

▶ **FILE #:** 1-M-14-UR **AGENDA ITEM #:** 40  
 POSTPONEMENT(S): 1/9/2014 **AGENDA DATE:** 2/13/2014

▶ **APPLICANT:** AT&T WIRELESS  
 OWNER(S): AT&T

TAX ID NUMBER: 62 163  
 JURISDICTION: County Commission District 8  
 STREET ADDRESS: 120 Cash Rd  
 ▶ **LOCATION:** East side of Cash Rd., north side of Asheville Hwy.  
 ▶ **APPX. SIZE OF TRACT:** 19.9 acres  
 SECTOR PLAN: East County  
 GROWTH POLICY PLAN: Urban Growth Area  
 ACCESSIBILITY: Access is via Cash Rd., a local street with an 18' pavement width within a 40' right-of-way.  
 UTILITIES: Water Source: Knoxville Utilities Board  
 Sewer Source: Knoxville Utilities Board  
 WATERSHED: Holston and French Broad and Sinking East Creek

▶ **ZONING:** A (Agricultural)  
 ▶ **EXISTING LAND USE:** Residence and vacant land  
 ▶ **PROPOSED USE:** 230' lattice commercial telecommunications tower

HISTORY OF ZONING: None noted  
 SURROUNDING LAND USE AND ZONING: North: Residences / A (Agricultural)  
 South: Residences / A (Agricultural) & CA (General Business)  
 East: Residences and vacant land / A (Agricultural)  
 West: Residences / A (Agricultural)  
 NEIGHBORHOOD CONTEXT: The site is located in an area of agricultural and low density residential use that has developed under A (Agricultural) zoning on the north side of the Asheville Hwy. corridor.

**STAFF RECOMMENDATION:**

- ▶ **APPROVE the request for a 230' lattice commercial telecommunications tower in the A (Agricultural) zoning district subject to 8 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. Shifting the driveway access onto Cash Rd. to the south to provide a minimum of 300' of sight distance in both directions along Cash Rd.
  4. Meeting all applicable requirements of the Knox County Department of Engineering and Public Works.
  5. Designing the tower and equipment area to support up to 5 telecommunication carrier antenna arrays

(presently designed for 4).

6. Installing the evergreen landscaping screen along the fenced enclosure, as identified on the tree planting plan, within six months of the tower becoming operational.
7. The tower lights shall be dual hazard warning lights (White strobe in daytime and red lights at night) and shall meet all applicable FAA requirements.
8. 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 A zoning district.

**COMMENTS:**

This is a request for a new 230' lattice commercial telecommunications tower to be located within a 10,000 square foot lease area located on a portion of a 19.9 acre tract. The subject property is zoned A (Agricultural) and telecommunication towers are considered as a use on review in this district. Access to the site is by an easement off of Cash Rd., a local 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 253 feet (110% of the tower height) from the nearest residence. The proposed tower exceeds that minimum standard since the nearest residence, which is the residence of the property owner, is 419' from the proposed tower. The nearest residence off-site is approximately 512' from the tower. The applicant is proposing an 8' high security fence around the tower and equipment area. Due to the height of the tower, FAA does require lighting for the tower. Staff is recommending a condition that dual hazard warning lights (White strobe in daytime and red lights at night) be used.

The applicant states that there are no existing structures in the area that can be used for antenna placement to obtain the required 4G 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 recommends that the applicant design the tower to hold up to 5 sets of antenna arrays and feedlines. Mr. Perry concludes that the 230' lattice 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 in an area made up of primarily large 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 A (Agricultural) 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, North 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 rural 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 East County 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 "Opportunity Area" and "Sensitive Area". The proposed tower site is located along the border of a rural/heavily wooded area which the Plan considers to be an "Opportunity Area" for the location of telecommunication towers. The Plan takes a neutral position on lattice towers located in a rural/heavily

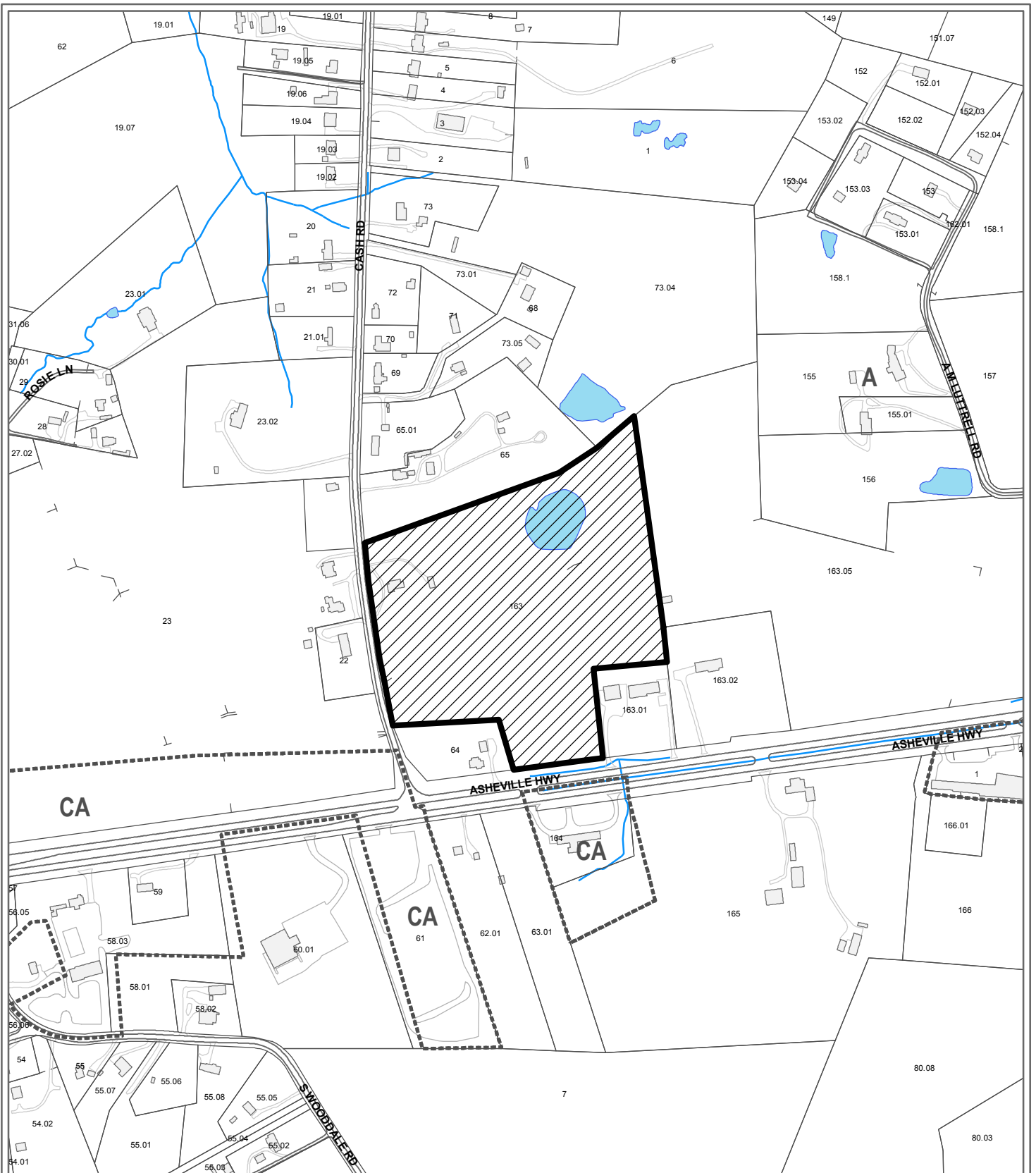
wooded areas. The proposed tower site is also located within 500' of a residence which is classified as a "Sensitive Area", and discouraged as a site for lattice towers. However, the only residence within 500' of the tower is the residence of the property owner.

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.



**1-M-14-UR  
USE ON REVIEW**



230' lattice commercial telecommunications tower in A (Agricultural)

Original Print Date: 12/20/2013      Revised:  
Metropolitan Planning Commission \* City / County Building \* Knoxville, TN 37902

Petitioner: AT&T Wireless

Map No: 62  
Jurisdiction: County





# RF Affidavit

1-M-14-UR

November 20, 2013

Re: Asheville Highway Cell Site

AT&T has determined that a new Wireless Communications Facility is required in Knox County, TN. A proposed tower at 215 Cash Road, Knoxville, TN 37924 has been accepted by RF Engineering. The primary focus of this facility is to cover Asheville Hwy and I-40 in the vicinity of Cash Road including 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 230 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.

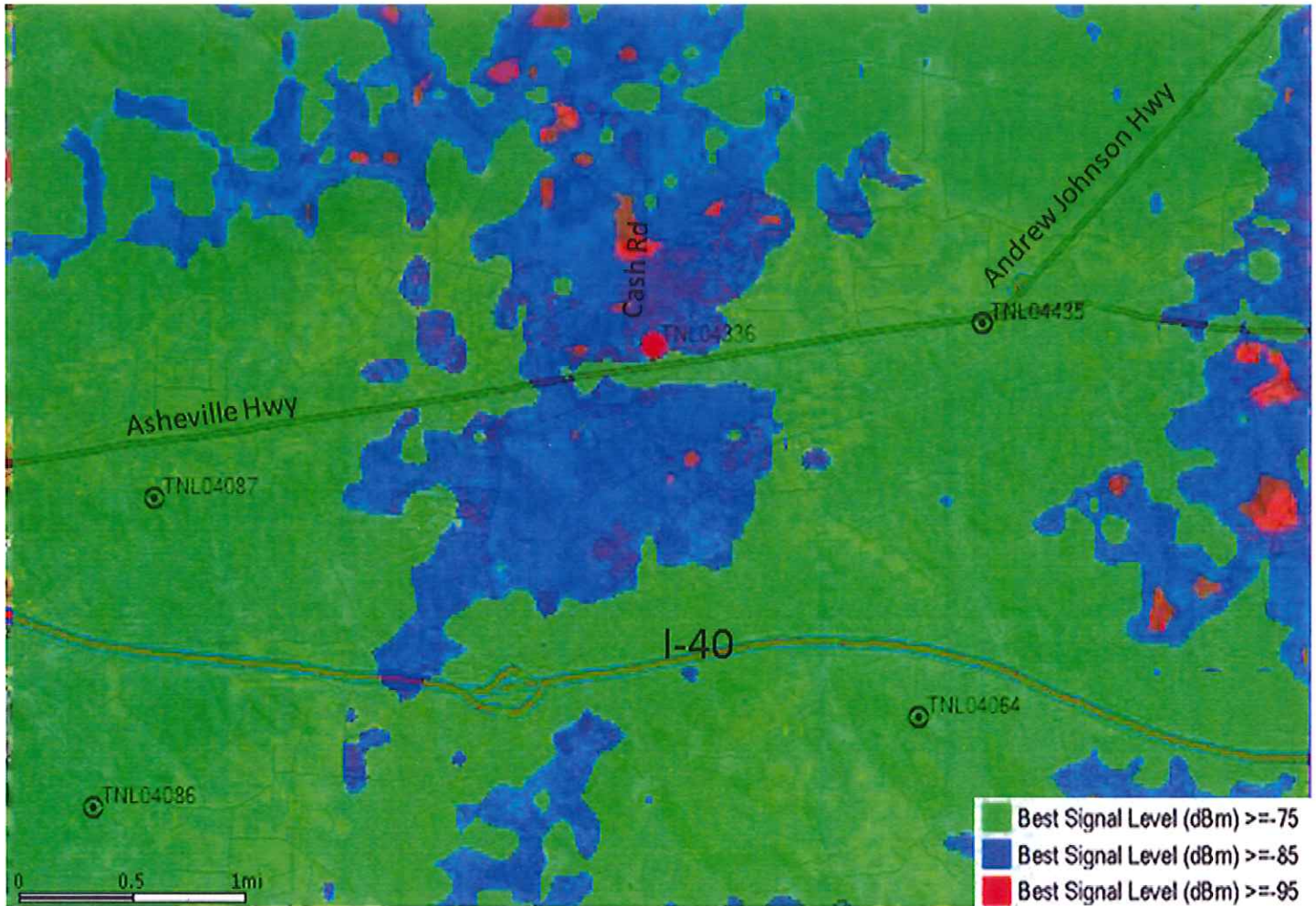
The closest existing AT&T sites that would hand off to this proposed site are, on average, 2.6 miles away from the needed coverage zone.

