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## Memorandum **Department of Planning & Public Works**

To: **Planning and Public Works Committee** 

**Shawn Seymour, AICP** From:

**Senior Planner** 

Date: October 17, 2011

RE: T.S.P. 39-2011 AT&T (Drew Station 1662 Clarkson Road): A request to

> obtain approval to amend a Telecommunications Siting Permit for the purpose of upgrading existing facilities to accommodate and provide 4G LTE data service on an existing high structure in a "C8" Planned Commercial Districtzoned tract of land located on the east side of Clarkson Road south of its

intersection with the Chesterfield Parkway (19S420394).

#### **Summary**

AT&T, has requested an amendment to a telecommunications siting permit to allow the location of upgraded antennas to facilitate 4G LTE data service on an existing high structure located on the east side of Clarkson Road south of its intersection with the Chesterfield Parkway.

City of Chesterfield Ordinance 2391, which governs telecommunications and facilities siting, permits applications for equipment upgrades to be submitted for sites that currently hold a telecommunications siting permit without the need for a public hearing. Staff has reviewed the request by AT&T and has determined that the proposed addition of the 4G LTE antennas are indeed an upgrade to an existing and permitted site and may amend said existing permit without the need for a public hearing.

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

Respectfully submitted,

Shawn Seymour, AICP

Senior 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

AT&T 4G LTE Upgrade Packet Attachments:





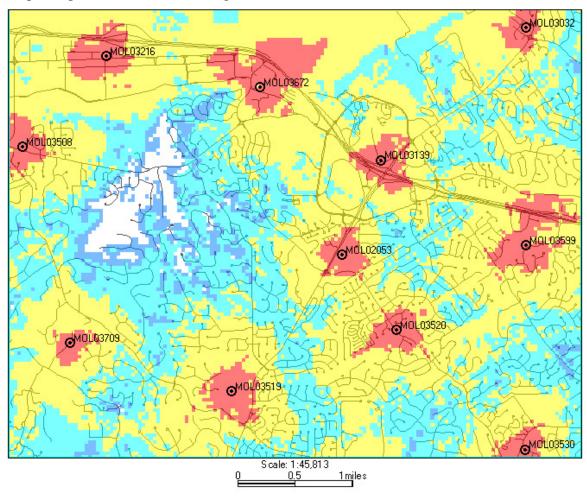
The following is a brief explanation of why AT&T Mobility is proposing to have the current wireless communication facility at 1700 Clarkson Road modified. This facility is labeled as MOL02053 on Map 1. Currently this facility is only capable of broadcasting our older technologies.

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 4th 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

# MO2053 BAXTER & CLARKSON

#### **ENGINEERING**

2009 INTERNATIONAL BUILDING CODE 2011 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 ATAIT'S CONDUCTORLESS TELECOMMUNICATIONS NETWORK. INSTALLATION OF (3) LTE ANTENNAS, (3) RRHs, (3) DC2 SURGE PROTECTORS, (1) FC12 JUNCTION BOX, (3) FIBER JUMPER CABLES, (3) DC POWER JUMPER CABLES, (1) FIBER TRUNK CABLE, (2) DC POWER TRUNK CABLES, (1) FIBER CABLE ENCLOSURES, (1) LTE GPS ANTENNA, (1) LTE POWER NODE B CABINET, AND (1) LTE 9412 ENODE B ARE PROPOSED.

#### SITE INFORMATION

PROPERTY OWNER:
ADDRESS:
ROSS REAL ESTATE VENTURES LLC
7750 CLAYTON ROAD, SUITE 305
ST. LOUIS, MO 63117

TOWER OWNER:
SITE NAME:
SITE NUMBER:
SITE CONTACT:

SITE ADDRESS: 1700 CLARKSON ROAD CHESTERFIELD, MO 63017

COUNTY: ST. LOUIS COUNTY
LATITUDE (NAD 83): 38' 38' 34.19" N

LONGITUDE (NAD 83): 90° 33° 56.30″ W

GROUND ELEVATION: 612' AMSL
RAD CENTER: 18', 24' AGL

RAD CENTER: 18', 24' AGL
ZONING JURISDICTION: ST. LOUIS COUNTY

ZONING DISTRICT: C8

TELEPHONE COMPANY:

