



QC Development

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June 14, 2015

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Notice of Exempt Modification – New Cingular Wireless PCS, LLC (AT&T)

530 Bushy Hill Road, Simsbury, CT 06092

N 41-49-05.26

W 72-51-46.93

Dear Ms. Bachman:

AT&T currently maintains three (3) antennas at the 104-foot level of the existing 120-foot Stealth Flagpole Tower at 530 Bushy Hill Road, Simsbury, CT. The tower and property are owned by E and A / I and G Simsbury Commons LP. AT&T now intends to install three (3) additional Andrew SBNHH-1D65A antennas. These antennas would be installed at the 96-foot level of the tower. AT&T also intends to install six (6) Kaelus TMAs and six (6) Kaelus Triplexers at the same 96-foot level. All equipment would be installed within the existing stealth shroud.

This facility was approved by the Connecticut Siting Council, Docket No. 279 on June 23, 2004. This approval included the condition that the facility be designed as a flagpole not to exceed 120 feet above ground level. AT&T's proposed modification would not alter the flagpole design or overall height of the structure. This modification therefore complies with the aforementioned approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Lisa V. Heavner, First Selectman for the Town of Simsbury, as well as the property owner and the tower

owner.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, AT&T respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Please feel free to call me at (860) 670-9068 with any questions regarding this matter. Thank you for your consideration.

Sincerely,

Mark Roberts
QC Development
Consultant for AT&T

Attachments

cc: Lisa V. Heavner - as elected official (via e-mail)
E and A / I and G Simsbury Commons LP - as tower & property owner (via e-mail)

Power Density

Existing Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm ²)	Freq. Band (MHz ^{**})	Limit S (mW/cm ²)	%MPE
Other Carriers*							1.21%
AT&T LTE	1	500	104	0.0187	700	0.4667	0.40%
AT&T LTE	1	500	104	0.0187	1900	1.0000	0.19%
AT&T GSM	2	500	104	0.0374	880	0.5867	0.64%
AT&T UMTS	1	500	104	0.0187	1900	1.0000	0.19%
AT&T WCS	1	500	104	0.0187	2300	1.0000	0.19%
Site Total							2.82%

*Per CSC Records (available upon request, includes calculation formulas)

** If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

Proposed Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm ²)	Freq. Band (MHz ^{**})	Limit S (mW/cm ²)	%MPE
Other Carriers*							1.21%
AT&T LTE	1	1791	104	0.0510	2300	1.0000	0.67%
AT&T LTE	1	1104	104	0.0314	734	0.4893	0.84%
AT&T LTE	1	2203	104	0.0627	1900	1.0000	0.82%
AT&T GSM	2	492	104	0.0140	880	0.5867	0.63%
AT&T UMTS	1	817	104	0.0232	1900	1.0000	0.31%
Site Total							4.49%

*Per CSC Records (available upon request, includes calculation formulas)

** If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

Note: Proposed Loading may also include corrections to certain Existing Loading values

PROJECT INFORMATION

SCOPE OF WORK: TELECOMMUNICATIONS FACILITY UPGRADE (LTE-1C UPGRADE):

SITE ADDRESS: 530 BUSHY HILL ROAD
SIMSBURY, CT 06092

LATITUDE: 41.818108° N 41° 49' 05.19" N

LONGITUDE: 72.863039° W 72° 51' 46.94" W

TYPE OF SITE: FLAGPOLE / INDOOR EQUIPMENT

FLAGPOLE HEIGHT: 120'±

RAD CENTER: 96'±

JURISDICTION: NATIONAL, STATE & LOCAL CODES OR ORDINANCES

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: CT1171

SITE NAME: SIMSBURY-BUSHY HILL ROAD

PROJECT: LTE-1C UPGRADE

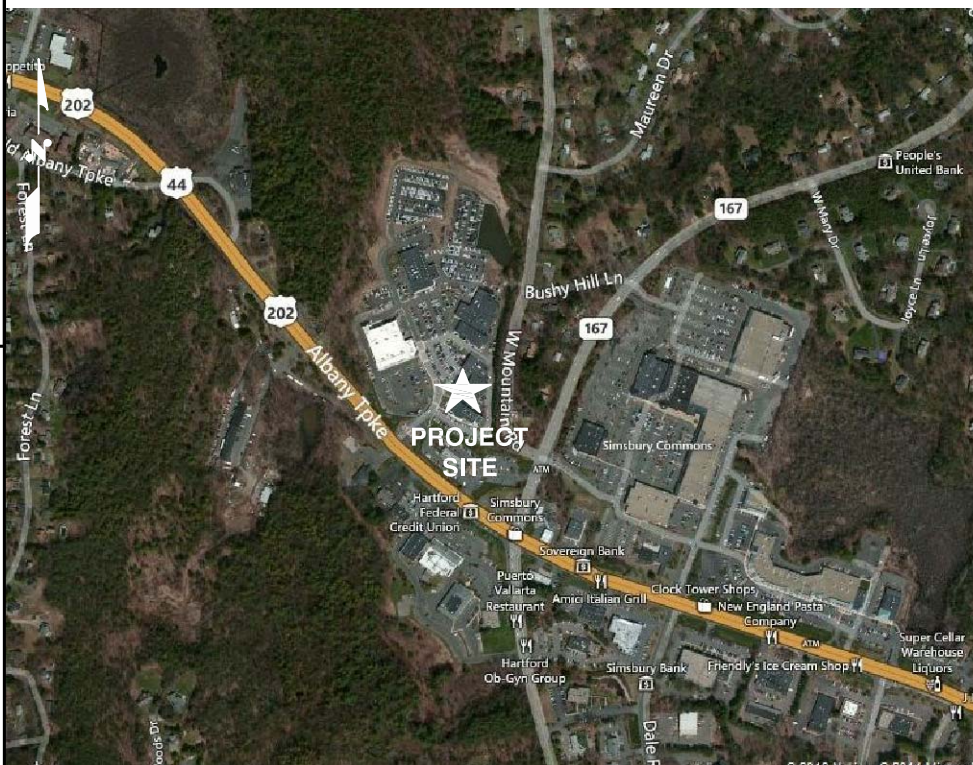
DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
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GN-1	GENERAL NOTES	5
A-1	COMPOUND & EQUIPMENT PLANS	5
A-2	ANTENNA LAYOUTS & ELEVATION	5
A-3	DETAILS	5
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G-1	GROUNDING DETAILS	5

