BY TOP.
8. BRIMS SPACED MAX. 24" INTERVALS.
9. TENSION WIRE: 8 GA GALVANIZED STEEL.
10. BARBED WIRE: DOUBLE STRANDS 12-1/2" O.D. TWISTED WIRE TO MATCH WITH FABRIC. 1/4" CA, 4 FT. BARBS SPACED ON APPROXIMATELY 3" CENTERS.
11. STRETCHER BAR.
12. 3/4" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
13. 1 1/2" MAXIMUM CLEARANCE FROM CORNER.
14. FINISH OR AS DETERMINED BY CONSTRUCTION MANAGER DURING BID WALK.
15. 4" COMPACTED DIRT BASE MATERIAL OR AS DETERMINED BY CONSTRUCTION MANAGER DURING BID WALK.
16. FINISH GRADE SHALL BE UNIFORM AND LEVEL.
17. DATE POST 4", SCHEDULE 40 PIPE, FOR DATE NOTIS UP THRU TO FEET OR 20 FEET FOR DOUBLE SWING DATE, PER ASTM-F1624.
18. GATE FRAME: 1 1/2" PIPE SCH. 40, PER ASTM-F1624.
19. G.C. FURNISH & INSTALL STAYLOCK & MASTER LOCK 1/2" W/ A/C COMBUST.
20. RACK SHALL OPEN DATE HOLDER.
21. GATE SHALL BE OPEN PRIOR TO INSTALLATION. VERIFY LOCATION.
22. GEOTEXTILE FABRIC: HIRAR 500X.
23. LINE POST: CONCRETE FOUNDATION (2000 PSI).
24. CORNER POST: CONCRETE FOUNDATION (3000 PSI).
25. GATE POST: CONCRETE FOUNDATION (3000 PSI).
26. 12" x 24" AMERICAN TOWER SIGN.
27. 12" x 18" YELLOW CAUTION SIGN.
28. DATE FRAME BRACE: 1 3/8" DIAMETER.

GENERAL NOTES:

1. INSTALL FENCING PER ASTM F-307.
2. INSTALL SWING GATES PER ASTM F-100.
3. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.
4. POST & DATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPE SHALL BE ASTM A500 GRADE "A" STEEL. ALL DATE FRAMES SHALL BE WELDED. ALL WELDING SHALL BE COATED WITH (3) COATS OF COLD GALV. (OR EQUIV.).
5. ALL OPEN POSTS SHALL HAVE END-CAPS.
6. USE GALVANIZED HOG-RING WIRE TO MOUNT ALL SIGNS.
7. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.

STAY LOCK
(U.S. PAT. 5,889,015) OR EQUIVALENT

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

NO PLUNGER OR MUSHROOM REQUIRED.