

## Memorandum Department of Planning and Public Works



**To:** Planning and Public Works Committee

**From:** Kristian Corbin, Project Planner

**Date:** December 8, 2011

**Re:** **TSP 35-2011 AT&T (14759 Deerhorn Drive)** A request to obtain approval for a Telecommunication Facility Siting Permit for a collocation of additional antennas and equipment on an existing high structure in a "FPR1" Residence District-zoned property located at 14759 Deerhorn Drive north of the intersection of Greenleaf Valley Drive and Deerhorn Drive (19R420441).

### **Summary**

AT&T has requested an amendment to a telecommunication siting permit to allow for the location of upgraded antennas to facilitate 4G LTE data service on an existing high structure located at 14759 Deerhorn Drive north of the intersection of Greenleaf Valley Drive and Deerhorn Drive (19R4420441).

City of Chesterfield Ordinance 2391, which governs telecommunications and facilities siting, requires that the Planning Commission provide a venue for public hearing for Telecommunications Siting Permits. Please note, the Planning Commission does not provide a recommendation to the City Council, but rather generates a list of issues during the hearing. At the public hearing on November 28, 2011, one (1) outstanding issue was identified. That issue was brought to the attention of the Planning Commission by a resident of the Green Leaf subdivision. It was detailed to the Commission that the subdivision has for some time been maintaining the vegetation around this AT&T site due to lack of regular maintenance by those parties responsible.

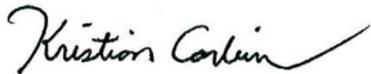
Staff has contacted AT&T and has requested information regarding who is responsible for the upkeep and maintenance of their sites in the City. Staff has also requested that AT&T contact the Green Leaf subdivision to work to resolve the maintenance issue at this site.

TSP 35-2011 AT&T (14759 Deerhorn Drive)  
Planning and Public Works Committee  
December 8, 2011

AT&T has stated to staff that they are responsible for the maintenance and upkeep of their sites in the City. Staff has been provided a direct contact with AT&T, so that if this issue occurs in the future AT&T can be contacted directly and this problem can be resolved as quickly as possible. With regards to the Green Leaf subdivision, staff has been notified that AT&T is working with the subdivision to include maintenance and upkeep of this site with the regularly scheduled subdivision common ground maintenance and upkeep. AT&T has stated that this agreement will include compensation.

Attached are copies of the site plan, elevations, boundary plat, and propagation study.

Respectfully Submitted,



Kristian Corbin  
Project Planner

CC: Michael G. Herring, City Administrator  
Rob Heggie, City Attorney  
Michael O. Geisel, Director of Planning & Public Works  
Aimee Nassif, Planning & Development Services Director

Attachments: AT&T 4G LTE Upgrade Packet

# MO3599 UE TIMBERLAKE



## LTE 166'-TRANSMISSION TOWER

### ENGINEERING

2009 INTERNATIONAL BUILDING CODE  
2008 NATIONAL ELECTRIC CODE  
ANSI/TIA-222-G OR LATEST EDITION

### GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL, IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

### PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE INSTALLATION AND OPERATION OF ANTENNAS AND ASSOCIATED EQUIPMENT CABINETS FOR AT&T'S CONDUCTORLESS TELECOMMUNICATIONS NETWORK. INSTALLATION OF (3) RRHS, (1) FIBER CABLE, (2) DC POWER CABLE, (1) RAYCAP SURGE PROTECTOR, (1) LTE RACK, (3) PIPE MOUNTED PANEL ANTENNAS, (3) TMA's INCLUDING (6) COAX AND (1) GPS ANTENNA IS PROPOSED.