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.

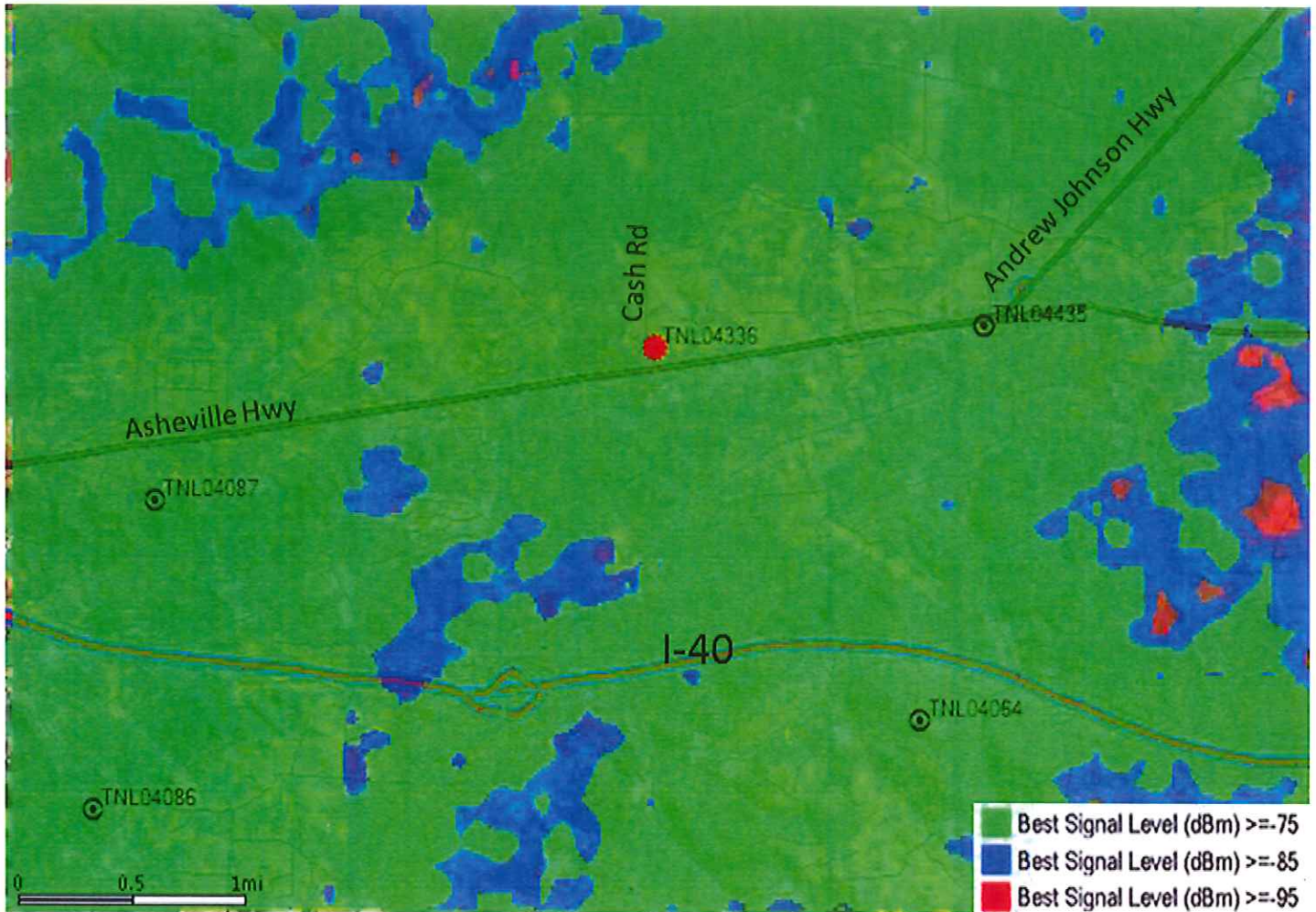
Submitted by:

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

# Asheville Hwy Before



# Asheville Hwy After





**AMERICAN TOWER®**  
CORPORATION

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:*

Site Name: Asheville Hwy TN, Site No. 282093  
Site Address: 215 Cash Road, Knoxville, Tennessee, 37924

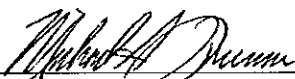
### **AMERICAN TOWERS LLC**

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 of Knox County, Tennessee and/or the Code of Ordinances of the City of Knoxville, Tennessee 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



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
<b>OPPORTUNITY AREAS</b>								
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								

<b>SENSITIVE AREAS</b>								
Within 500' of a Residence								
Rural Residential								
Non-residential Property in Residential Area (church, cemetery, library, etc.)								
Multi-family Residential								
On Hill below Ridgeline								

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

*1-M-14-UR*

Encouraged

Neutral

Discouraged

**AMERICAN TOWERS/ATT WIRELESS**  
**Telecommunications Tower Site Review**  
**USE ON REVIEW APPLICATION # 1-M-14-UR**  
**CONSULTANT'S SUMMARY**

**Asheville Hwy Site**

**Knox County**

**Location:** 120 Cash Road near Asheville Highway--East  
Knox County

**Proposed Tower Height:** 230 foot lattice

**Address:** 120 Cash Road  
Knoxville, Tennessee

**District:** # 8 County **Map Number:** 062 **Parcel** 163

**Use:** Telecommunications antenna support structure

**Zoning:** A (Agricultural)

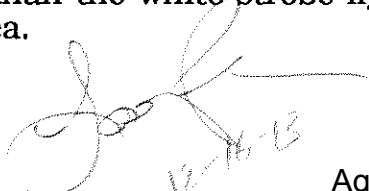
**Land Planning Area:** Urban Growth

**Variances and waivers:** None

**Need:** The applicant is American Towers with a commitment from AT&T Wireless as 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 230 foot lattice type support structure.

**Consultant's Recommendation:** The site and application meets the requirements of the Ordinance, but with the following provisions: The structure should be designed initially that it will support 6 additional carriers' set of antennas for a total of 7 sets of antennas and feedlines and that the required tower lights be dual aviation hazard warning lights (White strobe in day and red at night) rather than the white strobe lights day/night due to the residential homes in the area.



**REPORT TO  
METROPOLITAN PLANNING COMMISSION**

for

Proposed Telecommunications Tower Site  
Located at 120 Cash Road  
Knoxville, TN known as

**ASHEVILLE HWY SITE**

**AMERICAN TOWERS/ATT WIRELESS**

**1-M-14-UR**

**COMPLIANCE WITH**

**THE MPC TELECOMMUNICATIONS FACILITY ORDINANCE  
12/16/2013**

The proposed site for the applicant is a 230 foot lattice type antenna support structure (including antennas and lightning rod) to be located east of Cash Road north of Asheville Highway in East Knox County. The supporting material from applicant has been reviewed for technical and Federal/State legal compliance As well as with the Knox County Wireless Communication Facilities Plan from 2002. This is a new telecommunications site. This site is known as a capacity site. This means that there is some coverage at the site at the present, but the capacity of the existing coverage does not provide sufficient signal levels for the new 4G (4th Generation) technology.

**REQUESTED**

1. **Location.** The location is within the **County** of Knox in **District 8** and is located on **Tax Map Number: 062 Parcel: 163**
2. **Zoning.** A (Agricultural) **SPPLU: LDR**
3. **Land Planning Area:** Urban Growth
4. **Proposed Tower Height:** 230 foot lattice
5. **Address:** 120 Cash Road  
Knoxville, Tennessee
6. **Tower height.** The requested height is 230 feet above ground level should support up to 4 additional telecommunications carrier antennas for a total of 5 users. Lighting **will be** required on this structure.

7. **Variations.** 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 253 feet from the nearest dwelling unit (residence). The proposed site meets that requirement and no variations are required as the nearest dwelling is more than 270 feet from the base of the lattice. Also the setback from Cash Road is more than 100 feet and meets the Ordinance requirements. No variations are requested nor required.

8. **Site.** This application is for the construction of a new lattice type antenna support structure to be located in the middle of an agricultural field on Cash Road near a wooded area to the south and northeast.

9. **Use.** This antenna support structure will be used for telecommunications with the present state of the art communications technology using PCS and cellular communication sources. The applicant is ATT Wireless and there are 3 possible additional telecommunications users for the facility according to the application, but it is recommended that the structure be initially designed for a total of 5 users, 4 in addition to the current applicant. This will eliminate the need for additional towers in this area by other carriers in the future.

10. **Setbacks.** The setback requirements are that the facility must be 110% height of the tower from any dwelling unit (253 feet in this case) and 50 feet from the centerline a roadway right of way. The applicant meets that requirement and no variations are required.

11. **Height.** The proposed structure is for 230 feet **with lighting** required. This height is required to provide service to the surrounding area due to the varying terrain, otherwise multiple structures would be required to serve the same area.

## **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 surrounding foliage and tree coverage

Check design of tower for esthetic changes

Check height requirements necessary for coverage

Check separation from other towers

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

## **DISCUSSION**

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

The site elevation at this location is about 964 feet. It is located in the center of an agricultural field near a wooded area on Cash Road near Asheville Highway in East Knox County.

The request is for a 230 foot lattice of which ATT will use the top 15 feet and the additional usable lower 150 feet is for other carriers' expansion.