VICINITY MAP

DIRECTIONS TO SITE:

START OUT GOING NORTHEAST ON ENTERPRISE DR TOWARD CAPITOL BLVD. TURN LEFT ONTO CAPITOL BLVD. TURN LEFT ONTO WEST ST. MERGE ONTO I-91 N VIA THE RAMP ON THE LEFT TOWARD HARTFORD. TAKE THE I-84 W EXIT, EXIT 32A-32B, ON THE LEFT TOWARD TRUMBULL ST/WATERBURY. TAKE THE I-91 N EXIT TOWARD SPRINGFIELD. TAKE THE TRUMBULL STREET EXIT, EXIT 32B, ON THE LEFT. STAY STRAIGHT TO GO ONTO TRUMBULL ST. TURN RIGHT ONTO US-44/MAIN ST. CONTINUE TO FOLLOW US-44. TURN RIGHT ONTO CT-167/BUSHY HILL RD. DESTINATION IS ON THE RIGHT.



GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

72 HOURS



CALL BEFORE YOU DIG
CALL TOLL FREE 1-888-DIG-SAFE
OR CALL 811



UNDERGROUND SERVICE ALERT



1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586



27 NORTHWESTERN DR.
SALEM, NH 03079

SITE NUMBER: CT1171
SITE NAME: SIMSBURY-BUSHY HILL ROAD

530 BUSHY HILL ROAD
SIMSBURY, CT 06092
HARTFORD COUNTY



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
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4	04/06/16	ISSUED FOR CONSTRUCTION	RB	AT	DPH
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1	02/24/14	ISSUED FOR CONSTRUCTION	SB	AT	DPH



AT&T
TITLE SHEET
(LTE)

SITE NUMBER	DRAWING NUMBER	REV
1171.05	T-1	5

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR - SAI
 SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER - AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. APPLICABLE BUILDING CODES:
 SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
 BUILDING CODE: 2003 IBC WITH 2005 CT SUPPLEMENT, + 2009 & 2013 CT AMENDMENTS
 ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS
 LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS

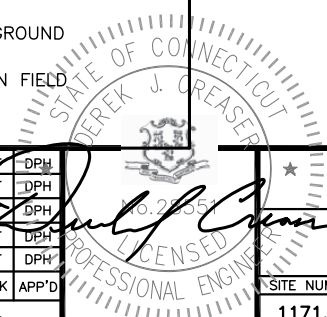
SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

- AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;
- TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARDS FOR STEEL
- EQUIPMENT AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		



Hudson Design Group, Inc.
 1600 OSGOOD STREET
 BUILDING 20 NORTH, SUITE 3090
 N. ANDOVER, MA 01845
 TEL: (978) 557-5553
 FAX: (978) 336-5586

SAI
 27 NORTHWESTERN DR.
 SALEM, NH 03079

SITE NUMBER: CT1171
SITE NAME: SIMSBURY-BUSHY HILL ROAD
 530 BUSHY HILL ROAD
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 HARTFORD COUNTY

