

## Memorandum Department of Planning and Public Works



**To:** Planning and Public Works Committee

**From:** Kristian Corbin, Project Planner

**Date:** November 17, 2011

**Re:** T.S.P. 38-2011 AT&T (17259 Wild Horse Creek Road): A request to obtain approval for a Telecommunication Facility Siting Permit for a collocation of additional antennas and equipment on an existing stealth tower in a "NU" Non-Urban District-zoned property located at 17259 Wild Horse Creek Road approximately 550 feet east of the intersection of Wild Horse Creek Road and Long Road (18U420104).

### 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 a stealth tower located approximately 550 feet east of the intersection of Wild Horse Creek Road and Long Road (18U420104).

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 October 24, 2011, there were no issues identified with this request.

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

Respectfully Submitted,

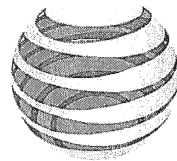
Kristian Corbin  
Project Planner

TSP 38-2011 AT&T (17259 Wild Horse Creek Road)  
Planning and Public Works Committee  
November 17, 2011

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

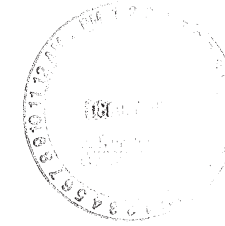
Attachments: AT&T 4G LTE Upgrade Packet

# MO3508 BAXTER GARDENS



at&t

## LTE 80'-REPLACEMENT FLAGPOLE



**at&t**  
13075 MANCHESTER RD, SUITE 100  
ST LOUIS, MO 63131

**BLACK & VEATCH**

10850 GRANDVIEW DRIVE  
OVERLAND PARK, KANSAS 66210  
(913) 458-2000  
BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION  
MISSOURI STATE CERTIFICATE OF AUTHORITY # 001618

PROJECT NO: 168986  
DRAWN BY: AK  
CHECKED BY: GFX

**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) RANGING SURGE PROTECTOR, (1) LTE RACK, (9) PIPE MOUNTED PANEL ANTENNAS INCLUDING (18) COAX, (9) TMA's, (1) GPS ANTENNA ARE PROPOSED.

**SITE INFORMATION**

PROPERTY OWNER: WILLIAM H. WELSHAAR SR AND MONTENE F. WELSHAAR  
ADDRESS: 17259 WILD HORSE CREEK DRIVE CHESTERFIELD, MO 63005

TOWER OWNER: AT&T  
SITE NAME: BAXTER GARDENS  
BU NUMBER: MO3508

SITE CONTACT: BILL WELSHAAR, SR.  
(636) 532-1033 EXT. 103

SITE ADDRESS: 17259 WILD HORSE CREEK ROAD, AK417281 CHESTERFIELD, MO 63005

COUNTY: ST. LOUIS COUNTY  
LATITUDE (NAD 83): 38° 39' 28.01" N  
38.65778  
LONGITUDE (NAD 83): 90° 37' 9.01" W  
-90.61917

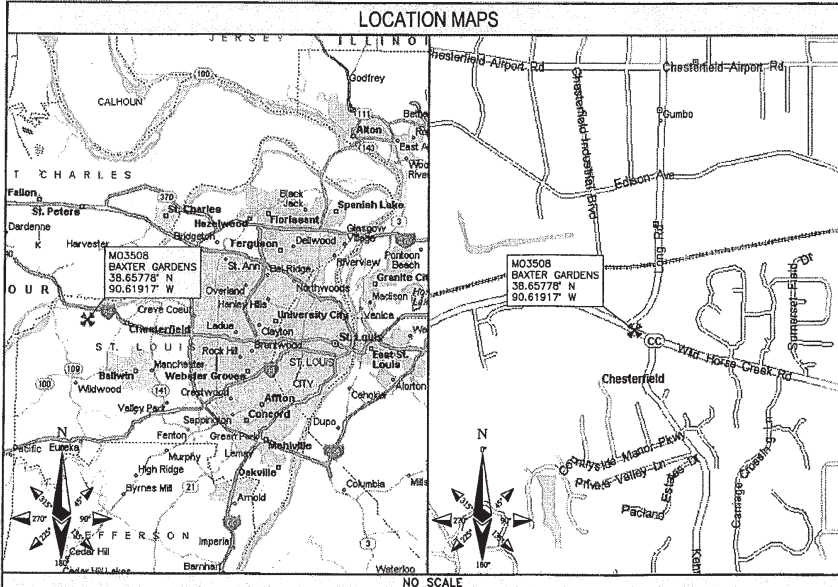
GROUND ELEVATION: 515' AMSL  
RAD CENTER: 55', 65', 75' AGL  
ZONING JURISDICTION: CITY OF CHESTERFIELD, MO  
ZONING DISTRICT: NU, NON-URBAN DISTRICT  
PARCEL #: 18U420104  
OCCUPANCY GROUP: U  
CONSTRUCTION TYPE: V-B  
POWER COMPANY: AMEREN MO  
TELEPHONE COMPANY: AT&T  
SITE ACQUISITION CONTACT: MARY KREPS  
(636) 532-1051 EXT. 113  
RF ENGINEER: RON HUMPHREY  
CONSTRUCTION MANAGER: MATT DEAN  
(913) 284-6646