This a "capacity" site. By that is meant that there is coverage in this area, but that the capacity 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 4 additional users for a total of 5, however, it is my recommendation that the structure be initially designed for a total of 7 carrier antennas and feedlines allowing for future co-locaters without the need for additional towers in the immediate vicinity. 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 lattice structure.

The proposed structure should not affect adjacent property as it is on a parcel of land that is zoned agricultural and there are no subdivisions or other multiple residential homes in the immediate area.

EMS access to the site would be via Cash Road on a flat road entrance.

Using the MPC's Wireless Facilities Matrix the site qualifies as a SENSITIVE AREA site in that it is 230 feet in height, a lattice type structure and located in an agricultural area. It is DISCOURAGED with regard to land use as it is located within 500 feet of a residence. (See attached Exhibit 7 Chart)

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

## **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 (230 feet) with lighting requirements and even though located near the intersection of Cash Road and Asheville Highway it is separated from residential units by wooded areas.

(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 lattice type structure more than 199 feet and due to the isolated location should be acceptable from a visibility viewpoint within a reasonable distance.

(A) **Sensitive Area**---This location is in a SENSITIVE AREA and is DISCOURAGED land use by the Matrix due to its height and being a lattice structure more than 199 feet.

## **SUMMARY**

- (1) The proposed antenna support structure is a 230 foot lattice including antennas. Lighting **will be** required for this structure by the FAA due to its proposed height. It is recommended that the applicant use dual aviation hazard warning lights (White strobe in the day and red at night) as opposed to the white strobe lights due to residential homes in the area.
- (2) A review of the structure stress analysis on the proposed structure and specifications support the use of the lattice by three other potential users in the future, but the recommendation here is for six other users in the initial design of the structure so as to prevent additional structures for other carriers in the future to cover the same area.
- (3) The structure design meets or exceeds FCC and EIA requirements.
- (4) The area surrounding the site is zoned Agriculture. There are no residences within 253 feet of the tower.
- (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 outdoor cabinet 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 G 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 minimal environmental impact within the federal guidelines.

(12) Assuming that there are 7 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 Cash Road. However, the site is an unmanned site.

(15) There are no other antenna structures within a 1 mile radius that would allow the coverage needed by the applicant for this area.

### **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 with following provisions: (1) The structure should be designed initially that it will support 6 additional carriers set of antennas for a total of 7 sets of antennas and feedlines to allow for future growth without adding additional structures in the area; and (2) the structure use the dual aviation hazard warning lights (White strobe in the day and red at night) instead of white strobe lights day and night due to the location of residential homes in the area.

Respectfully submitted,

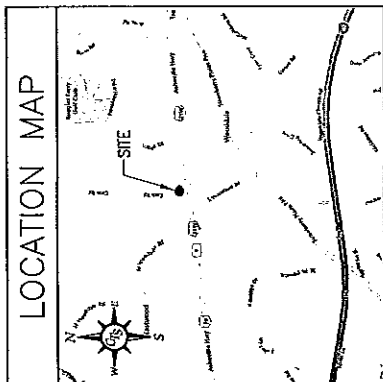


Larry Perry  
Consultant to MPC

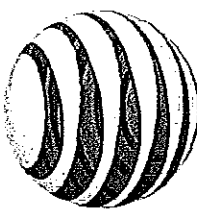


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FRANKS PLOTTED TO SCALE ON 11x17 SHEETS



**DIRECTIONS TO THE SITE**  
 FROM BRENTWOOD, TN TAKE I-40 TOWARD NASHVILLE. MERGE ONTO I-40E  
 VIA EXIT 50 TOWARD KNOXVILLE/CHATTANOOGA. MERGE ONTO I-24W VIA THE  
 EXIT ON THE LEFT TOWARD NASHVILLE/KNOXVILLE. MERGE ONTO I-40E  
 EXIT 30A TOWARD US-50W. TURN LEFT ONTO ASHEVILLE  
 HWY/US-70E/US-25W S/WIS-11E E/TN/SH. TURN LEFT ONTO CASH ROAD &  
 SITE IS ON THE RIGHT IN AN OPEN FIELD.



# AT&T SITE NAME: ASHEVILLE HWY PROPOSED RAWLAND SITE

120 CASH ROAD  
 KNOXVILLE, TENNESSEE 37924

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

**compass**  
 5449 BELLS FERRY ROAD  
 ACWORTH, GA 30102  
 PHONE: 770-701-2500  
 FAX: 770-701-2501  
 WALTER MATTHEWS PRATHER, P.E.  
 LICENSED PROFESSIONAL ENGINEER

DESIGNED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**SITE SUMMARY**

SITE TYPE:	PROPOSED RAWLAND GROUND BUILD
TOWER TYPE:	SELF-SUPPORT
PROPOSED RAD CENTER:	230'
PROPOSED LEASE AREA:	100' x 100' (10,000sqft)
TOWER LATITUDE:	N 35° 01' 26.51" (NAD 83)
TOWER LONGITUDE:	W 85° 45' 49.56" (NAD 83)
GROUND ELEVATION:	947.7 AMSLL
ZONING JURISDICTION:	KNOX COUNTY
ZONING CLASSIFICATION:	A
PARCEL TAX ID:	062-163
POWER COMPANY:	KNOXVILLE UTILITY BOARD
TELEPHONE COMPANY:	(865) 524-2911 AT&T

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

**PLUMBING REQUIREMENTS:**  
 FACILITY HAS NO SANITARY OR POTABLE WATER.

UNDERGROUND SERVICE ALERT  
 CALL TOLL FREE  
 1-800-351-1111

THINK BEFORE YOU DIG

**PROJECT DIRECTORY**

LAND OWNER:	SUZAN L. FRAZIER 215 CASH ROAD KNOXVILLE, TN 37924 (865) 660-1321
APPLICANT:	AT&T WIRELESS PCS, LLC 402 FRANKLIN ROAD CONSTRUCTION & ENGINEERING 2ND FLOOR BRENTWOOD, TN 37027 CONTACT: KEVIN LEE (770) 701-2537
SITE DESIGN:	COMPASS TECHNOLOGY SERVICES 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) 706-8114

**SHEET INDEX**

TITLE SHEET	REV.	DATE
T-1 SITE SPECIFIC SHEETS	0	01/30/14
T-2 GENERAL NOTES, SPECIFICATIONS AND SCHEDULES	0	01/30/14
T-3 PROPERTY SURVEY (BY OTHERS)	2	01/24/14
T-4 PROPOSED LEASE AREA SURVEY (BY OTHERS)	2	01/24/14
C-1 OVERALL SITE PLAN	0	01/30/14
C-2 ACCESS DRIVE GRADING AND EROSION CONTROL PLAN	0	01/30/14
C-3 TOWER SITE GRADING AND EROSION CONTROL PLAN	0	01/30/14
C-4 GENERAL CONSTRUCTION NOTES & SITE PLAN	0	01/30/14
C-5 EROSION CONTROL AND GRADING DETAILS	0	01/30/14
C-6 EROSION CONTROL AND GRADING DETAILS	0	01/30/14
C-7 EROSION CONTROL AND GRADING NOTES	0	01/30/14
L-1 LANDSCAPING PLAN AND DETAILS	0	01/30/14
S-1 TOWER ELEVATION & ANTENNA ORIENTATION	0	01/30/14
S-2 SHELTER ELEVATIONS	0	01/30/14
S-3 SITE SIGNAGE	0	01/30/14
S-4 ICE BRIDGE DETAILS	0	01/30/14
S-5 FOUNDATION DETAILS	0	01/30/14
S-6 FENCING DETAILS	0	01/30/14
E-1 GENERAL ELECTRICAL NOTES AND SYMBOLS	0	01/30/14
E-2 ELECTRICAL SITE PLAN	0	01/30/14
E-3 GROUNDING PLAN	0	01/30/14
E-4 ONE-LINE DIAGRAM	0	01/30/14
E-5 GROUNDING RISER DIAGRAM	0	01/30/14
E-6 ELECTRICAL DETAILS	0	01/30/14
E-7 ELECTRICAL DETAILS	0	01/30/14
E-8 H-FRAME DETAILS	0	01/30/14

**1-M-14-UK**  
**REVISED**  
 2-3-14

**at&t**

402 FRANKLIN ROAD  
 CONSTRUCTION & ENGINEERING  
 BRENTWOOD, TN 37027


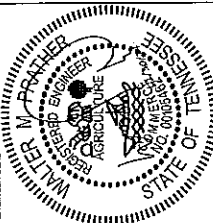

ACHIEVILLE HWY

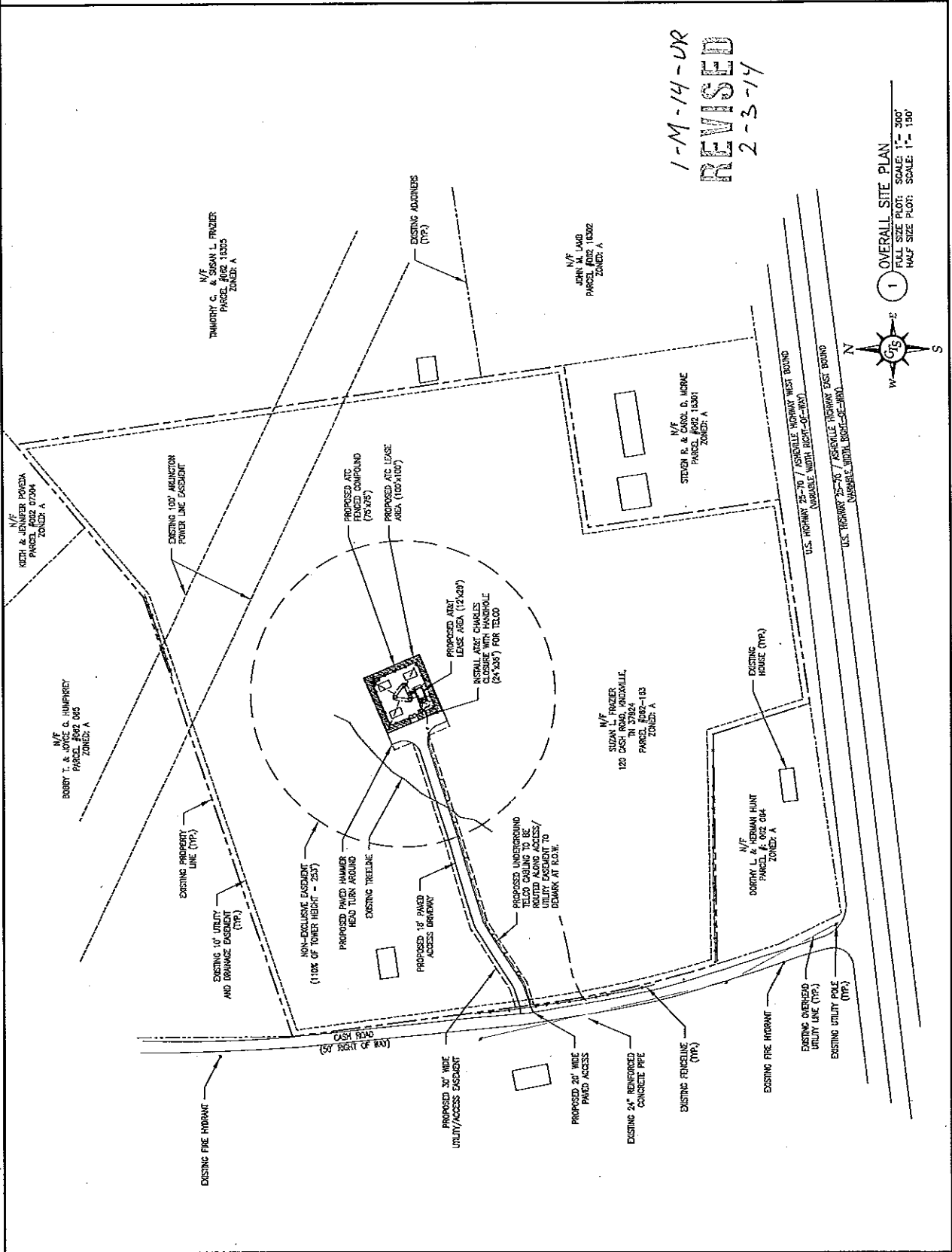
APPROVED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