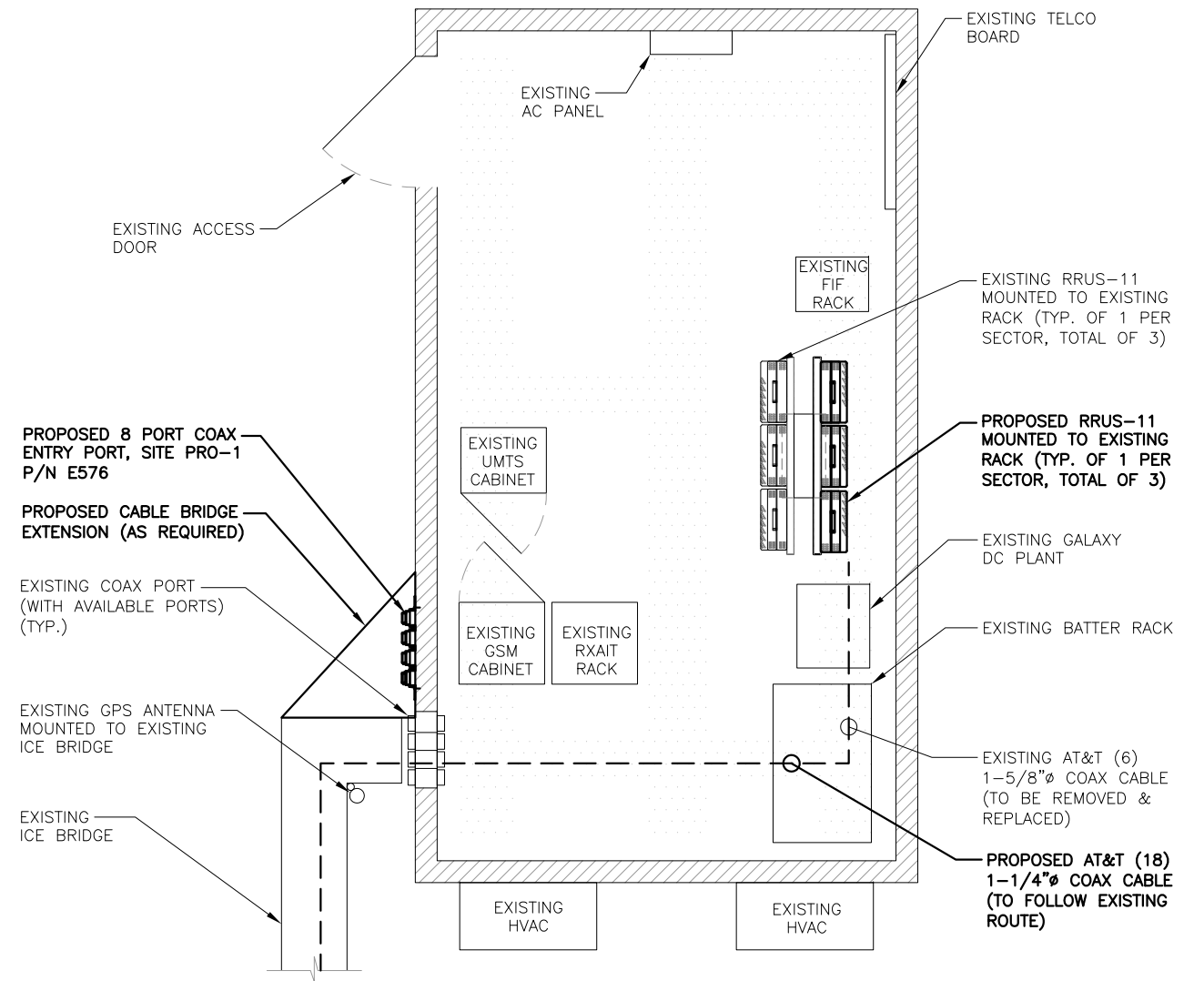
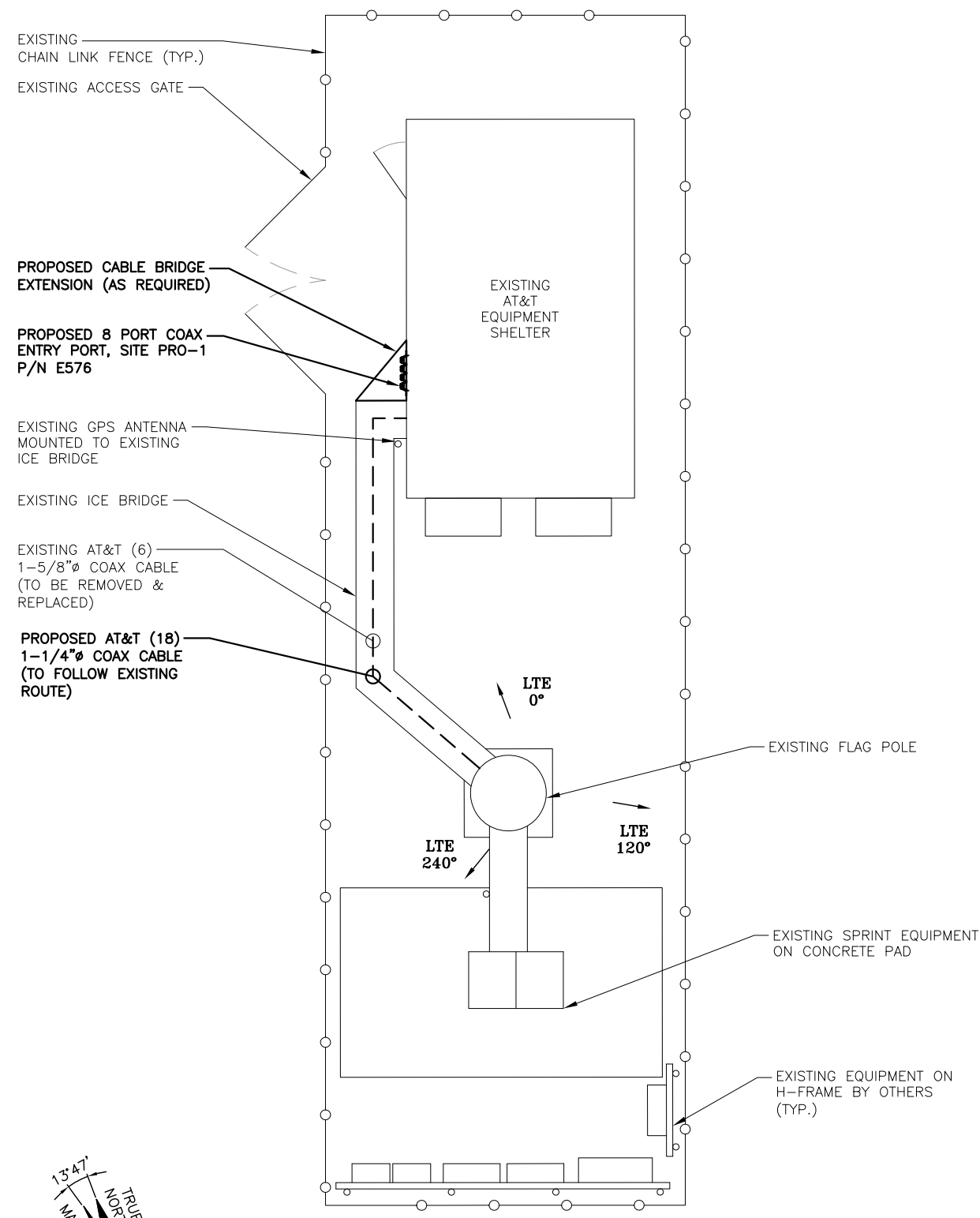
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SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: AL		