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



**DRIVING DIRECTIONS**

DIRECTIONS FROM NEAREST AT&T OFFICE:

FROM SR 100, KEEP RIGHT ONTO I-270 RAMP, TAKE EXIT 12, KEEP RIGHT ONTO I-64 W RAMP, KEEP LEFT ONTO I-64 W RAMP, KEEP RIGHT ONTO LONG ROAD RAMP, GO STRAIGHT ONTO LONG ROAD RAMP, KEEP RIGHT ONTO LONG ROAD RAMP, TURN LEFT ONTO WILD HORSE CREEK ROAD, SITE IS ON THE LEFT.

**APPROVALS**

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE SUBCONTRACTOR 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 AQ: \_\_\_\_\_ DATE: \_\_\_\_\_  
OCI: \_\_\_\_\_ DATE: \_\_\_\_\_  
PROPERTY OWNER: \_\_\_\_\_ DATE: \_\_\_\_\_  
MUNICIPAL: \_\_\_\_\_ DATE: \_\_\_\_\_

**DRAWING INDEX**

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
Z-1	SITE SURVEY
Z-2	OVERALL SITE PLAN
Z-3	EXISTING SITE PLAN
Z-4	PROPOSED SITE PLAN
Z-5	SITE ELEVATION
Z-6	ANTENNA MOUNT DETAIL

**DO NOT SCALE DRAWINGS**

SUBCONTRACTOR 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.m1call.com

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

**STATE OF MISSOURI**  
**P.H. DOYLE**  
NUMBER  
**E-28899**  
REGISTERED PROFESSIONAL ENGINEER  
P. H. DOYLE E-28899  
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.

**MO3508  
BAXTER GARDENS  
17259 WILD HORSE CREEK ROAD  
CHESTERFIELD, MO 63005  
LTE - REPLACEMENT FLAGPOLE**

SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**T-1**

EASEMENT EXHIBIT  
LS 1.0

  
**BLACK & VEATCH**  
CORPORATION  
11401 LAMAR  
OVERLAND PARK, KS 66211  
(913) 458-2000

  
**FINLEY**  
SURVEYING & ENGINEERING  
104 E. 11th STREET  
LAWRENCE, MO 64503  
TEL: 472-8231

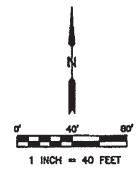
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Drawn By: D.A.  
Reviewed By: D.B.