TITLE SHEET

T-1



 <p>COMPASS ENGINEERS 3449 BELLS FERRY ROAD ACWORTH, GA 30102 PHONE: 770-701-2500 FAX: 770-701-2501 WALTER MATHEWS PRATHER, P.E. REGISTERED PROFESSIONAL ENGINEER</p>	<p>NO. DATE REVISIONS BY</p> <p>0 01/20/14 CONSTRUCTION OMB</p> <p>NOT VALID WITHOUT SIGNATURE AND DATE</p>		 <p>PREPARED FOR: 480 TRANSLATION COUNTY, TENNESSEE BIRMINGHAM, TN 38017</p>	<p>DATE DRAWN: ASHEVILLE HWY</p>	<p>APPROVED BY: W. PRATHER DESIGNED BY: M. ROBINSON DATE: 1/20/14</p>	<p>PROJECT NAME: OVERALL SITE PLAN</p>	<p>PRINT NUMBER: C-1</p>
	<p>PREPARED BY:</p>						



1-M-14-UR  
REVISED  
2-3-14



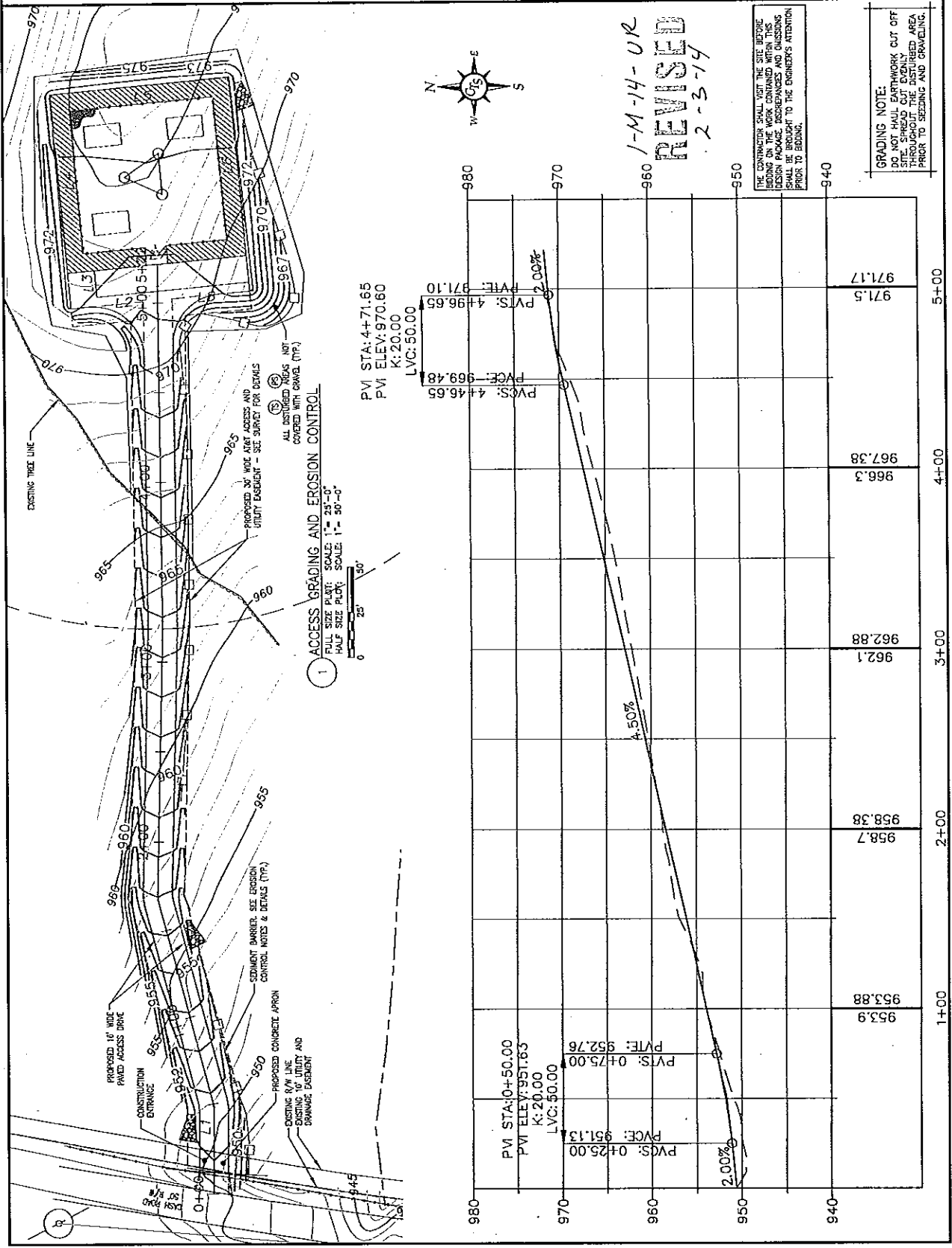
PREPARED BY: **compass** TECHNOLOGY SERVICES  
 5448 BELLS FERRY ROAD  
 ACONORTH, CA 95012  
 PHONE: 770-791-2500  
 WALTER MATHEWS PRATHER, P.E.  
 PROJECT NO: 100000

DESIGNED FOR: CONSTRUCTION DATE: \_\_\_\_\_  
 NO. DATE: \_\_\_\_\_  
 NOT VALID WITHOUT SIGNATURE AND DATE OF REGISTERED PROFESSIONAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER  
 WALTER MATHEWS PRATHER  
 AGRICULTURE  
 STATE OF TENNESSEE  
 LICENSE NO. 30000

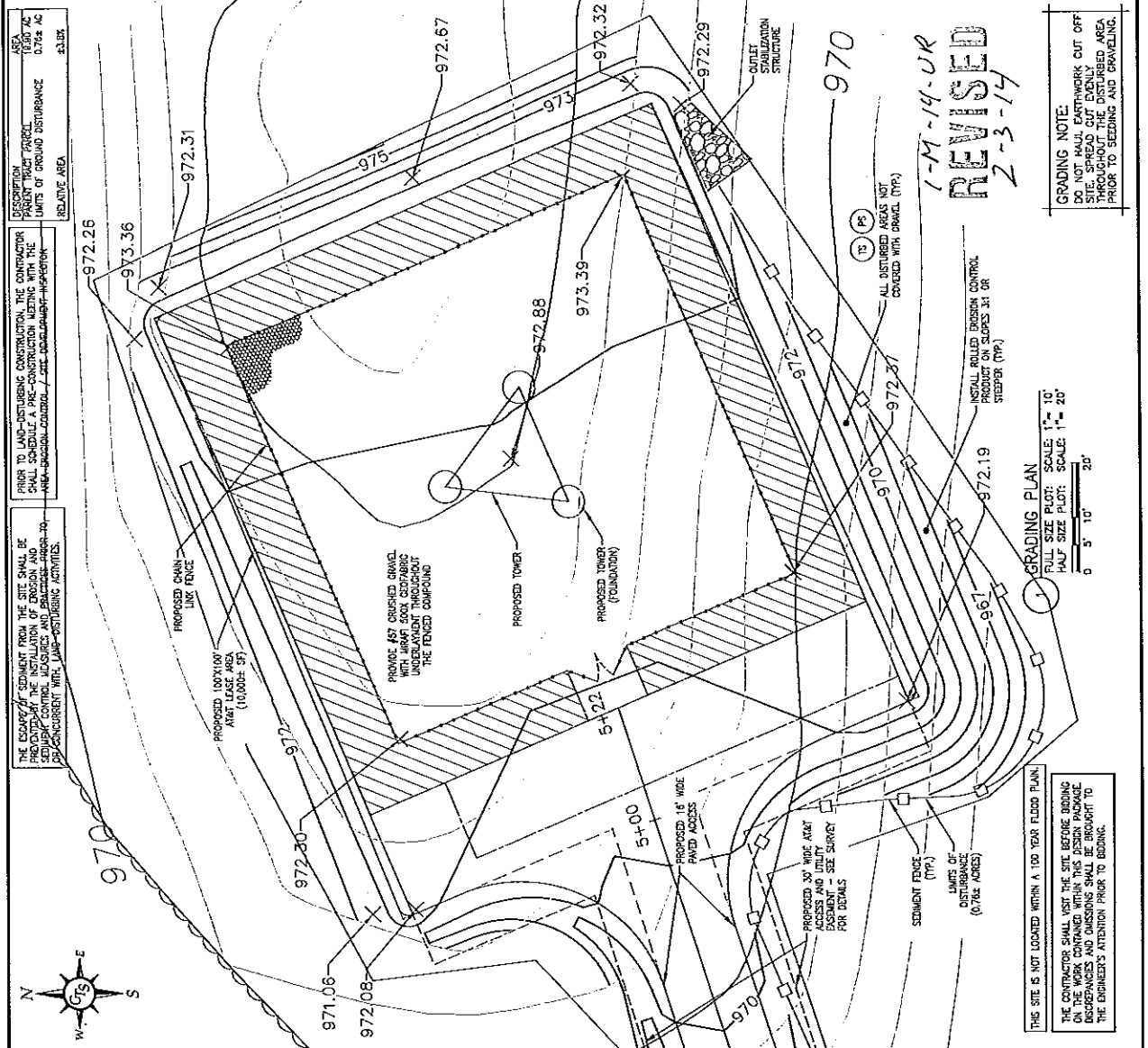
PREPARED FOR: **at&t**  
 500 W. WASHINGTON  
 COLUMBIA, MISSISSIPPI  
 39201-0001