PARCEL #: 19S420394

OCCUPANCY GROUP: U

CONSTRUCTION TYPE: V-B

POWER COMPANY: AMEREN MO

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

AT&T

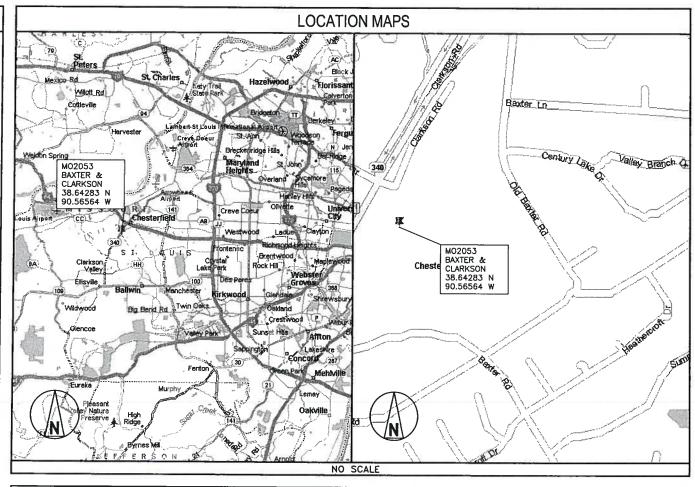
ENGINEER:

15450 S OUTER FORTY DR, SUITE 200 CHESTERFIELD, MO 63017

CONTACT: PHONE: GEORGE P. XENOS (913) 687-9233



## LTE ROOFTOP



#### DRIVING DIRECTIONS

DIRECTIONS FROM NEAREST AT&T OFFICE:

TURN LEFT ONTO PINE ST FOR 0.9 MI, KEEP LEFT ONTO RAMP FOR 0.2 MI, TAKE RAMP ONTO I-64 FOR 19.1 MI, AT EXIT 19B, TURN RIGHT ONTO RAMP FOR 0.2 MI, BEAR RIGHT ONTO LOCAL ROAD FOR 32 YDS, TURN LEFT ONTO SR-340 FOR 0.8 MI, TURN LEFT ONTO CLARKSON ROAD FOR 43 YDS, TURN RIGHT ON LOCAL ROAD FOR 98 YDS.

#### **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
AND OF DIVITIONS,	DAIL.
AT&T SITE AQ:	DATE:
OCI:	DATE:
DDODEDDY OWNED	2.75
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 EXISTING SITE PLAN					
Z-4 PROPOSED SITE PLAN					
Z-5 SITE ELEVATION					

#### 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.mo1call.com

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



13075 MANCHESTER RD, SUITE 100 ST LOUIS, MO 63131

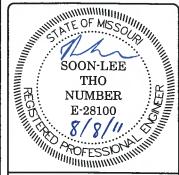


10950 GRANDVIEW DRIVE OVERLAND PARK, KANSAS 66210 (913) 458-2000

BLACK & YEATCH PROFESSIONAL ENGINEERING CORPORATI MISSOURI STATE CERTIFICATE OF AUTHORITY & 001 646

1	PROJECT NO:	100900	
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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.

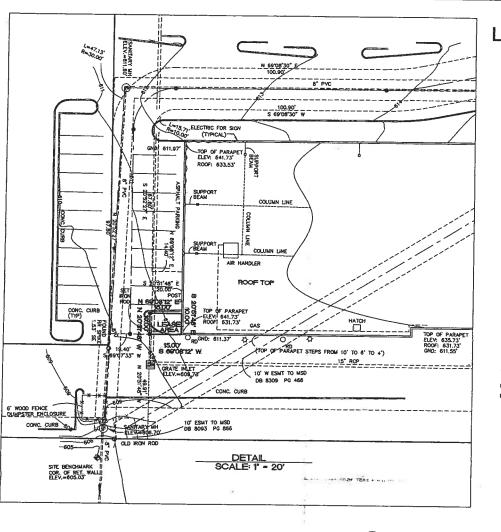
MO2053
BAXTER & CLARKSON
1700 CLARKSON ROAD
CHESTERFIELD, MO 63017
LTE — ROOFTOP