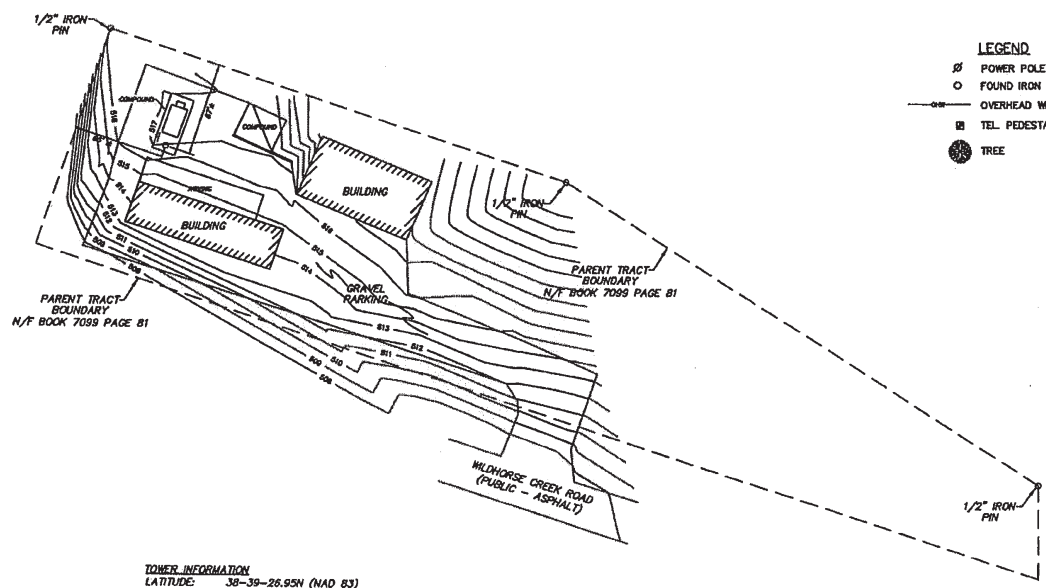
REVISIONS	DATE	BY	DESCRIPTION

Project No. 11138.000  
LIZZALL SURVEY

MO3508  
ST. LOUIS COUNTY, MISSOURI  
EASEMENT EXHIBIT  
LS-1.0  
SHEET 1 OF 1

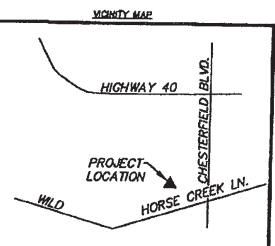


- LEGEND**
-  POWER POLE
  -  FOUND IRON PIN
  -  OVERHEAD WIRE
  -  TEL. PEDESTAL
  -  TREE

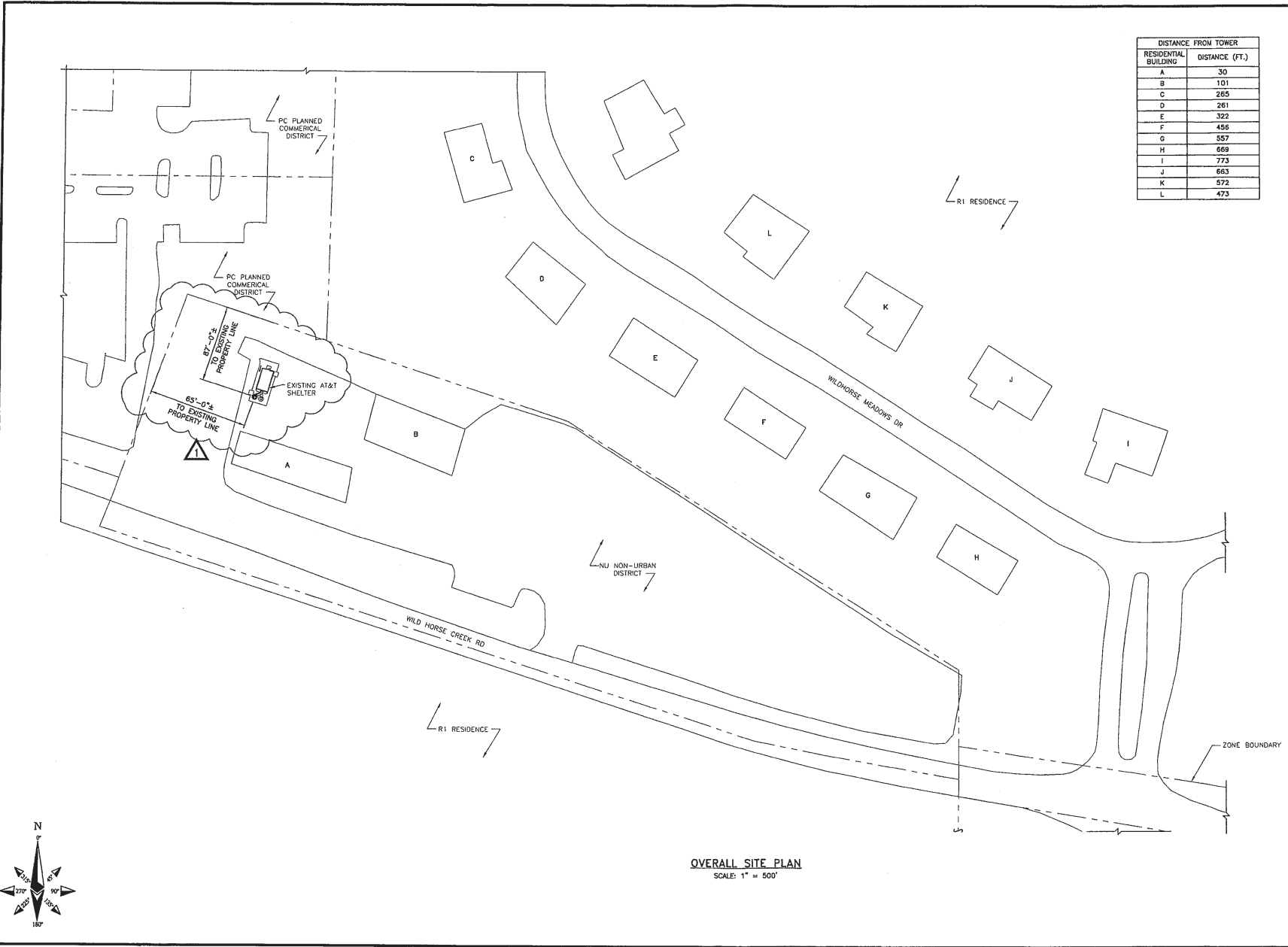


**TOWER INFORMATION**  
LATITUDE: 38-39-26.95N (NAD 83)  
LONGITUDE: 90-36-59.94W (NAD 83)  
GROUND ELEVATION: 517' (NAVD 88)  
TOP OF POLE ELEVATION: 597' (NAVD 88)

- NOTES:**
- BEARINGS BASED ON MISSOURI STATE PLANE - EAST ZONE.
  - ACCORDING TO INFORMATION PROVIDED TO THE SURVEYOR, THE TOWER TRACT LIES ENTIRELY WITHIN PARENT TRACT



**SURVEYOR'S DECLARATION**  
I HEREBY DECLARE THAT THIS EXHIBIT WAS PREPARED UNDER MY DIRECT PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE THE CONDITIONS ARE AS SHOWN.