### SITE INFORMATION

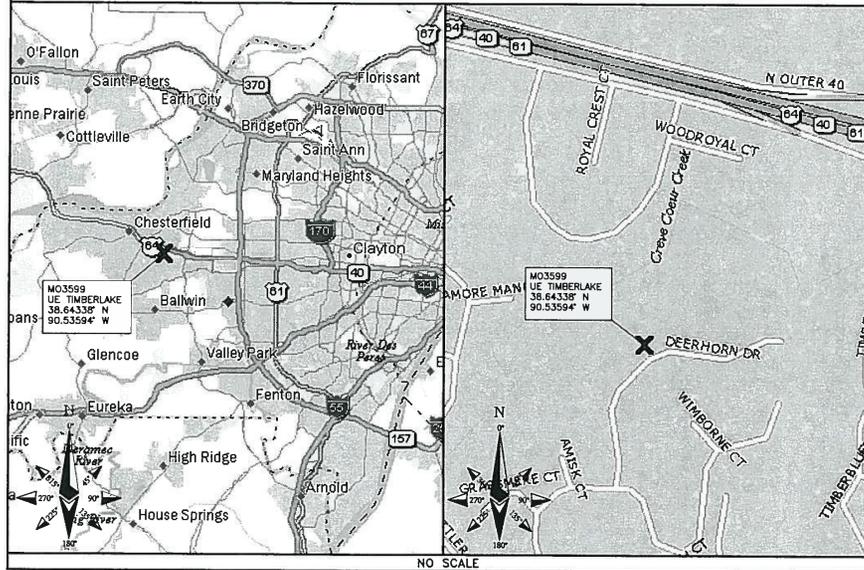
PROPERTY OWNER: UNION ELECTRIC COMPANY d/b/a AMEREN UE  
ADDRESS: NA  
TOWER OWNER: UNION ELECTRIC COMPANY D/B/A AMEREN UE  
SITE NAME: MASON-GRAY SUMMIT TOWER #27  
SITE NUMBER: W0001  
SITE CONTACT: TIM WEBBERS (314) 554-2993  
SITE ADDRESS: 14759 DEERHORN DRIVE CHESTERFIELD, MO 63017  
COUNTY: ST. LOUIS COUNTY  
LATITUDE (NAD 83): 38° 38' 36.17" N 38.64338  
LONGITUDE (NAD 83): 90° 32' 9.38" W -90.53594  
GROUND ELEVATION: 509' AMSL  
RAD CENTER: 171' AGL  
ZONING JURISDICTION: ST. LOUIS COUNTY  
ZONING DISTRICT: FPRIA  
PARCEL #: 18R420441  
OCCUPANCY GROUP: U  
CONSTRUCTION TYPE: V-B  
POWER COMPANY: AMEREN MO  
TELEPHONE COMPANY: AT&T  
SITE ACQUISITION CONTACT: DOUG KONRATH (314) 605-7542  
RF ENGINEER: RON HUMPHREY  
CONSTRUCTION MANAGER: KEN SHAW (314) 210-8629

IF USING 11"X17" PLOT, DRAWINGS WILL BE HALF SCALE

### CONTACT INFORMATION

ENGINEER: 15450 S OUTER FORTY DR. SUITE 200 CHESTERFIELD, MO 63017  
CONTACT: GEORGE P. XENOS  
PHONE: (913) 687-9233

### LOCATION MAPS



NO SCALE

### DRIVING DIRECTIONS

DIRECTIONS FROM NEAREST AT&T OFFICE:

FROM SR 100, TURN LEFT ONTO LOCAL ROAD, GO STRAIGHT ONTO SR 100, TURN RIGHT ONTO WEIDMAN ROAD, TURN LEFT ONTO CLAYTON ROAD, TURN RIGHT ONTO SCHOETTLER ROAD, TURN RIGHT ONTO GREENLEAF VALLEY DRIVE, TURN LEFT ONTO DEERHORN DRIVE, SITE IS ON THE LEFT.

### APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.

AT&T RF: \_\_\_\_\_ DATE: \_\_\_\_\_  
AT&T OPERATIONS: \_\_\_\_\_ DATE: \_\_\_\_\_  
AT&T SITE AG: \_\_\_\_\_ DATE: \_\_\_\_\_  
OCI: \_\_\_\_\_ DATE: \_\_\_\_\_  
PROPERTY OWNER: \_\_\_\_\_ DATE: \_\_\_\_\_  
MUNICIPAL: \_\_\_\_\_ DATE: \_\_\_\_\_

### DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
Z-1	△ SITE SURVEY (BY OTHERS)
Z-2	OVERALL SITE PLAN
Z-3	ENLARGED SITE PLAN
Z-4	SITE ELEVATIONS

### DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.



TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN MISSOURI, CALL MISSOURI ONE CALL

TOLL FREE: 1-800-344-7483 OR  
www.mo1call.com

MISSOURI STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE.