AT&T
GENERAL NOTES (LTE)
 SITE NUMBER: 1171.05
 DRAWING NUMBER: GN-1
 REV: 5

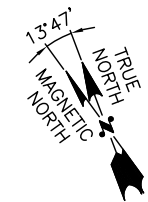
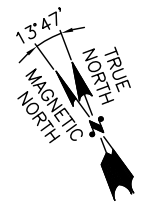
NOTE:
 REFER TO STRUCTURAL ANALYSIS
 BY: HUDSON DESIGN GROUP, LLC,
 DATED: JUNE 09, 2016,
 FOR THE CAPACITY OF THE
 EXISTING STRUCTURES TO SUPPORT
 THE PROPOSED EQUIPMENT.

NOTE:
 REFER TO THE FINAL RF DATA
 SHEET FOR FINAL ANTENNA
 SETTINGS.



COMPOUND PLAN
 22x34 SCALE: 1/4"=1'-0"
 11x17 SCALE: 1/8"=1'-0"

EQUIPMENT PLAN
 22x34 SCALE: 1/2"=1'-0"
 11x17 SCALE: 1/4"=1'-0"



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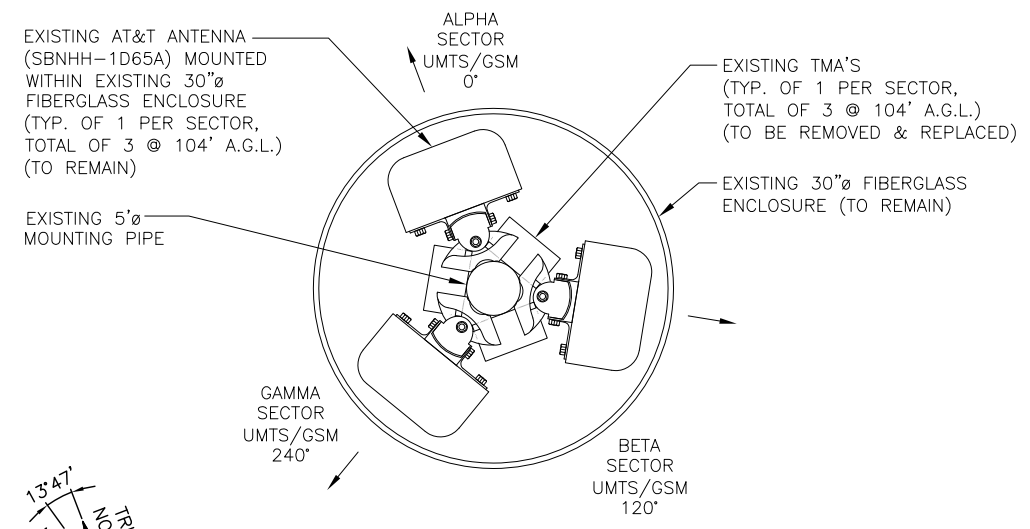
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SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: AL