DISTANCE FROM TOWER	
RESIDENTIAL BUILDING	DISTANCE (FT.)
A	30
B	101
C	265
D	261
E	322
F	456
G	557
H	669
I	773
J	663
K	572
L	473



13075 MANCHESTER RD, SUITE 100  
ST LOUIS, MO 63131



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

BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION  
MISSOURI STATE CERTIFICATE OF AUTHORITY # 001646

PROJECT NO:	169986
DRAWN BY:	AK
CHECKED BY:	GPX

REV	DATE	DESCRIPTION
1	10/12/11	MISC REVISIONS
0	9/16/11	ISSUED FOR ZONING



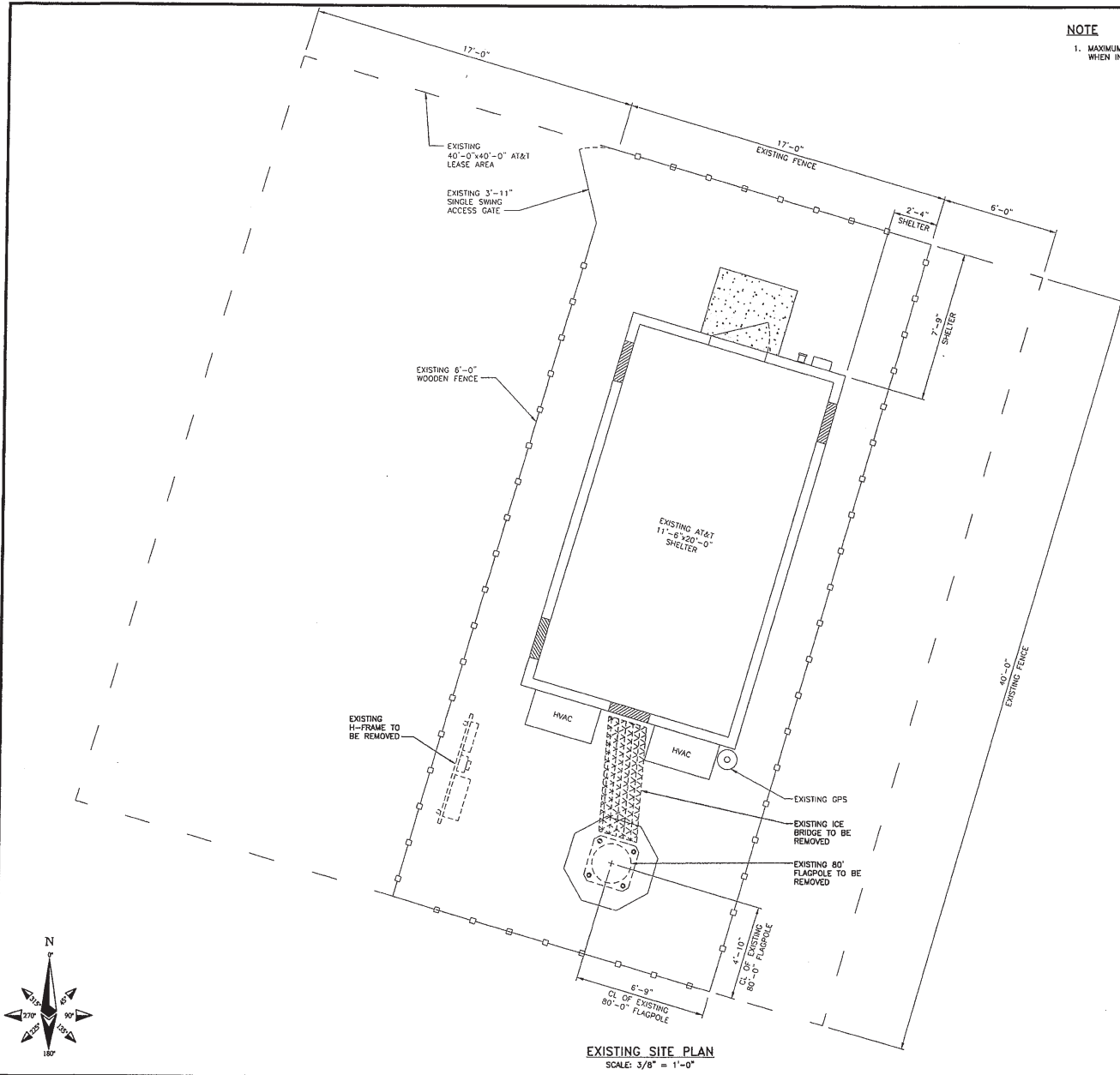
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M03508  
BAXTER GARDENS  
17259 WILD HORSE CREEK ROAD  
CHESTERFIELD, MO 63005  
LTE - REPLACEMENT FLAGPOLE

SHEET TITLE  
OVERALL  
SITE PLAN

SHEET NUMBER  
**Z-2**

OVERALL SITE PLAN  
SCALE: 1" = 500'

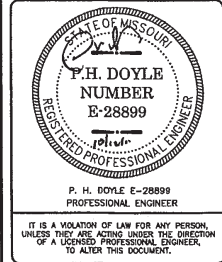


**NOTE**  
1. MAXIMUM DISTANCE OF 6" GAP SHALL EXIST BETWEEN ICE BRIDGE AND ADJACENT STRUCTURE WHEN INSTALLING THE ICE BRIDGE.