13075 MANCHESTER RD, SUITE 100  
ST LOUIS, MO 63131



### BLACK & VEATCH

10950 GRANDVIEW DRIVE  
OVERLAND PARK, KANSAS 66210  
(913) 456-2000

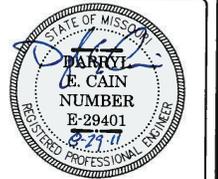
BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION  
MISSOURI STATE CERTIFICATE OF AUTHORITY # 001848

PROJECT NO: 158986

DRAWN BY: AMH

CHECKED BY: GFX

REV	DATE	DESCRIPTION
1	08/28/11	PLANNER COMMENTS
0	08/10/11	ISSUED FOR ZONING



DARRYL E. CAIN E-29401  
PROFESSIONAL ENGINEER

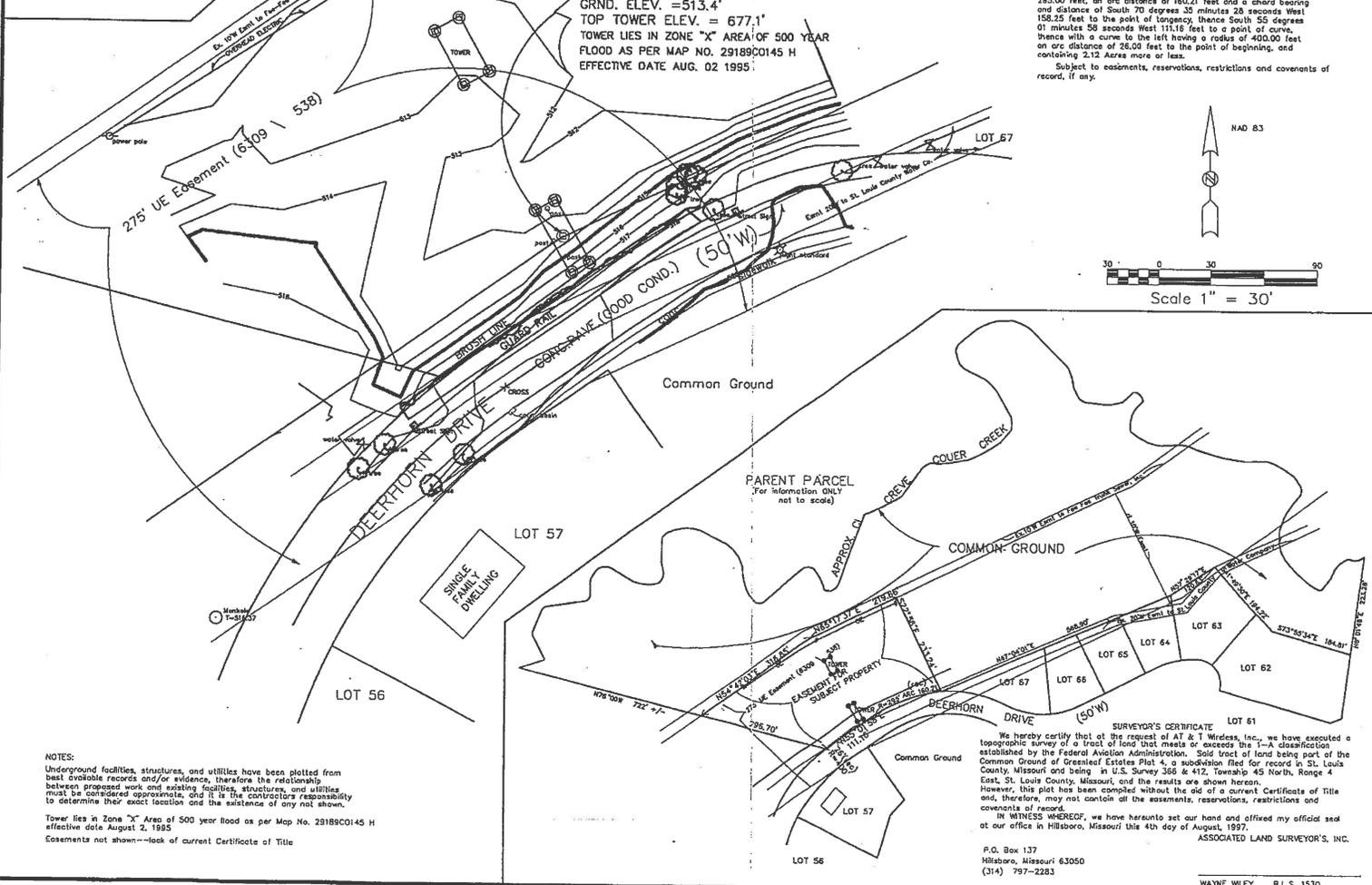
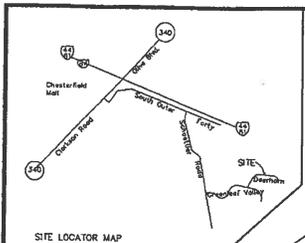
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