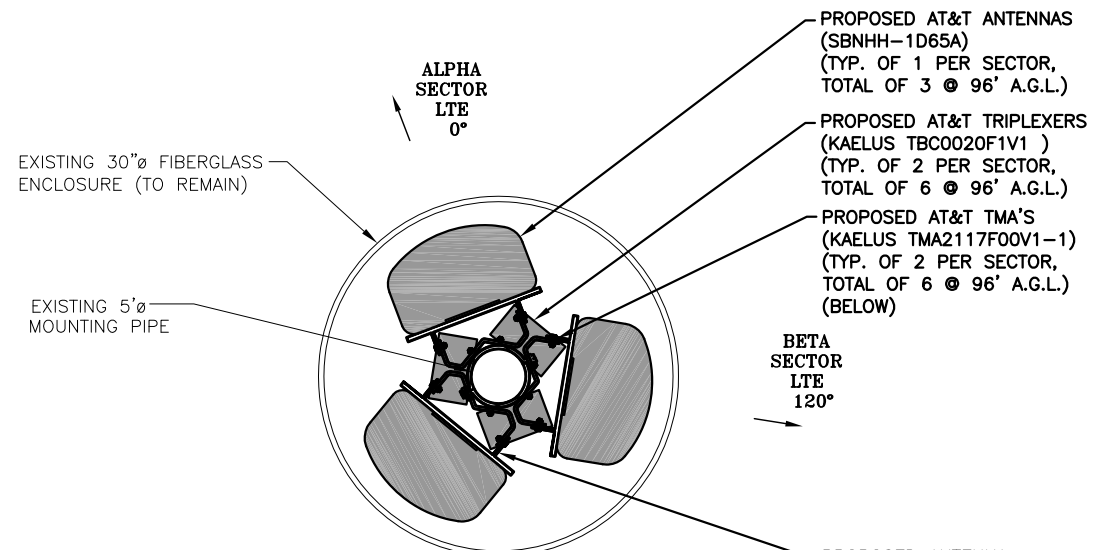


AT&T
COMPOUND & EQUIPMENT PLANS (LTE)
 SITE NUMBER: 1171.05 DRAWING NUMBER: A-1 REV: 5



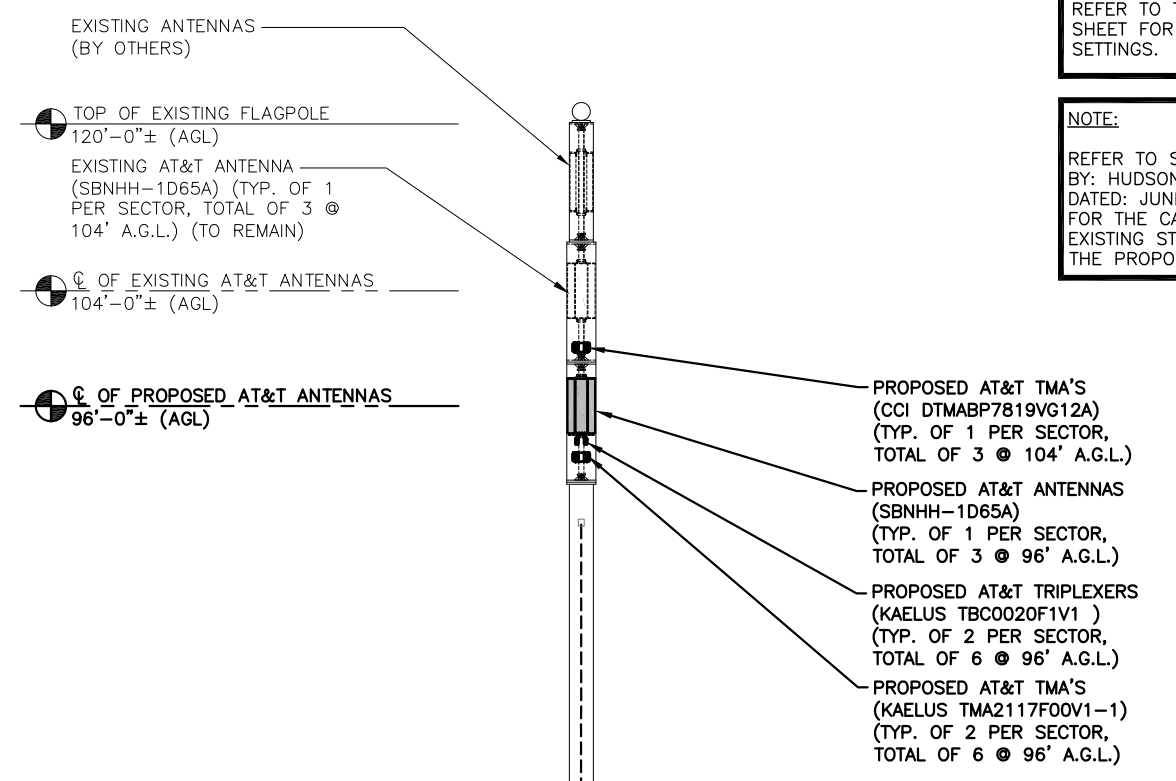
EXISTING ANTENNA LAYOUT @ 104' A.G.L.
SCALE: N.T.S.