PROJECT NO:	168986
DRAWN BY:	AK
CHECKED BY:	GFX

REV	DATE	DESCRIPTION
1	10/12/11	MSO REVISIONS
0	9/16/11	ISSUED FOR ZONING



MO3508  
BAXTER GARDENS  
17259 WILD HORSE CREEK ROAD  
CHESTERFIELD, MO 63005  
LTE - REPLACEMENT FLAGPOLE

SHEET TITLE  
**EXISTING SITE PLAN**

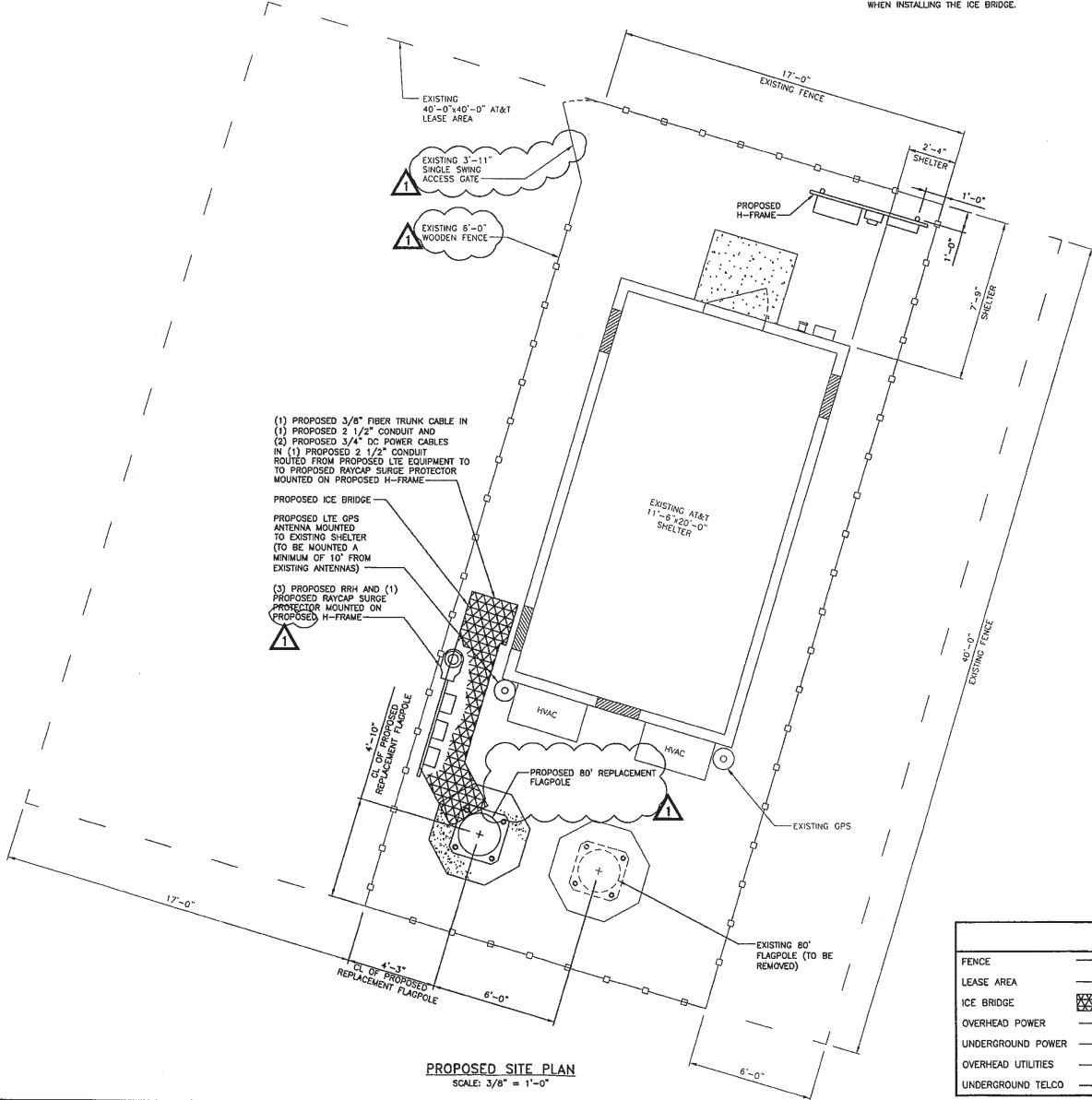
SHEET NUMBER  
**Z-3**

LEGEND	
FENCE	—□—□—□—□—
LEASE AREA	—□—□—□—□—
ICE BRIDGE	XXXXXX
OVERHEAD POWER	—OHP— OHP— OHP—
UNDERGROUND POWER	—USP— USP— USP—
OVERHEAD UTILITIES	—OHU— OHU— OHU—
UNDERGROUND TELCO	—UST— UST— UST—



**EXISTING SITE PLAN**  
SCALE: 3/8" = 1'-0"

**NOTE**  
 1. MAXIMUM DISTANCE OF 6" GAP SHALL EXIST BETWEEN ICE BRIDGE AND ADJACENT STRUCTURE WHEN INSTALLING THE ICE BRIDGE.