MO3599  
UE TIMBERLAKE  
14759 DEERHORN DRIVE  
CHESTERFIELD, MO 63017  
LTE- SST

SHEET TITLE  
TITLE SHEET

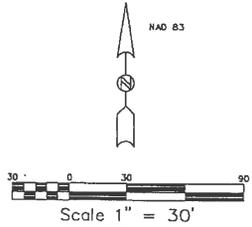
SHEET NUMBER

T-1



C/L EXISTING U.E. TOWER # 27  
 LAT. = 38 38' 35.68"  
 LONG. = 90 32' 09.37"  
 GRND. ELEV. = 513.4'  
 TOP TOWER ELEV. = 677.1'  
 TOWER LIES IN ZONE "X" AREA OF 500 YEAR  
 FLOOD AS PER MAP NO. 29189C0145 H  
 EFFECTIVE DATE AUG. 02 1995

EASEMENT DESCRIPTION FOR SUBJECT PROPERTY  
 A tract of land being part of the tract shown as Common Ground on the plot of Greenleaf Estates Plat Four, as recorded in Plat Book 194, at Pages 62-64 of the St. Louis County Land Records, and being described as follows:  
 Beginning at the point of intersection of the most Southern line of said Common Ground with the Western right-of-way line of Deerhorn Drive, thence with said Southern line South 76 degrees 00 minutes West 286.70 feet to a point in the Southeastern line of a 10 feet wide easement conveyed to Fee Fee Trunk Sewer Inc. by deed recorded in Book 6578, at Page 1638 of said St. Louis County Land Records, thence with said Southeastern line the following courses and distances: North 54 degrees 42 minutes 03 seconds East 316.85 feet to a point, thence North 65 degrees 17 minutes 37 seconds East 219.86 feet to a point, thence leaving said Southeastern line South 22 degrees 56 minutes East 233.24 feet to a point on the Northwest right-of-way line of Deerhorn Drive (50' W), thence along said right-of-way line in a Southwesterly direction with a curve to the left having a radius of 285.00 feet, an arc distance of 160.21 feet and a chord bearing and distance of South 70 degrees 35 minutes 28 seconds West 158.25 feet to the point of tangency, thence South 55 degrees 01 minutes 58 seconds West 111.18 feet to a point of curve, thence with a curve to the left having a radius of 400.00 feet on an arc distance of 26.00 feet to the point of beginning, and containing 2.12 Acres more or less.  
 Subject to easements, reservations, restrictions and covenants of record, if any.



NOTES:  
 Underground facilities, structures, and utilities have been plotted from best available records and/or evidence, therefore the relationship between proposed work and existing facilities, structures, and utilities must be considered approximate, and it is the contractor's responsibility to determine their exact location and the existence of any not shown.  
 Tower lies in Zone "X" Area of 500 year flood as per Map No. 29189C0145 H effective date August 2, 1995  
 Easements not shown—lack of current Certificate of Title

SURVEYOR'S CERTIFICATE  
 We hereby certify that at the request of AT & T Wireless, Inc., we have executed a topographic survey of a tract of land that meets or exceeds the 1-A classification established by the Federal Aviation Administration. Said tract of land being part of the Common Ground of Greenleaf Estates Plat 4, a subdivision filed for record in St. Louis County, Missouri and being in U.S. Survey 366 & 412, Township 45 North, Range 4 East, St. Louis County, Missouri, and the results are shown hereon.  
 However, this plot has been compiled without the aid of a current Certificate of Title and, therefore, may not contain all the easements, reservations, restrictions and covenants of record.  
 IN WITNESS WHEREOF, we have hereunto set our hand and affixed my official seal at our office in Hillsboro, Missouri this 4th day of August, 1997.  
 ASSOCIATED LAND SURVEYOR'S, INC.