1
A-2



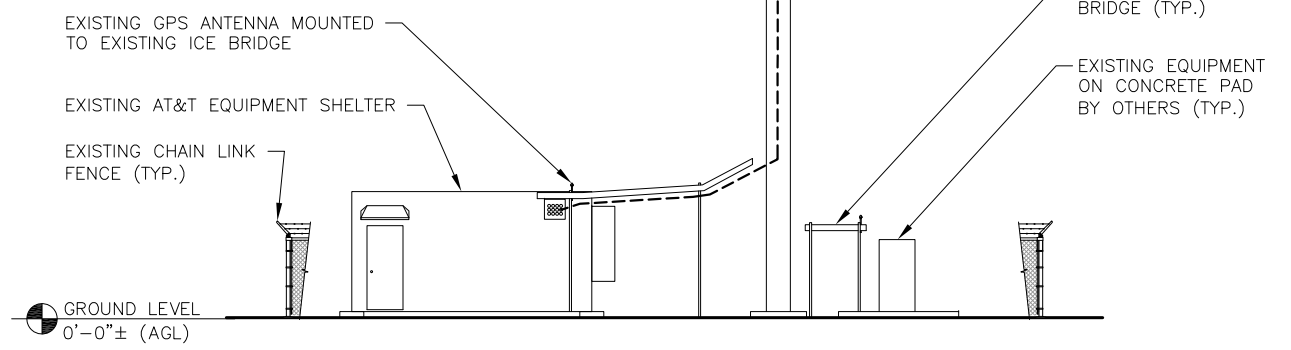
PROPOSED ANTENNA LAYOUT @ 96' A.G.L.
SCALE: N.T.S.

2
A-2



NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

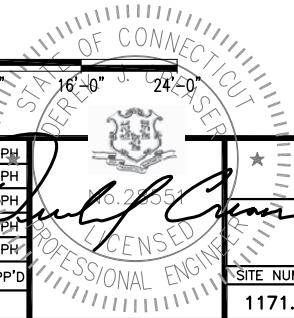
NOTE:
REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: JUNE 09, 2016, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



ELEVATION

22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"

3
A-2



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SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: AL

AT&T
ANTENNA LAYOUTS & ELEVATION (LTE)

SITE NUMBER	DRAWING NUMBER	REV
1171.05	A-2	5

EXISTING ANTENNA SCHEDULE @ 104' A.G.L.

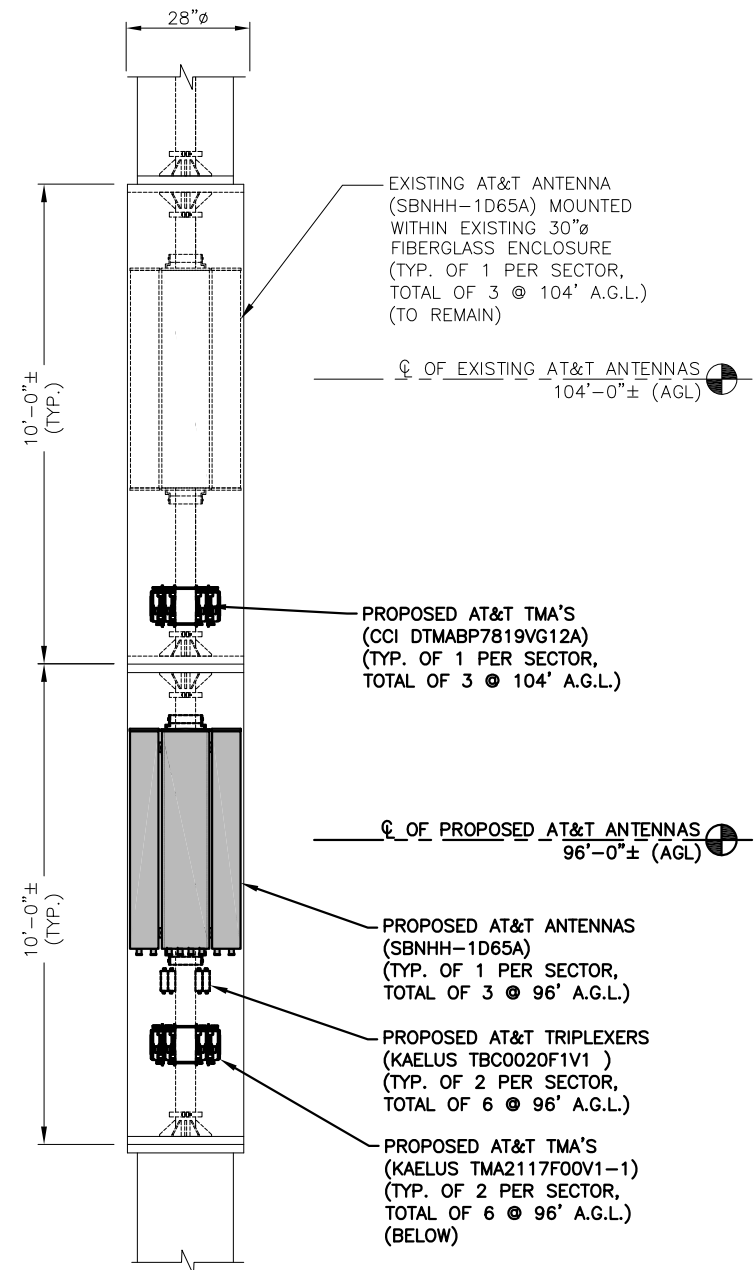
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	ANDREW	SBNHH-1D65A	55X11.9X7.1
BETA:	ANDREW	SBNHH-1D65A	55X11.9X7.1
GAMMA:	ANDREW	SBNHH-1D65A	55X11.9X7.1

PROPOSED ANTENNA SCHEDULE @ 96' A.G.L.

SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	ANDREW	SBNHH-1D65A	55X11.9X7.1
ALPHA:	ANDREW	SBNHH-1D65A	55X11.9X7.1
BETA:	ANDREW	SBNHH-1D65A	55X11.9X7.1
BETA:	ANDREW	SBNHH-1D65A	55X11.9X7.1
GAMMA:	ANDREW	SBNHH-1D65A	55X11.9X7.1
GAMMA:	ANDREW	SBNHH-1D65A	55X11.9X7.1

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: JUNE 09, 2016, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



TRIPLEXERS DIMENSIONS

MODEL #	TBC0020F1V
MANUF.	KAELUS
HEIGHT	5.83"
WIDTH	9.65"
DEPTH	2.05"
WEIGHT	7.5 LBS

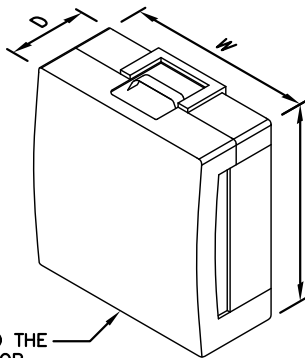


PROPOSED TRIPLEXERS 3
SCALE: N.T.S. A-3

RRU CHART

QUANTITY	MODEL	L	W	D
(P) 3 &(E) 3	RRUS-11	19.7"	17.0"	7.2"
-	RRUS-12	20.4"	18.5"	7.5"
-	RRUS-32	27.2"	12.1"	7.0"
-	RRUS-E2	20.4"	18.5"	7.5"
-	LTE-A2	16.4"	15.2"	3.4"

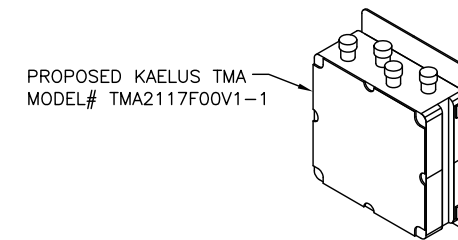
NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS



PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

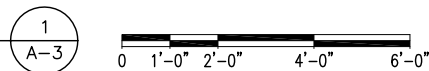
PROPOSED RRU DETAIL 2
SCALE: N.T.S. A-3



TMA DETAIL 4
SCALE: N.T.S. A-3

PROPOSED ANTENNA & TMA MOUNTING DETAIL

22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"



1
A-3



1600 OSGOOD STREET
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N. ANDOVER, MA 01845
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FAX: (978) 336-5586



27 NORTHWESTERN DR.
SALEM, NH 03079

SITE NUMBER: CT1171
SITE NAME: SIMSBURY-BUSHY HILL ROAD

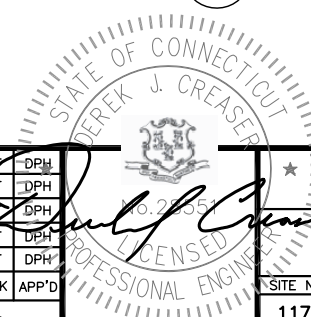
530 BUSHY HILL ROAD
SIMSBURY, CT 06092
HARTFORD COUNTY