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1



LOT 1

8 69'07'33" W

GRAPHIC SCALE

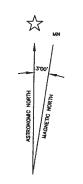
### LOT 2 OF "DREW STATION SHOPPING CENTER"

U.S. SURVEY 2002. TOWNSHIP 45 NORTH, RANGE 4 EAST, CITY OF CHESTERFIELD ST. LOUIS COUNTY, MISSOURI

N73'07'56'E

S69'07'33"W 1029.01"

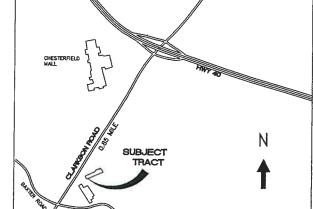
10' UTILITY ESMT DB 8687 PG 144



MAGNETIC DECLINATION-NTS (SCALED FROM USGS QUAD MAP)

- SET CP SPINDLE IN ASPHALT (UNLESS OTHERWISE NOTED) RD ROOF DRAIN
- PP POWER POLE

N7406'06'E 10175



LOCATION MAP



SOUTHWESTERN Baxter

**SURVE**) re: (314)894-7055 le: (314)894-3207

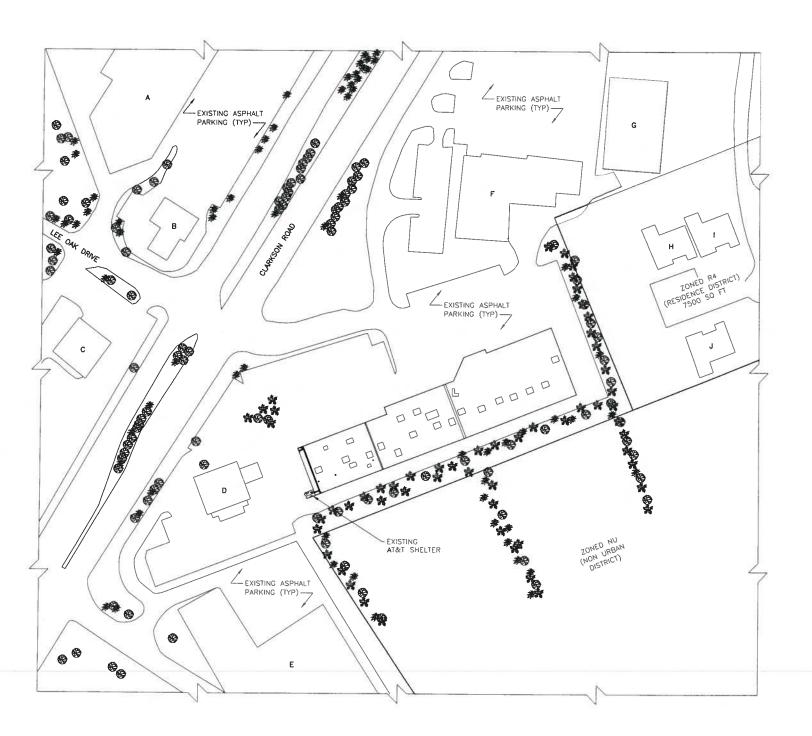
LAND

SUBURBAN L 5977 Hawkins Fuchs Road St. Louis, MO 63129-2124

Clarkson, Cell 1698 Cl. Chesterfield, \$ 10 City

DATE: 12/30/00 JOB NUMBER: D0120 FILE NAME: Cell4224.dw DRAWN BY: AMG CHECKED BY:

1 of 1



OVERALL SITE PLAN
SCALE: 1'=1000'

DISTANCE FROM TOWER	
RESIDENTIAL BUILDING	DISTANCE (FT.)
A	570
В	390
С	365
D	95
E	250
F	465
G	730
Н	695
1	775
J	695



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:

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

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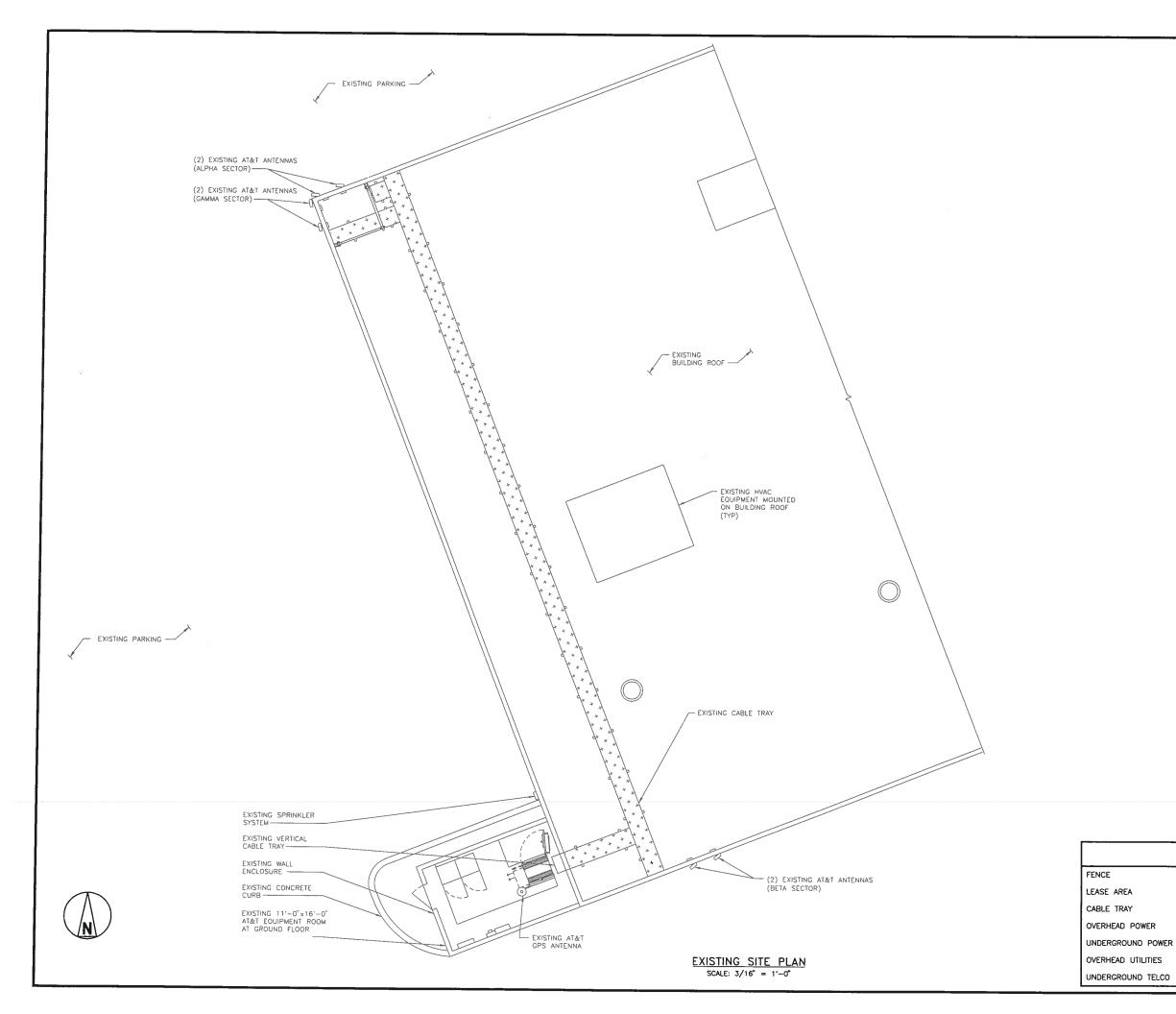
IT IS A MOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