- (1) PROPOSED 3/8" FIBER TRUNK CABLE IN
  - (1) PROPOSED 2 1/2" CONDUIT AND
  - (2) PROPOSED 3/4" DC POWER CABLES
  - IN (1) PROPOSED 2 1/2" CONDUIT
  - ROUTED FROM PROPOSED LTE EQUIPMENT TO
  - TO PROPOSED RAYCAP SURGE PROTECTOR
  - MOUNTED ON PROPOSED H-FRAME
- PROPOSED ICE BRIDGE
- PROPOSED LTE GPS ANTENNA MOUNTED TO EXISTING SHELTER (TO BE MOUNTED A MINIMUM OF 10' FROM EXISTING ANTENNAS)
- (3) PROPOSED RRH AND (1) PROPOSED RAYCAP SURGE PROTECTOR MOUNTED ON PROPOSED H-FRAME

**PROPOSED SITE PLAN**  
 SCALE: 3/8" = 1'-0"

LEGEND	
FENCE	— ○ — ○ — ○ — ○ —
LEASE AREA	-----
ICE BRIDGE	▒ ▒ ▒ ▒ ▒ ▒ ▒ ▒ ▒ ▒
OVERHEAD POWER	— OHP — OHP — OHP —
UNDERGROUND POWER	— UGP — UGP — UGP —
OVERHEAD UTILITIES	— OHU — OHU — OHU —
UNDERGROUND TELCO	— UOT — UOT — UOT —



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(913) 458-2000

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

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

REV	DATE	DESCRIPTION
1	10/12/11	MISC REVISIONS
0	9/14/11	ISSUED FOR ZONING

P. H. DOYLE E-28899  
PROFESSIONAL ENGINEER

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MO3508  
BAXTER GARDENS  
17259 WILD HORSE CREEK ROAD  
CHESTERFIELD, MO 63005  
LTE - REPLACEMENT FLAGPOLE

SHEET TITLE  
**PROPOSED SITE PLAN**

SHEET NUMBER  
**Z-4**



13075 MANCHESTER RD, SUITE 100  
ST LOUIS, MO 63131



**BLACK & VEATCH**

10850 GRANDVIEW DRIVE  
OVERLAND PARK, KANSAS 66210  
(913) 458-2000

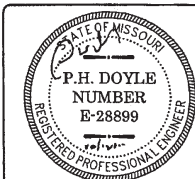
BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION  
MISSOURI STATE CERTIFICATE OF AUTHORITY # 001648