SHEET NAME: ADHEVILLE HWY  
 PREPARED BY: M. PRATHER  
 PROJECT NO: 100000  
 DATE: 1/20/14  
 SHEET NUMBER: ACCESS DRIVE GRADING & EROSION CONTROL PLAN  
**C-2**



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- GRADING NOTES:**
- THIS PLAN WAS PREPARED FOR THE EXCLUSIVE USE OF A&T, AND EXCLUSIVELY FOR THE TRANSFER OF THE EASEMENT AND THE RIGHT OF EASEMENT SHOWN HEREON AND SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE TRANSFER OF THE SUBJECT PROPERTY FOR 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 IMAGINE SITE AREA ARE APPROXIMATE.
  - THE UTILITIES SHOWN HEREON ARE BASED UPON AN AERIAL-GROUND FIELD SURVEY. THE EXACT LOCATION OF UTILITIES 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 BRIDGE ANY ROCK AND/OR UNSUITABLE MATERIAL TO A DEPTH OF TWO (2) FEET BELOW THE FINISHED GRADE OR AS DIRECTED BY THE SOILS ENGINEER OR THE DEVELOPER.
  - EARTHWORK IN PERMANENT STRUCTURE AREAS SHALL BE COMPACTED TO A MINIMUM OF 90% 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 CLEANING 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 REQUIREMENTS MAY BE NECESSARY AND IDENTIFIED THROUGHOUT THE CONSTRUCTION PERIOD AND CLEANING ANY TIERES 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 BRUSHING ANY CUT OR MUD FROM THE TIRES OF ANY CONSTRUCTION VEHICLES PRIOR TO THEM LEAVING THE SITE.
- TEMPORARY STREAM CROSSING**
- CHECK DAM
  - OUTLET PROTECTION
  - CONCRETE WASHOUT
  - DISBURBED AREA STABILIZATION WITH STRAW MULCH
  - DISBURBED AREA STABILIZATION WITH OTHER MULCHES
  - DISBURBED AREA STABILIZATION WITH PERMANENT VEGETATION
  - DISBURBED AREA STABILIZATION WITH SOO
  - DISBURBED AREA STABILIZATION WITH TEMPORARY VEGETATION
  - ROLLED EROSION CONTROL PRODUCTS
  - CONSTRUCTION ERT
  - SEDIMENT FENCE
  - CONSTRUCTION ROAD STABILIZATION
  - CONSTRUCTION ROAD STABILIZATION



**COMPASS TECHNOLOGY**  
 5448 BELLS FERRY ROAD  
 ACRYORTH, CA 30102  
 PHONE: 770-701-2500  
 WALTER MATTHEWS PRITCHER, P.E.

**at&t**  
 605 FRANKLIN ROAD  
 CONCORD, GEORGIA 30045  
 BENTONWOOD 11 1017

**WALTER MATTHEWS PRITCHER, P.E.**  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF TENNESSEE  
 LICENSE NO. 20158  
 AGRICULTURE

**PROJECT INFORMATION:**

PROJECT NO.	1017
NO. DATE	REVISED
DATE	10/17/17
BY	WMP
FOR	AT&T

**PREPARED FOR:** ADHEVILLE HWY

**APPROVED BY:** W. MATTHEWS PRITCHER  
 DATE: 10/17/17

**PROJECT NAME:** TOWER SITE GRADING & EROSION CONTROL PLAN

**SHEET NUMBER:** C-3

**compass**  
CONSULTANTS

5440 BELLS FERRY ROAD  
ADWORTH, GA 30102  
PHONE: 770-701-2850  
FAX: 770-701-2850  
WALTER MATTHEWS PRITCHER, P.E.

DATE: 01/08/14  
BY: WMP  
LAST DATE: 01/08/14  
PROJECT: 14-000000-0000

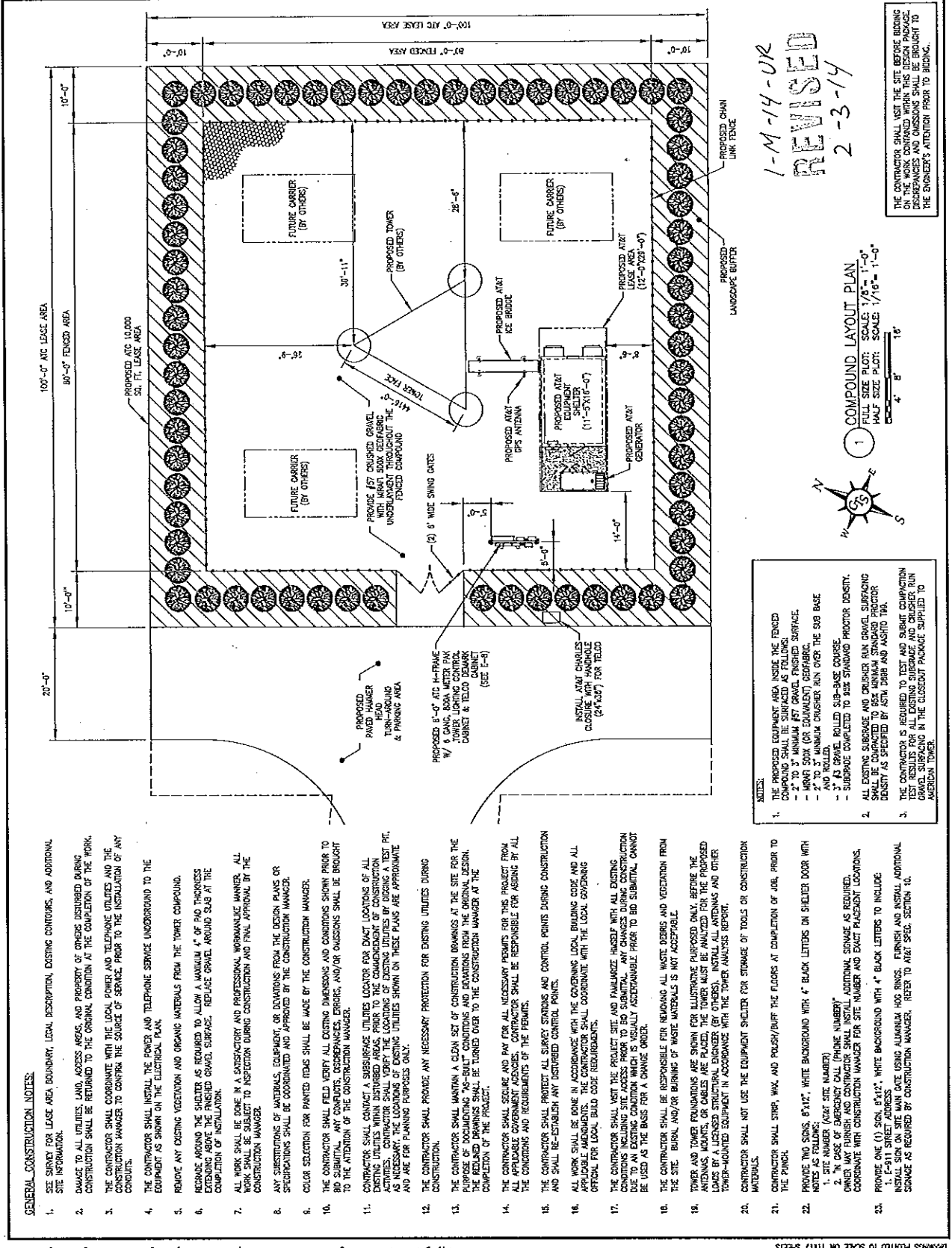
REGISTERED PROFESSIONAL ENGINEER  
WALTER MATTHEWS PRITCHER  
STATE OF TENNESSEE  
LICENSE NO. 20000