M02053 BAXTER & CLARKSON 1700 CLARKSON ROAD CHESTERFIELD, MO 63017 LTE - ROOFTOP

SHEET TITLE

OVERALL SITE PLAN

SHEET NUMBER





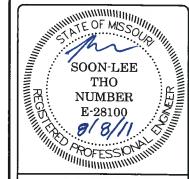
13075 MANCHESTER RD, SUITE 100 ST LOUIS, MO 63131



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

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MO2053

BAXTER & CLARKSON
1700 CLARKSON ROAD
CHESTERFIELD, MO 63017
LTE - ROOFTOP

SHEET TITLE

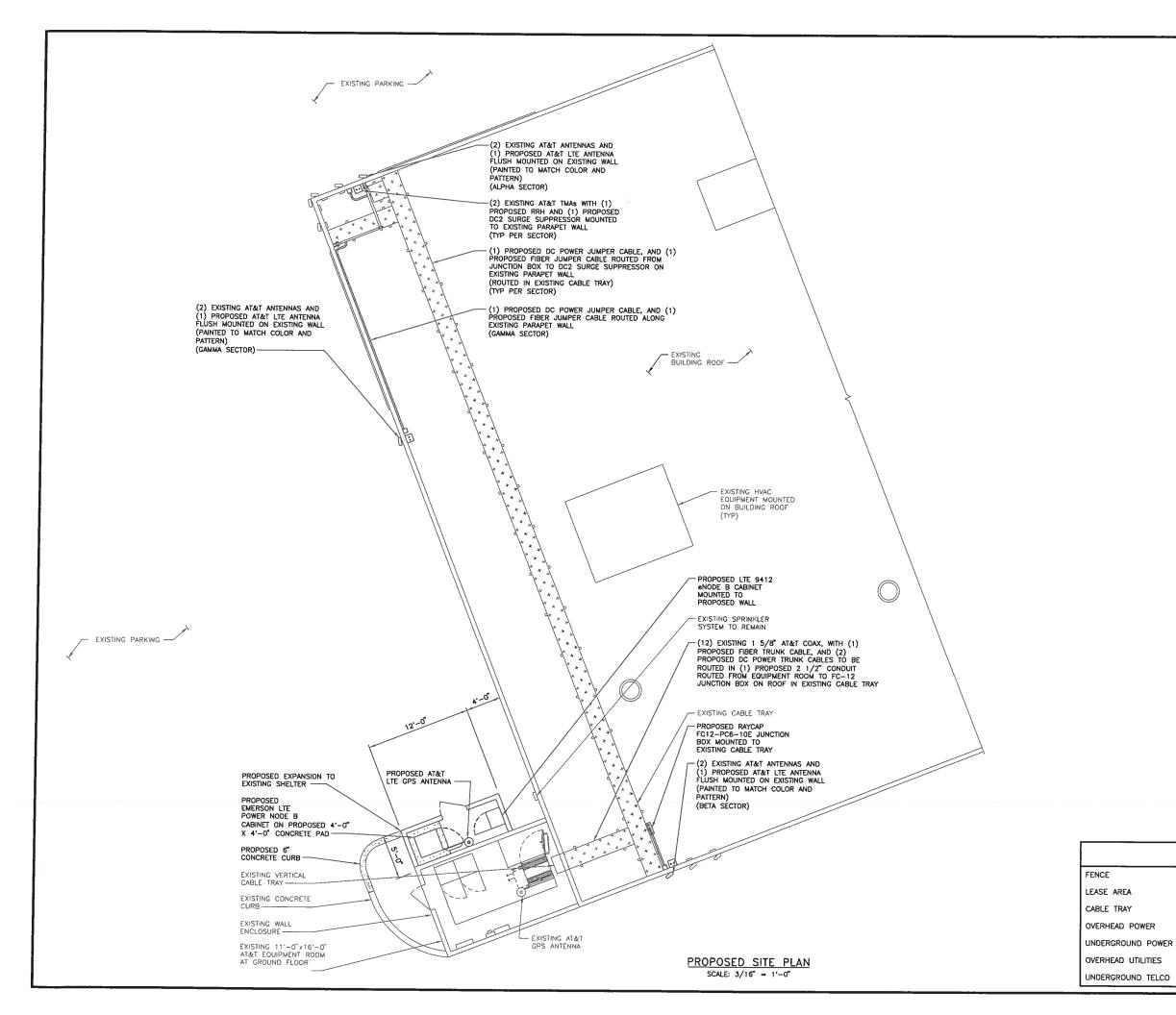
**LEGEND** 

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EXISTING SITE PLAN

SHEET NUMBER





13075 MANCHESTER RD, SUITE 100 ST LOUIS, MO 63131



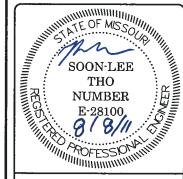
10950 GRANDVIEW DRIVE OVERLAND PARK, KANSAS 66210 (913) 458-2000

BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION MISSOURI STATE CERTIFICATE OF AUTHORITY # 00:1846

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MO2053
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LTE — ROOFTOP

SHEET TITLE