PROJECT NO: 168986

DRAWN BY: AK

CHECKED BY: GFX

REV	DATE	DESCRIPTION
1	10/12/11	MISC REVISIONS
0	8/16/11	ISSUED FOR ZONING



P. H. DOYLE E-28899  
PROFESSIONAL ENGINEER

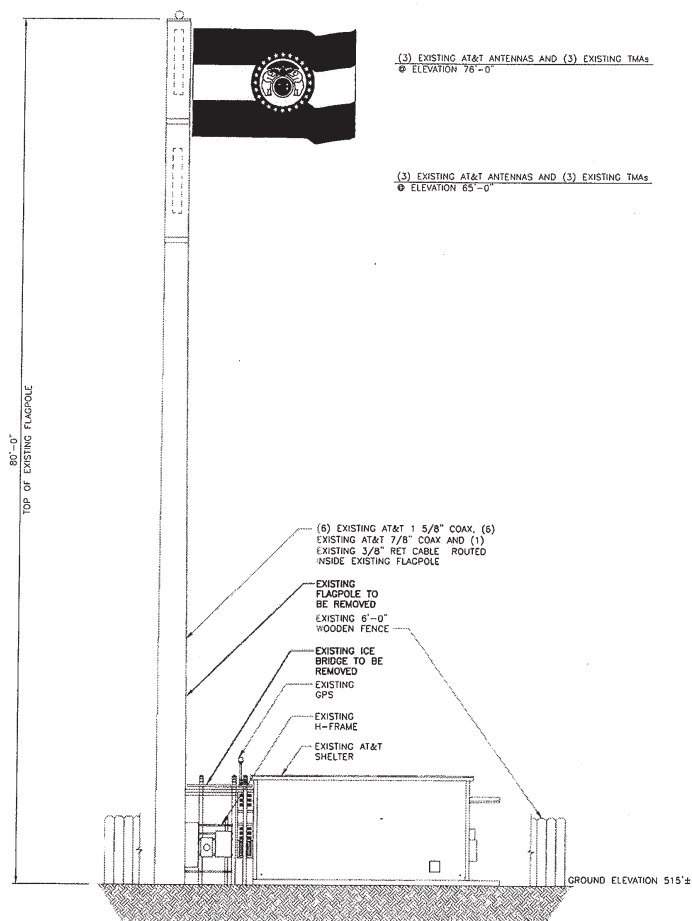
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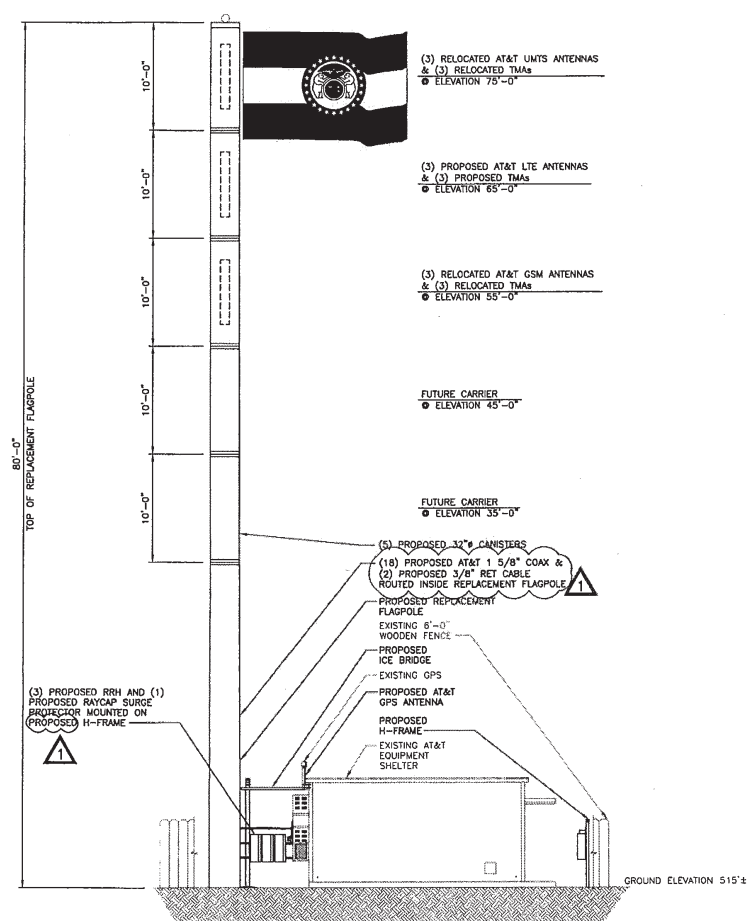
SHEET TITLE  
SITE ELEVATION

SHEET NUMBER

Z-5



EXISTING SITE ELEVATION  
NO SCALE



PROPOSED SITE ELEVATION  
NO SCALE







September 7, 2011

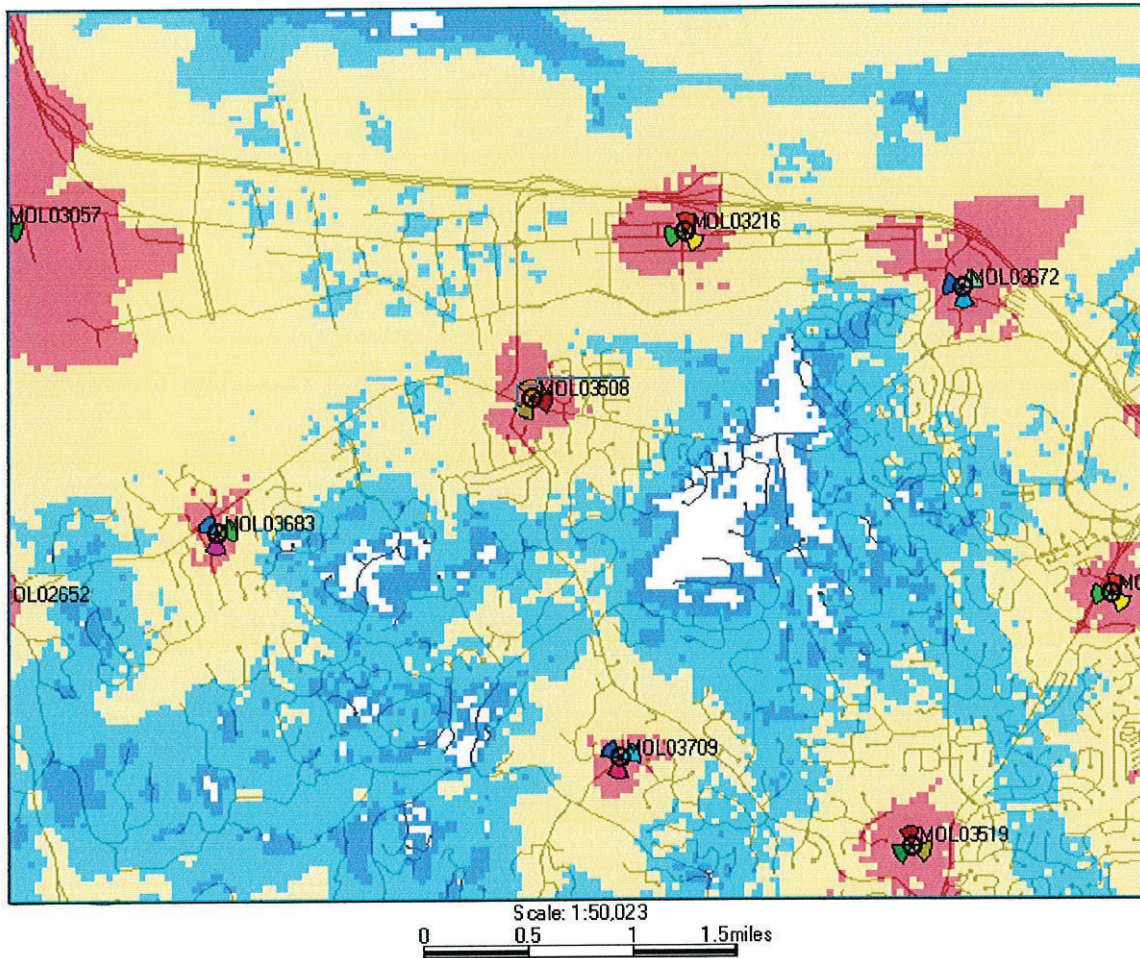
The following is a brief explanation of why AT&T Mobility is proposing to have the current wireless communication facility at 17261 Wild Horse Creek Road modified. This facility is labeled as MOL03508 on Map 1. Currently this facility is only capable of broadcasting our older technologies.