at&t

507 FRENCH ROAD  
CANTON, TN 37024  
MEMPHIS, TN 38127

APPROVED BY: W. MATTHEWS  
DESIGNED BY: W. MATTHEWS  
DATE: 01/08/14

GENERAL CONSTRUCTION  
NOTES & SITE PLAN



REVISION

1-M-14-UR  
2-3-14

**1** COMPOUND LAYOUT PLAN

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

- GENERAL CONSTRUCTION NOTES:**
- SEE SURVEY FOR LEASE AREA BOUNDARY, LEGAL DESCRIPTION, EXISTING CONTOURS, AND ADDITIONAL SITE INFORMATION.
  - DAMAGE 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.
  - 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.
  - THE CONTRACTOR SHALL INSTALL THE POWER AND TELEPHONE SERVICE UNDERGROUND TO THE EQUIPMENT AS SHOWN ON THE ELECTRICAL PLAN.
  - REMOVE ANY EXISTING VEGETATION AND ORGANIC MATERIALS FROM THE TOWER COMPOUND.
  - INCREASE AROUND THE SHELTER AS REQUIRED TO ALLOW A MAXIMUM 4" OF PWD THICKNESS EXTENDING ABOVE THE FINISHED GRADE SURFACE. REPLACE GRAVEL AROUND SLOPE AT THE COMPLETION OF INSTALLATION.
  - ALL WORK SHALL BE DONE IN A SATISFACTORY AND PROFESSIONAL MANNER. ALL WORK SHALL BE SUBJECT TO INSPECTION DURING CONSTRUCTION AND FINAL APPROVAL BY THE CONSTRUCTION MANAGER.
  - ANY SUBSTITUTIONS OF MATERIALS, EQUIPMENT, OR DIMENSIONS FROM THE DESIGN PLANS OR SPECIFICATIONS SHALL BE COORDINATED AND APPROVED BY THE CONSTRUCTION MANAGER.
  - COLOR SELECTION FOR PAINTED ITEMS SHALL BE MADE BY THE CONSTRUCTION MANAGER.
  - THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS BEFORE WORK TO 80 CONDUITS, W/ 5 OMC, SOAK PIT FOR CABINET & TOWER DEWARM (SEE E-4) AND ARE FOR PLANNING PURPOSES ONLY.
  - CONTRACTOR SHALL CONTACT A SUBSURFACE UTILITIES LOCATOR FOR EXACT LOCATIONS OF ALL EXISTING UTILITIES WITHIN DISTURBED AREAS, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. LOCATIONS OF ALL EXISTING UTILITIES SHALL BE MARKED WITH REFLECTOR PINS AND ARE FOR PLANNING PURPOSES ONLY.
  - THE CONTRACTOR SHALL PROVIDE ANY NECESSARY PROTECTION FOR EXISTING UTILITIES DURING CONSTRUCTION.
  - THE CONTRACTOR SHALL MAINTAIN A CLEAN SET OF CONSTRUCTION DRAWINGS AT THE SITE FOR THE PURPOSE OF DOCUMENTING "AS-BUILT" CONDITIONS AND DIMENSIONS FROM THE ORIGINAL DESIGN. THE REVISIONS TO THE DRAWINGS SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER AT THE COMPLETION OF THE PROJECT.
  - THE CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS FOR THE PROJECT FROM ALL APPLICABLE GOVERNMENT AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ADDRESSING ALL THE CONDITIONS AND REQUIREMENTS OF THE PERMITS.
  - THE CONTRACTOR SHALL PROTECT ALL SURVEY STATIONS AND CONTROL POINTS DURING CONSTRUCTION AND SHALL RE-ESTABLISH ANY DISTURBED CONTROL POINTS.
  - 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.
  - THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ANY CHANGES TO THE CONSTRUCTION PLAN DUE TO AN EXISTING CONDITION WHICH IS USUALLY UNREASONABLE PRIOR TO BID SUBMITTAL, CANNOT BE USED AS THE BASIS FOR A CHANGE ORDER.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL WASTE DEBRIS AND VEGETATION FROM THE SITE. BURN AND/OR BURNING OF WASTE MATERIALS IS NOT ACCEPTABLE.
  - TOWER AND TOWER FOUNDATIONS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. BEFORE THE ANTI-TANKS, MOUNTS, OR CABLES ARE PLACED, THE TOWER MUST BE ANALYZED FOR THE PROPOSED LOADS BY A LICENSED STRUCTURAL ENGINEER (BY OTHERS). INSTALL ALL ANTENNAS AND OTHER TOWER-MOUNTED EQUIPMENT IN ACCORDANCE WITH THE TOWER ANALYSIS REPORT.
  - CONTRACTOR SHALL NOT USE THE EQUIPMENT SHELTER FOR STORAGE OF TOOLS OR CONSTRUCTION MATERIALS.
  - CONTRACTOR SHALL STRIP, WAX, AND POLISH/BUFF THE FLOORS AT COMPLETION OF JOB, PRIOR TO THE FINISH.
  - PROVIDE TWO SIGNS, 6'x12" WHITE BACKGROUND WITH 4" BLACK LETTERS ON SHELTER DOOR WITH THE FOLLOWING INFORMATION: (1) SITE NUMBER (2) SITE NAME (3) PHONE NUMBER (4) OWNER MAY FURNISH AND CONTRACTOR SHALL INSTALL ADDITIONAL SIGNAGE AS REQUIRED. COORDINATE WITH CONSTRUCTION MANAGER FOR SITE NUMBER AND EXACT PLACEMENT LOCATIONS.
  - PROVIDE ONE (1) SIGN, 6'x12" WHITE BACKGROUND WITH 4" BLACK LETTERS TO INCLUDE: (1) SITE NAME (2) SITE MAIN GATE USING ALUMINUM HOO BRIMS. FURNISH AND INSTALL ADDITIONAL SIGNAGE AS REQUIRED BY CONSTRUCTION MANAGER. REFER TO AT&T SECTION 10.

- NOTES:**
- THE PROPOSED EQUIPMENT AREA INSIDE THE FENCED COMPOUND SHALL BE SURFACED AS FOLLOWS:
    - 2" TO 3" MINIMUM 1/2" GRAVEL FINISHED SURFACE.
    - 1" MIN 3" (OR EQUIVALENT) GEOTEXTILE.
    - 1" AND 1/2" MINIMUM CRUSHER RUN OVER THE SUB-BASE.
    - 3" 41" GRAVEL ROLLED SUB-BASE COURSE.
  - ALL EXISTING SUBSURFACE AND CRUSHER RUN GRAVEL SURFACING SHALL BE REMOVED AND REPLACED WITH NEW GRAVEL SURFACING AS SPECIFIED BY ASTM D208 AND AASHTO M19.
  - THE CONTRACTOR IS REQUIRED TO TEST AND SUBMIT COMPLETION REPORTS FOR ALL TESTS AND ALL TESTS SHALL BE IN GENERAL SURFACE AND ALL TESTS SHALL BE SUPPLIED TO AMERICAN TOWER.

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DRAWING PLOTTED TO SCALE ON 11x17 SHEETS

**compass**  
LANDSCAPE ARCHITECT

8448 BELLS FERRY ROAD  
ACWORTH, GA 30102  
PHONE: 770-701-2500  
FAX: 770-701-2501  
WALTER MATHEWS PRATHER, P.E.

REVISIONS

NO.	DATE	DESCRIPTION	BY
0	01/20/14	CONCEPT DWS	
1		REVISIONS	
2		NOT YET REVISED	

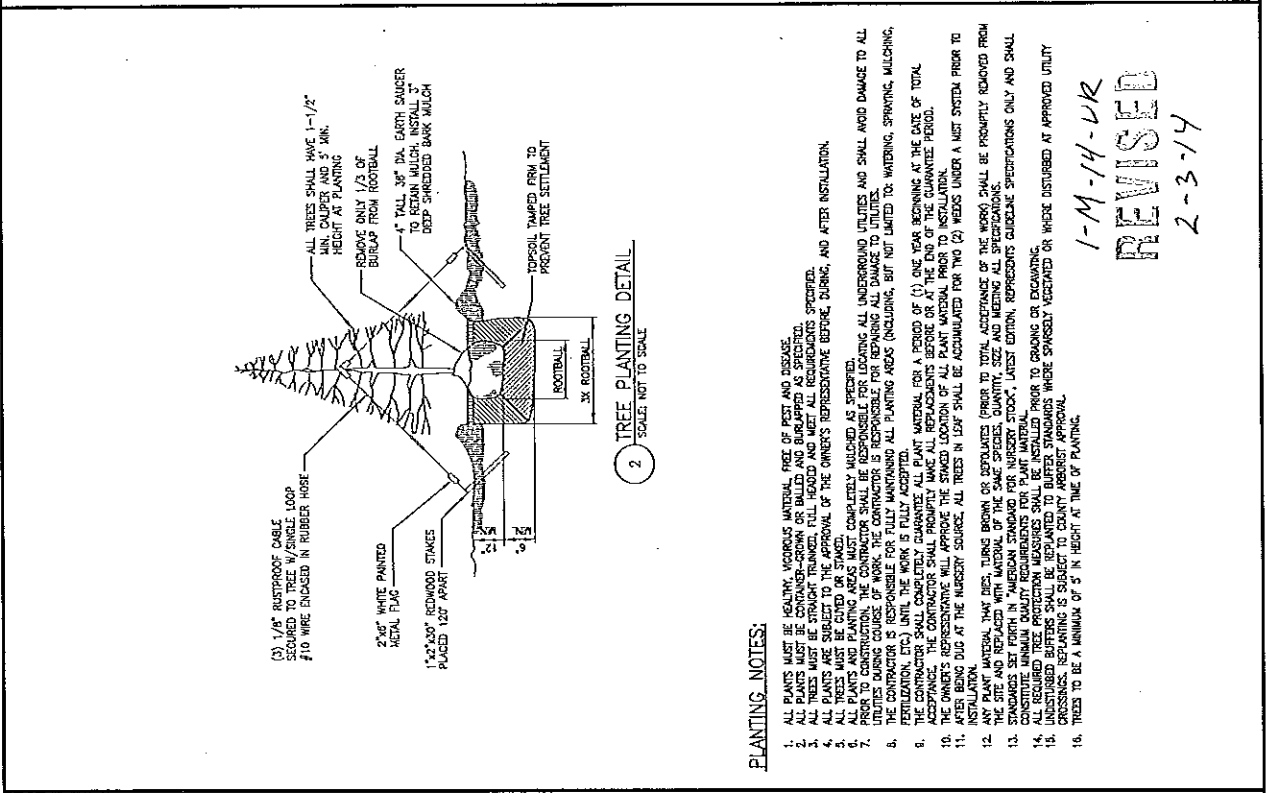
427 PINEHURST ROAD  
COLUMBIANA, ALABAMA 35956  
PH: 205-370-1100