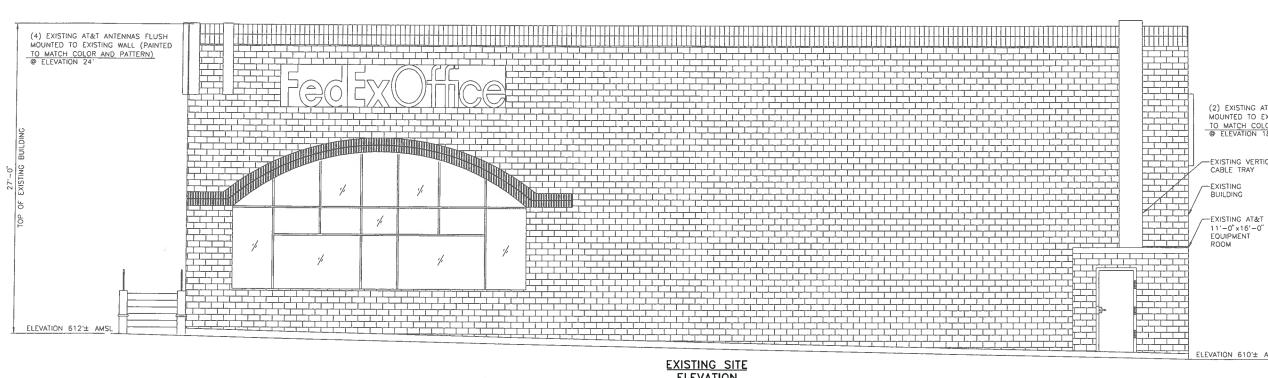
**LEGEND** 

- UGT -

- UGT -

PROPOSED SITE PLAN

SHEET NUMBER



(2) EXISTING AT&T ANTENNAS FLUSH
MOUNTED TO EXISTING WALL (PAINTED
TO MATCH COLOR AND PATTERN)

© ELEVATION 18

-EXISTING VERTICAL CABLE TRAY

ELEVATION 610'± AMSL

ELEVATION NO SCALE

ELEVATION NO SCALE



(2) EXISTING AT&T ANTENNAS WITH (1) PROPOSED AT&T LTE ANTENNA FLUSH MOUNTED TO EXISTING WALL (PAINTED

-EXISTING VERTICAL CABLE TRAY

-EXISTING

-EXISTING AT&T 11'-0"×16'-0" EQUIPMENT ROOM

ELEVATION 610'± AMSL

-PROPOSED EXTENSION TO EXISTING AT&T EQUIPMENT SHELTER (MATCH EXISTING BRICK AND COPING COLOR/MATERIAL)



13075 MANCHESTER RD, SUITE 100 ST LOUIS, MO 63131

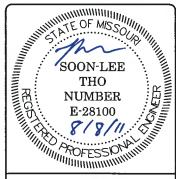
10950 GRANDVIEW DRIVE OVERLAND PARK, KANSAS 66210 (913) 458-2000

168986

**BLACK & VEATCH** 

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M02053 **BAXTER & CLARKSON** 1700 CLARKSON ROAD CHESTERFIELD, MO 63017 LTE - ROOFTOP

SHEET TITLE

SITE ELEVATION

SHEET NUMBER