This facility currently is broadcasting our "2G" technology (called GSM) and our "3G" technology (called UMTS). Normally 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 other 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. Normally each technology uses its own antennas and equipment. The new 4G technology is on lower frequencies and therefore require slightly larger antennas than what we currently use. Because of this there is no way to fit these antennas in the existing enclosures. The best way to get these antennas concealed from view is to replace the current pole with another pole.

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

# PHOTO SIMULATION

## PROPOSED WIRELESS COMMUNICATIONS FACILITY

### SITE LOCATION MAP

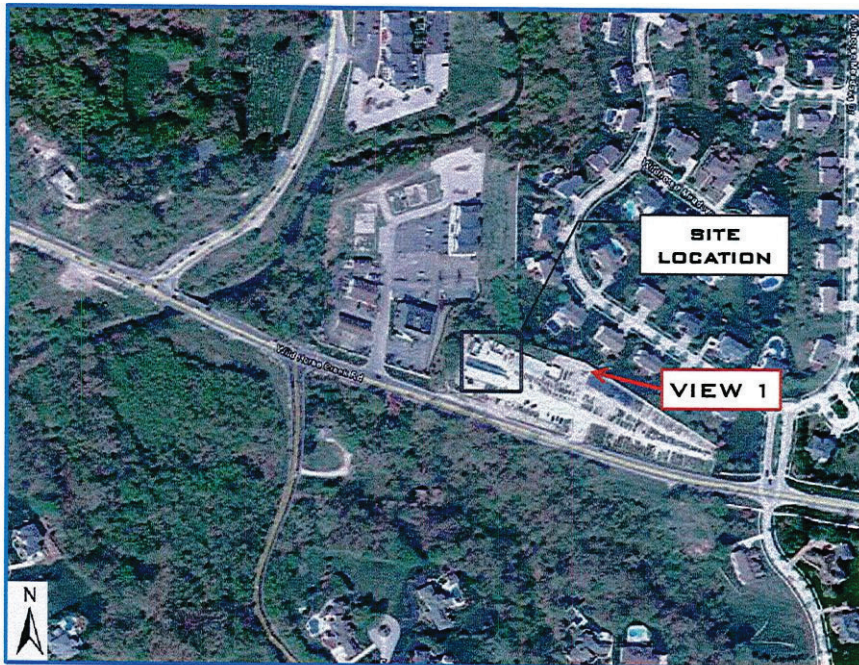


Image from GoogleMaps 2011©

**SITE NUMBER:** MO3508 (8747)

**SITE NAME:** BAXTER GARDENS

**SITE ADDRESS:** 17259 WILD HORSE CREEK ROAD  
CHESTERFIELD, MO 63005

**DATE:** 09/15/11

**APPLICANT:** AT&T WIRELESS

**CONTACT:** GEORGE XENOS  
BLACK & VEATCH  
(913) 687-9233



EXISTING CANISTERS  
AND EXISTING  
FLAGPOLE

EXISTING VIEW -  
LOOKING NORTHWEST

PHOTO SIMULATION -  
LOOKING NORTHWEST



(1) PROPOSED 80'-0"  
FLAG POLE WITH 32"  
DIAMETER  
CANISTERS