PROJECT NO. ASPHEVILLE HWY

DESIGNED BY: M. PRATHER  
CHECKED BY: M. ROBINSON  
PROJECT NO: 130488  
DATE: 1/20/14

SHEET NAME: LANDSCAPING PLAN  
& DETAILS

SHEET NUMBER: L-1

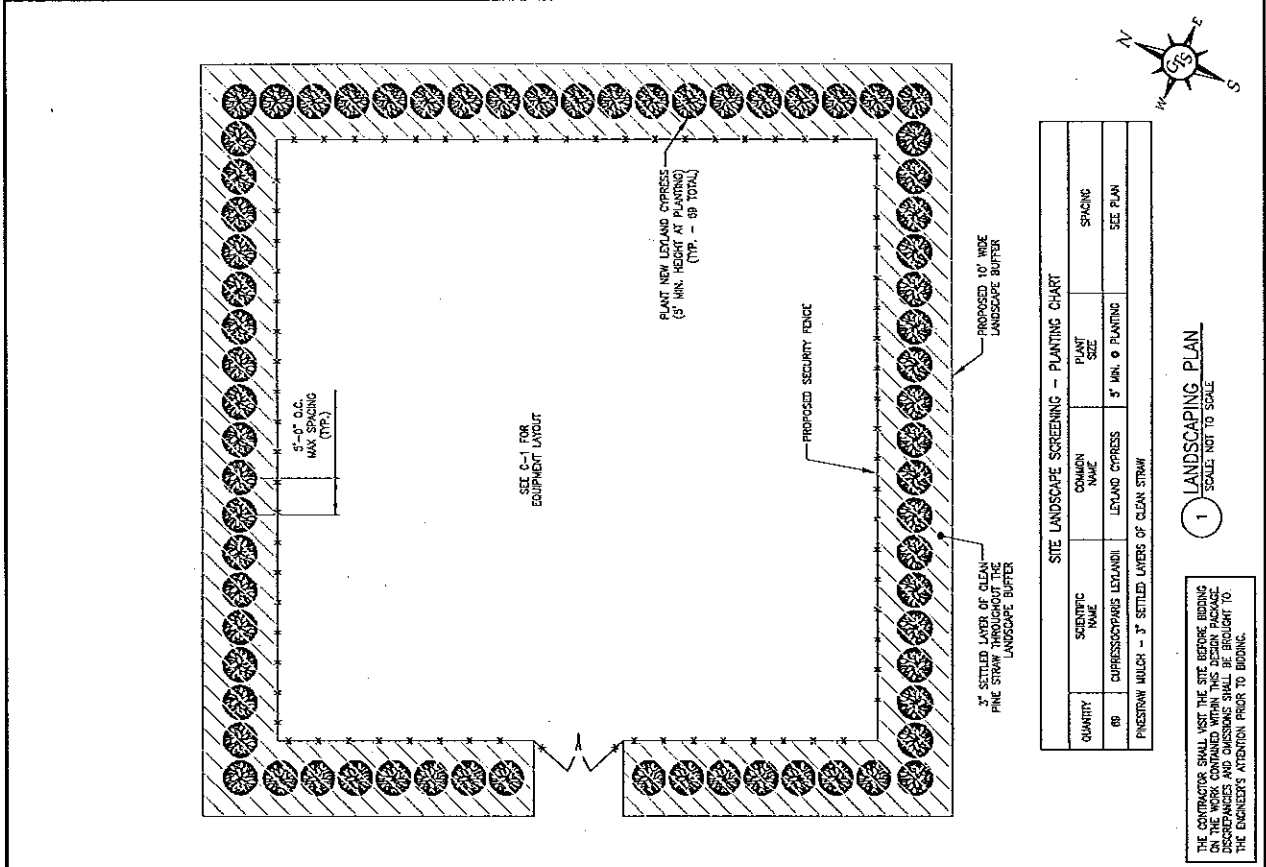


**PLANTING NOTES:**

1. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PEST AND DISEASE.
2. ALL PLANTS MUST BE CONTAINER-GROWN OR BALLED AND BURLAPPED AS SPECIFIED.
3. ALL PLANTS MUST BE SET TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE BEFORE, DURING, AND AFTER INSTALLATION.
4. ALL TREES MUST BE COTED OR STAKED.
5. ALL PLANTS AND PLANTING AREAS MUST COMPLETELY WITHSTAND ALL UNDERSTANDING UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERSTANDING UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MARKING ALL PLANTING AREAS (INCLUDING, BUT NOT LIMITED TO: WATERING, SPRINKLING, MULCHING, FERTILIZATION, ETC.) UNTIL THE WORK IS FULLY ACCEPTED.
6. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF (1) ONE YEAR BEGINNING AT THE DATE OF TOTAL ACCEPTANCE. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD.
7. THE OWNER'S REPRESENTATIVE WILL APPROVE THE SAVED LOCATION OF ALL PLANT MATERIAL PRIOR TO INSTALLATION.
8. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN EXPOSED SHALL BE ACCUMULATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
9. ALL PLANT MATERIAL THAT DIES, TURNS BROWN OR DEVELOPES OTHER TO TOTAL ACCEPTANCE OF THE WORK SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, SIZE AND MEETING ALL SPECIFICATIONS.
10. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK", LATEST EDITION, REPRESENTS CURRENT SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
11. ALL PLANTING AREAS SHALL BE MULCHED WITH A 2" DEEP LAYER OF CLEAN PINE STRAW.
12. ALL PLANTING AREAS SHALL BE MULCHED WITH A 2" DEEP LAYER OF CLEAN PINE STRAW.
13. ALL PLANTING AREAS SHALL BE MULCHED WITH A 2" DEEP LAYER OF CLEAN PINE STRAW.
14. ALL PLANTING AREAS SHALL BE MULCHED WITH A 2" DEEP LAYER OF CLEAN PINE STRAW.
15. ALL PLANTING AREAS SHALL BE MULCHED WITH A 2" DEEP LAYER OF CLEAN PINE STRAW.
16. TREES TO BE A MINIMUM OF 5' IN HEIGHT AT TIME OF PLANTING.

REVISÉ

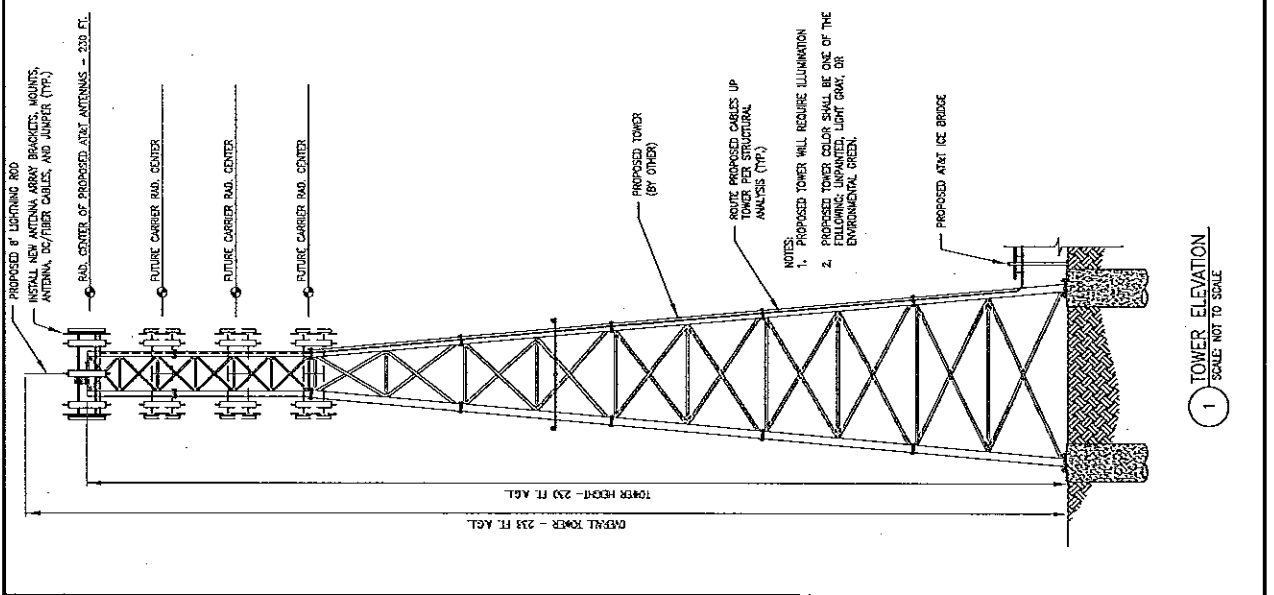
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2-3-14



**SITE LANDSCAPE SCREENING - PLANTING CHART**

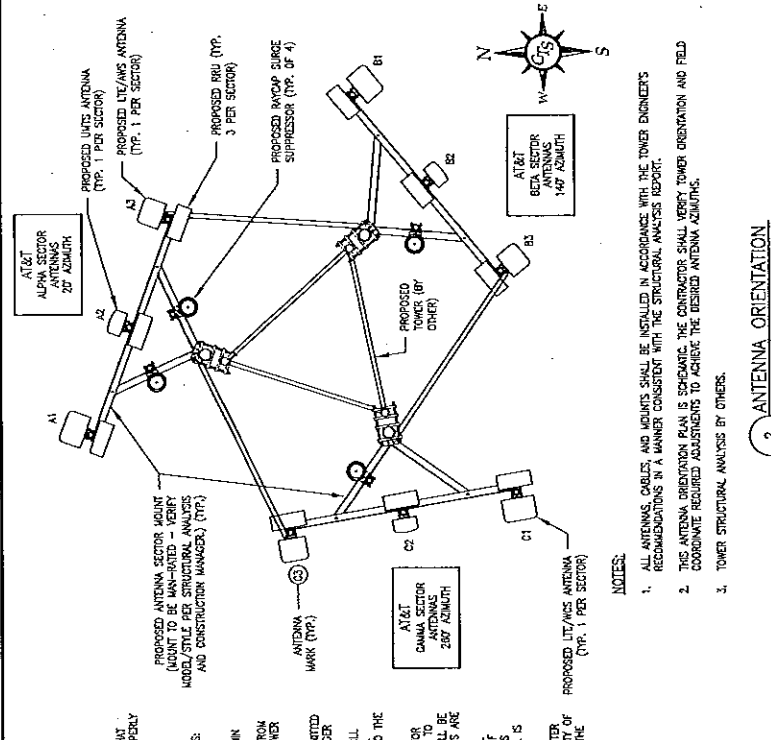
QUANTITY	SCIENTIFIC NAME	COMMON NAME	PLANT SIZE	SPACING
88	CYPRESSOPHORE LEUCANH	LEUCANH CYPRESS	5" MIN. Ø PLANTING	SEE PLAN

THE CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING ON THE WORK CONTAINED WITHIN THIS DESIGN PACKAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND ATTENTION PRIOR TO BIDDING.



THE PROPOSED SECTOR MOUNT HAS NOT BEEN STRUCTURALLY ANALYZED. IF THESE LITE/ANTENNA CABLES ARE TO BE INSTALLED, A STRUCTURAL ANALYSIS MUST BE SUBMITTED TO THE ENGINEER.

- NOTES:**
- GENERAL CONTRACTOR SHALL TEST AND DOCUMENT THAT THE TOWER LIGHTING SYSTEMS ARE FUNCTIONING PROPERLY DURING AND UPON COMPLETION OF EQUIPMENT INSTALLATION.
  - GENERAL CONTRACTOR SHALL PERFORM TWO HEIGHT VERIFICATIONS ON TOWER PROVIDED FORMS AS FOLLOWS:  
 TEST ORDER #1 SHALL BE SUBMITTED TO THE APPROPRIATE AT&T CONSTRUCTION MANAGER WITHIN (72) HOURS UPON COMPLETION OF THE TOWER ERECTION AND WILL DOCUMENT THE DIMENSION FROM ANTENNA AND LITE INSTALLATION. THIS FORM WILL BE SUBMITTED TO THE AT&T PROJECT MANAGER TO DOCUMENT THE DIMENSION FROM THE GROUND TO THE TOP OF AT&T ANTENNAS.  
 TEST ORDER #2 SHALL BE PERFORMED AND SUBMITTED TO THE APPROPRIATE AT&T CONSTRUCTION MANAGER WITHIN (72) HOURS UPON COMPLETION OF THE TOWER ERECTION AND WILL DOCUMENT THE DIMENSION FROM ANTENNA AND LITE INSTALLATION. THIS FORM WILL BE SUBMITTED TO THE AT&T PROJECT MANAGER TO DOCUMENT THE DIMENSION FROM THE GROUND TO THE TOP OF AT&T ANTENNAS.  
 IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MARK THE TOWER MATERIALS PERIODICALLY TO THE SITE. A BILL OF MATERIAL (PACKING LIST(S)) WILL BE INCLUDED WITH THE SHIPMENT. IF THIS LIST OR LISTS ARE NOT INCLUDED, PLEASE NOTIFY THE AT&T PROJECT MANAGER IMMEDIATELY. THE AT&T PROJECT MANAGER WILL NOT ACCEPT THE TOWER MATERIALS UNLESS ALL SHIPPED OR DAMAGED GOODS WITHIN 48 HOURS OF RECEIPT WILL INDICATE THE GENERAL CONTRACTOR HAS ACCEPTED ALL MATERIAL IN GOOD CONDITION AND ALL IS ACCOUNTED FOR.
  - ANY MATERIAL SHORTAGES OR DAMAGES REPORTED AFTER 48 HOURS WILL AT THAT POINT BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO HAVE CORRECTED BY THE TOWER VENDOR AT HIS/HER EXPENSE.