P.O. Box 137  
 Hillsboro, Missouri 63050  
 (314) 797-2283

WAYNE WILEY R.L.S. 1530

REV	DATE	DESCRIPTION	DSGN
1	8-4-97	certs. parent parcel	MAG
2	8-7-97	legal description added	MAG

DRAWN BY: D.W.W.  
 CHECKED BY:  
 APPROVED BY:  
 DATE DRAWN: 07-20-97

Associated Land Surveyor's, Inc.  
 P.O. Box 137  
 Hillsboro, Missouri 63050  
 Phone: (314) 797-2283  
 Fax: (314) 942-4001



PCS SITE NO.: WW001  
 UNION ELECTRIC-MASON-GRAY SUMMIT LINE  
 TOWER NO.: #27  
 SITE ADDRESS:

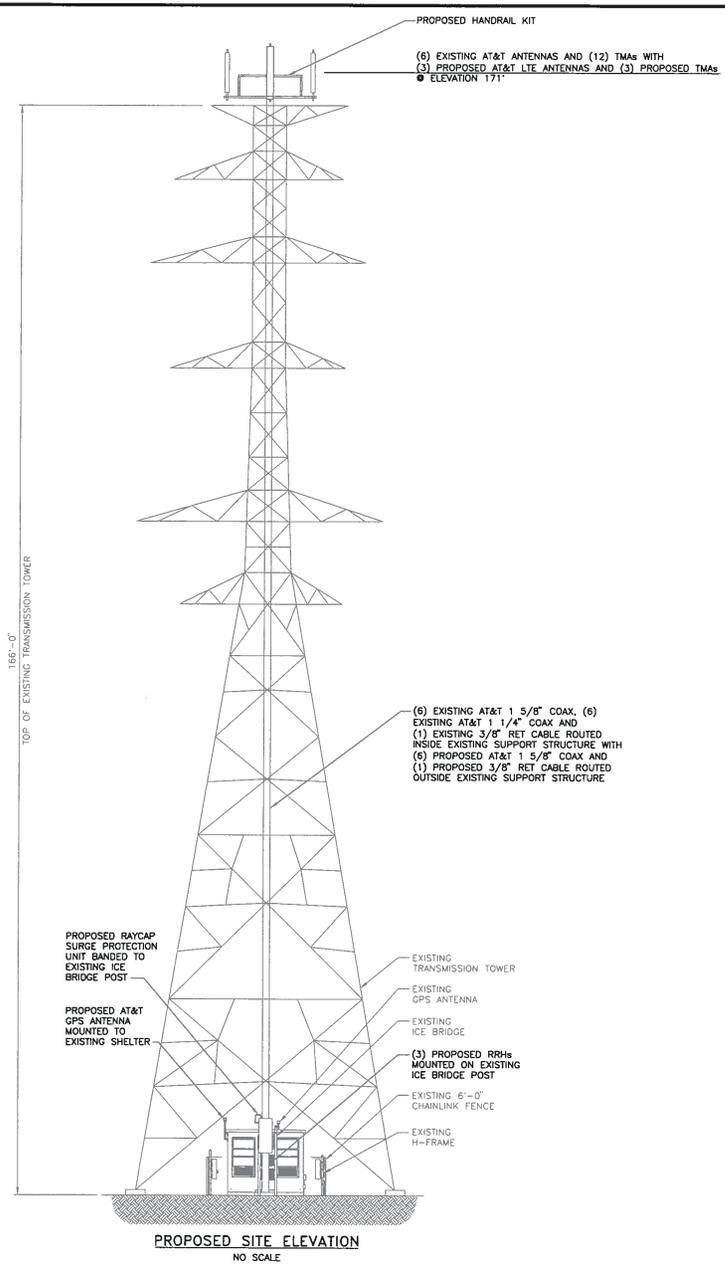
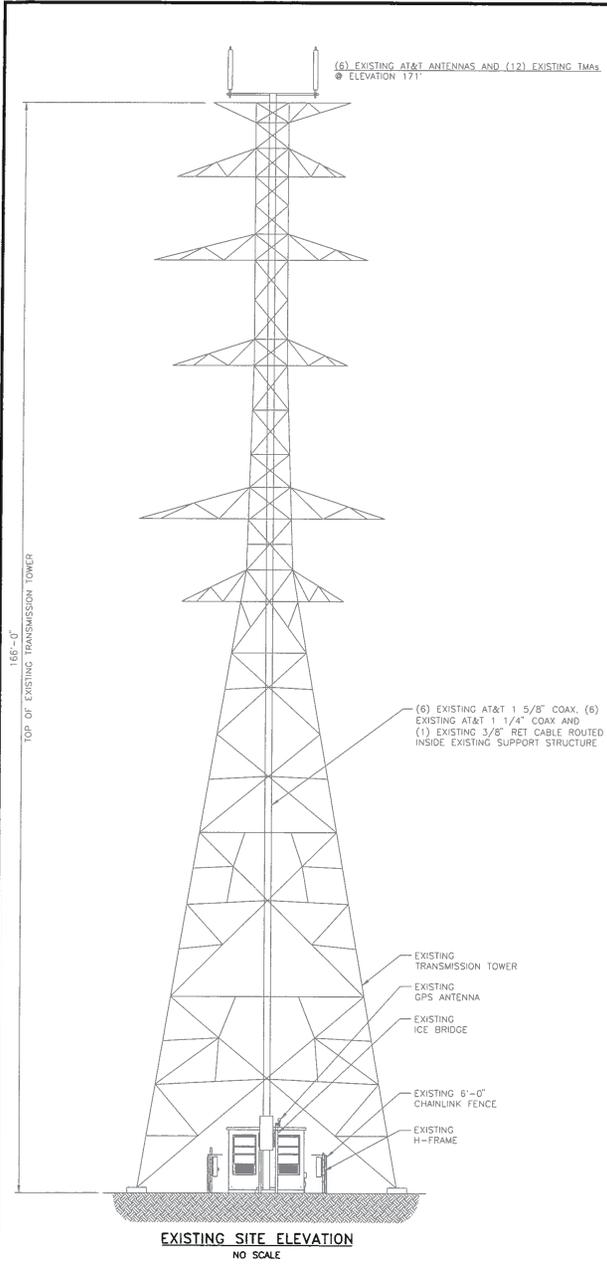
TITLE:  
 CIVIL SURVEY