**ANTENNA AND CABLE SCHEDULE**

SCALE: NOT TO SCALE

ANTENNA SECTOR	ANTENNA MODEL #	SECTOR HEIGHT (ft.)	SECTOR WIDTH (ft.)	SECTOR CENTER	CABLE FEEDER	RAD. CENTER	RAD. COUNT	IS. MODULE	FEED. TECH.	FEED. TILT
A1	HR0118102-1	230'	23'	230'	(1) RAY CAP (2) DC DC-48-90-16-8F	230'	3	0	0	4/3
A2	HR0118102-1	230'	23'	230'	(1) RAY CAP (2) DC DC-48-90-16-8F	230'	3	0	0	2
A3	HR0118102-1	230'	23'	230'	(1) RAY CAP (2) DC DC-48-90-16-8F	230'	3	0	0	2
B1	HR0118102-1	140'	14'	140'	(1) RAY CAP (2) DC DC-48-90-16-8F	230'	3	0	0	2
B2	HR0118102-1	140'	14'	140'	(1) RAY CAP (2) DC DC-48-90-16-8F	230'	3	0	0	2
C1	HR0118102-1	230'	23'	230'	(1) RAY CAP (2) DC DC-48-90-16-8F	230'	3	0	0	2
C2	HR0118102-1	230'	23'	230'	(1) RAY CAP (2) DC DC-48-90-16-8F	230'	3	0	0	2
C3	HR0118102-1	230'	23'	230'	(1) RAY CAP (2) DC DC-48-90-16-8F	230'	3	0	0	2

REMARKS: RAY CAP TO BE INSTALLED FROM LITE. RADIO HEAD 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, TO BE INSTALLED.
- ALL ANTENNA BRACKETS PER ANTENNA MANUFACTURER, OR EQUAL, TO BE INSTALLED.
- ALL ANTENNA INFORMATION BASED ON RF CONFIGURATION FORM FOR RFD'S NAME: TMM011533, SUBMITTED 10/21/2013.

1-M-14-UR  
 REVISION  
 2-3-14

ANTENNA & DC/FIBER CABLE SCHEDULE  
 SCALE: NOT TO SCALE

**compass**  
 5448 BELLS FERRY ROAD  
 ACWORTH, GA 30102  
 PHONE: 770-701-2600  
 FAX: 770-701-2601  
 WALTER MATTHEWS PROATHER, P.E.  
 PROJECT NUMBER: \_\_\_\_\_

NO. 0 01/2014 CONSTRUCTION DAY  
 NO. DATE NOVEMBER 04 BY  
 NOT VALID WITHOUT SIGNATURE AND DATE  
 ENGINEER'S SEAL

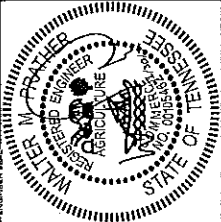
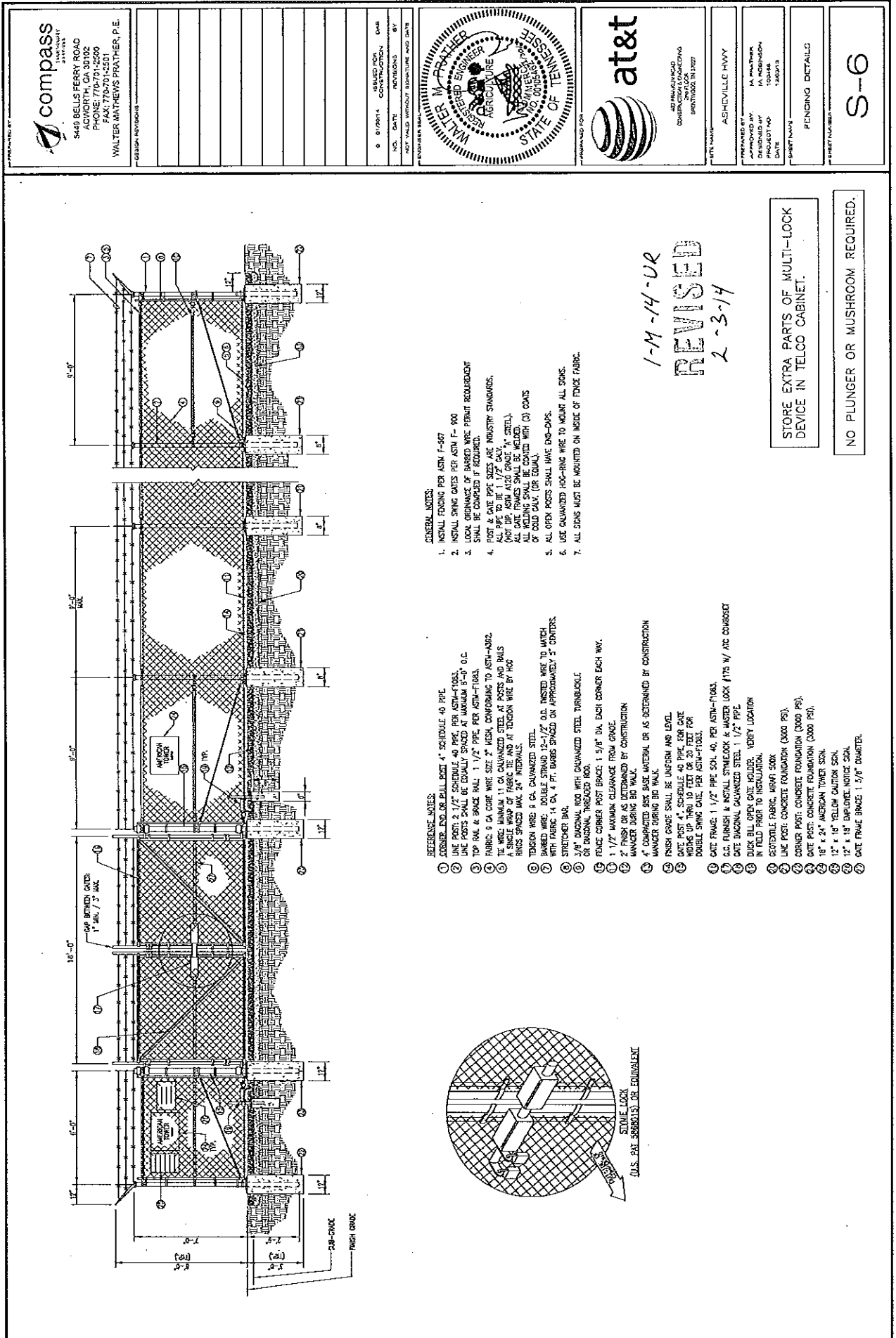
**at&t**  
 40 FRANKLIN ROAD  
 COLUMBIANA, MISSISSIPPI  
 39230  
 (601) 725-2800

APPROVED BY: \_\_\_\_\_  
 DESIGNED BY: M. PROATHER  
 DATE: 11/14/13

PROJECT NAME: ADCHVILLE HWY  
 TOWER ELEVATION & ANTENNA ORIENTATION  
 SHEET NUMBER: S-1



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DESIGNED BY WALTER MATTHEWS PROATHER DATE 12/20/13	APPROVED BY WALTER MATTHEWS PROATHER DATE 12/20/13
SHEET NUMBER S-6	

**GENERAL NOTES:**

1. INSTALL FENCING PER ASTM F-457
2. INSTALL SWING GATES PER ASTM F-100
3. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED BY REQUIRED.
4. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPE TO BE 1 1/2" (SCH. 40) STEEL. ALL GATE FRAMES SHALL BE WELDED WITH (2) COATS OF GILD GALV. (OR EQUAL).
5. ALL OPEN POSTS SHALL HAVE END-CAPS.
6. USE GALVANIZED HOC-RING WIRE TO MOUNT ALL SIGNS.
7. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.

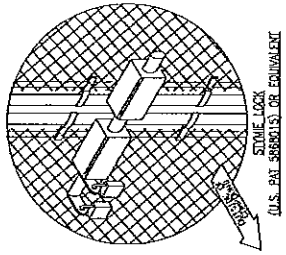
**REFERENCE NOTES:**

1. CORNER END OR WALL GATE 4" SCHEDULE 40 PIPE
2. LINE POSTS 2 1/2" SCHEDULE 40 PIPE PER ASTM-F100L
3. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 8'-0" O.C.
4. TOP RAIL & BRACE RAIL 1 1/2" PIPE PER ASTM-F100L
5. FABRIC 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A952
6. THE WIRE MINIMUM 11 GA GALVANIZED STEEL AT POSTS AND RAILS
7. FABRIC SHALL BE TENSIONED AT TENSION WIRE BY HOC RINGS SPACED MAX. 24" INTERVALS
8. TENSION WIRE 9 GA GALVANIZED STEEL
9. BARBED WIRE DOUBLE STRAND 12-1/2" O.D. RUSTED WIRE TO MATCH BARBED WIRE IN GA. 4 FT. BARBS SPACED ON APPROXIMATELY 3" CENTER.
10. STAYDOWN BAR
11. 2 1/2" GALVANIZED WIRE LOCK
12. 2 1/2" GALVANIZED WIRE LOCK
13. 1 1/2" WARMON CORNER POST BRACE 1 5/8" DIA. EACH CORNER EACH WAY.
14. LINE FRAME CLEARANCE FROM GRADE
15. FINISH OR AS DETERMINED BY CONSTRUCTION
16. WANGER USING 3/4" WALL
17. WANGER USING 3/4" WALL
18. FINISH GRADE SHALL BE UNIFORM AND LEVEL
19. GATE POST 4" SCHEDULE 40 PIPE FOR GATE
20. GATE POST 4" SCHEDULE 40 PIPE FOR GATE
21. DOUBLE SWING GATE PER ASTM-F100L
22. GATE FRAME 1 1/2" PIPE SOL. 40. PER ASTM-F100L
23. G.C. FINISH & INSTALL STYREFOK & MASTER LOCK (175 W/ ATC CORUSSET IN FIELD PRIOR TO INSTALLATION)
24. DUCK BILL OPEN GATE ROLLER, VERIFY LOCATION
25. SEATTLE FABRIC, MESH 200X
26. 18" X 24" CONCRETE TOWER SOIL
27. 12" X 18" YELLOW CAUTION SOIL
28. 12" X 18" EMPLOYER NOTICE SOIL
29. GATE FRAME BRACE 1 5/8" DIAMETER

1-M-14-UR  
REVISED  
2-3-14

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

NO PLUNGER OR MUSHROOM REQUIRED.



STONE LOCK  
U.S. PAT. 2,826,211 OR EQUIVALENT



Jacobs Engineering  
5449 Bells Ferry Road  
Acworth, GA 301002 USA  
Phone: 770-701-2500  
Fax: 770-701-2501

November 22, 2013

RE: Cell Site Name: Asheville Highway  
Fixed Asset #: 12939184

No suitable facilities exist that would allow service to be provided to the proposed coverage area.

A handwritten signature in black ink that reads "Thomas A. Porter". The signature is written in a cursive style.

Thomas A. Porter  
Site Acquisition Contractor