FD CONTRACT NO. 21900204  
 DRAWING NO. WW001-C1

PLOT DATE: 08-26-97  
 FILENAME: \19845\ SCHOETTL.DWG XREF:







13075 MANCHESTER RD, SUITE 100  
ST LOUIS, MO 63131



**BLACK & VEATCH**

10950 GRANOVIEV DRIVE  
OVERLAND PARK, KANSAS 66210  
(913) 458-2000

BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION  
MISSOURI STATE CERTIFICATE OF AUTHORITY # 001648

PROJECT NO:	168986
DRAWN BY:	AMH
CHECKED BY:	GPX

REV	DATE	DESCRIPTION
1	08/29/11	PLANNER COMMENTS
0	08/10/11	ISSUED FOR ZONING



DARRYL E. CAIN E-29401  
PROFESSIONAL ENGINEER

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M03599  
UE TIMBERLAKE  
14759 DEERHORN DRIVE  
CHESTERFIELD, MO 63017  
LTE- SST

SHEET TITLE  
SITE ELEVATION

SHEET NUMBER  
**Z-4**



August 5, 2011

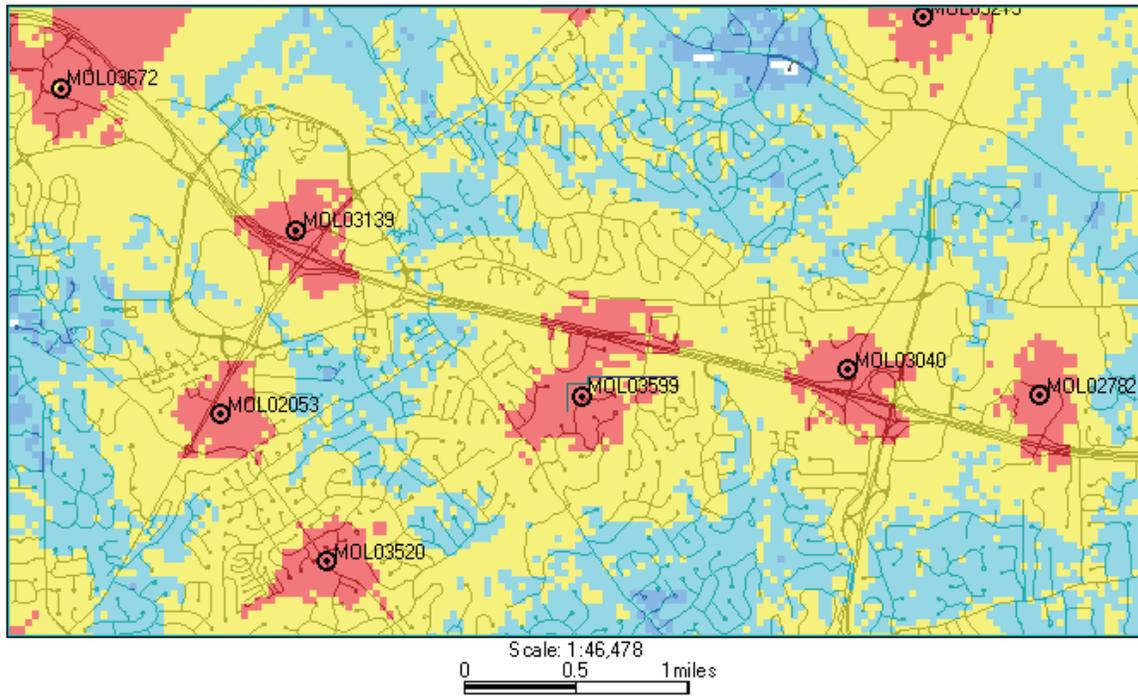
The following is a brief explanation of why AT&T Mobility is proposing to have the current wireless communication facility at 14759 Deerhorn Drive modified. This facility is labeled as MOL03599 on Map 1. Currently this facility is only capable of broadcasting our older technologies.

This facility currently is broadcasting our “2G” technology (called GSM) and our “3G” technology (called UMTS). Each technology uses its own antennas and equipment. The modification we are proposing is to add our “4G” technology (called LTE). Perhaps you have seen all the television commercials from various wireless carriers talking about their 4G systems. 4G, short for 4<sup>th</sup> generation of wireless technology, allows wireless carriers to provide much faster data speeds than our current networks. 4G is only for data at this point. All voice calls will still be served on older technologies. Currently AT&T still has the fastest data network. Although as other carriers implement and optimize their 4G networks we expect to lose that advantage and eventually fall behind other carriers unless we also launch our 4G network. The proposed modifications will allow us to implement our 4G technology by using additional antennas and equipment.

Because of national E911 requirements, this site needs to run all technologies. The 4G technology is not capable of handling voice calls at this time and all 911 calls made from a wireless device will be routed through our older technologies. These technologies require that we use a total of 3 antennas for each direction covered. This site, like most of our locations, serves three directions creating a need for 9 antennas. This requires us to add 3 additional antennas for this location.

This plan will have no effect on our coverage for current technologies. Map 1 below shows the proposed coverage for our 4G network in the area. AT&T Mobility has acceptable coverage in most of the surrounding area. Because 4G is a data only service the different signal levels don't indicate whether service exists or not. In general on 4G the stronger the signal (to a point) the faster the data rates will be. It is expected that red, yellow and light blue will have data speeds faster than our 3G technology. The dark blue will likely have data speeds nearly identical to the 3G technology.

Map 1 Proposed AT&T “4G” coverage



Ron Humphrey

Radio Frequency Design Engineer  
AT&T Mobility Division