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

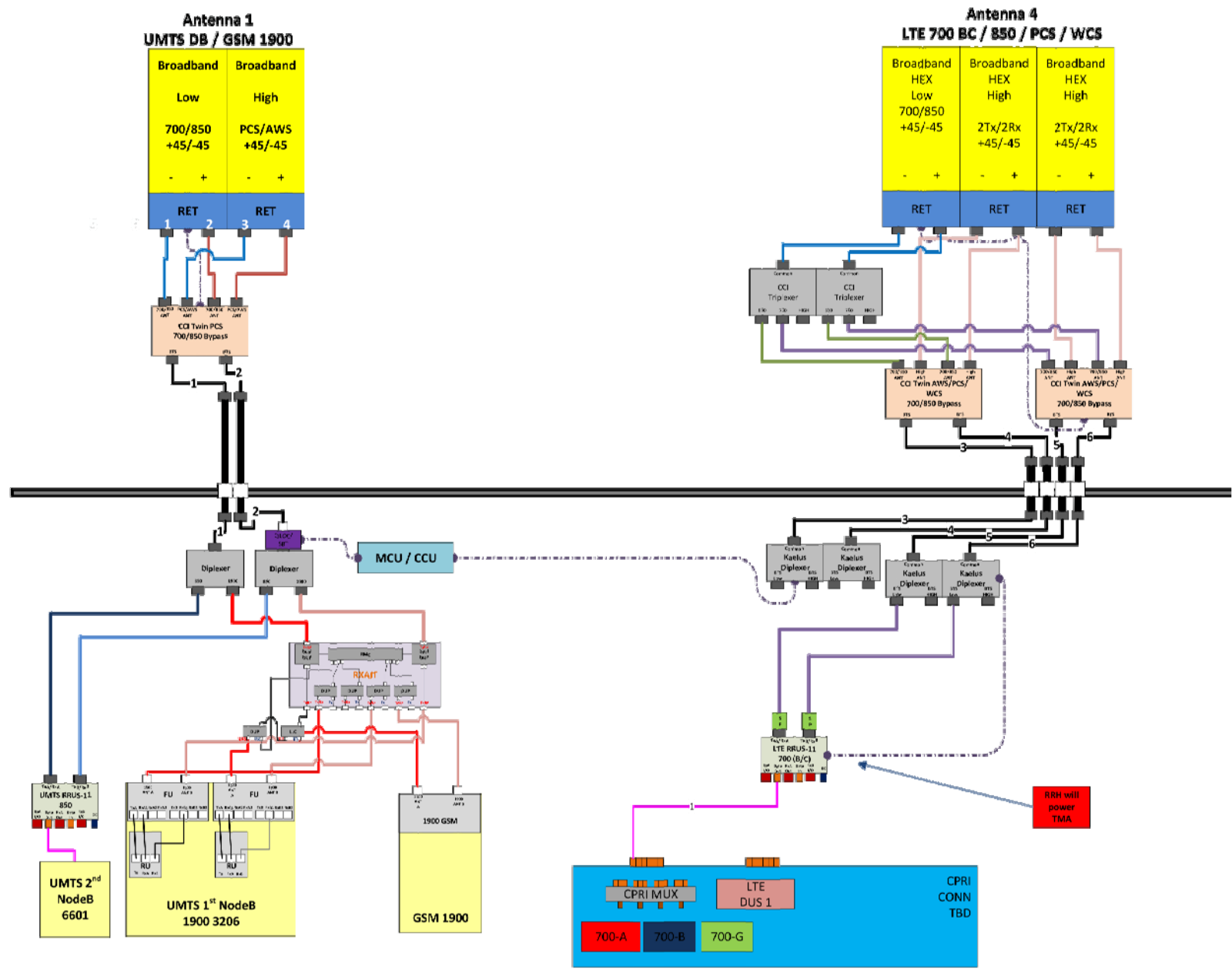
NO.	DATE	REVISIONS	BY	CHK	APP'D
5	06/09/16	ISSUED FOR CONSTRUCTION	EB	AT	DPH
4	04/06/16	ISSUED FOR CONSTRUCTION	RB	AT	DPH
3	10/23/14	ISSUED FOR CONSTRUCTION	SG	AT	DPH
2	04/29/14	ISSUED FOR CONSTRUCTION	SB	AT	DPH
1	02/24/14	ISSUED FOR CONSTRUCTION	SB	AT	DPH

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: AL

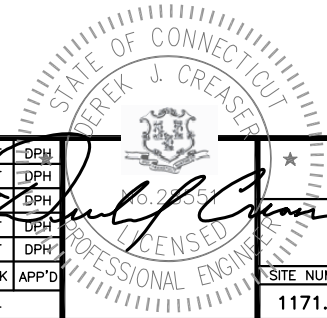


AT&T
DETAILS
(LTE)

SITE NUMBER	DRAWING NUMBER	REV
1171.05	A-3	5



RF PLUMBING DIAGRAM 1
SCALE: N.T.S. RF-1



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SALEM, NH 03079

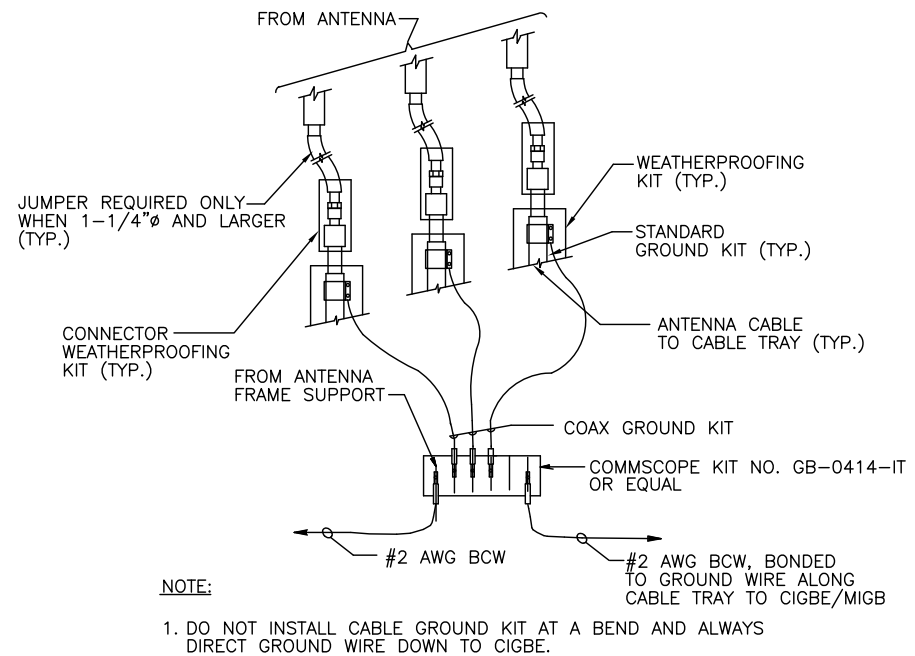
SITE NUMBER: CT1171
SITE NAME: SIMSBURY-BUSHY HILL ROAD
530 BUSHY HILL ROAD
SIMSBURY, CT 06092
HARTFORD COUNTY

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

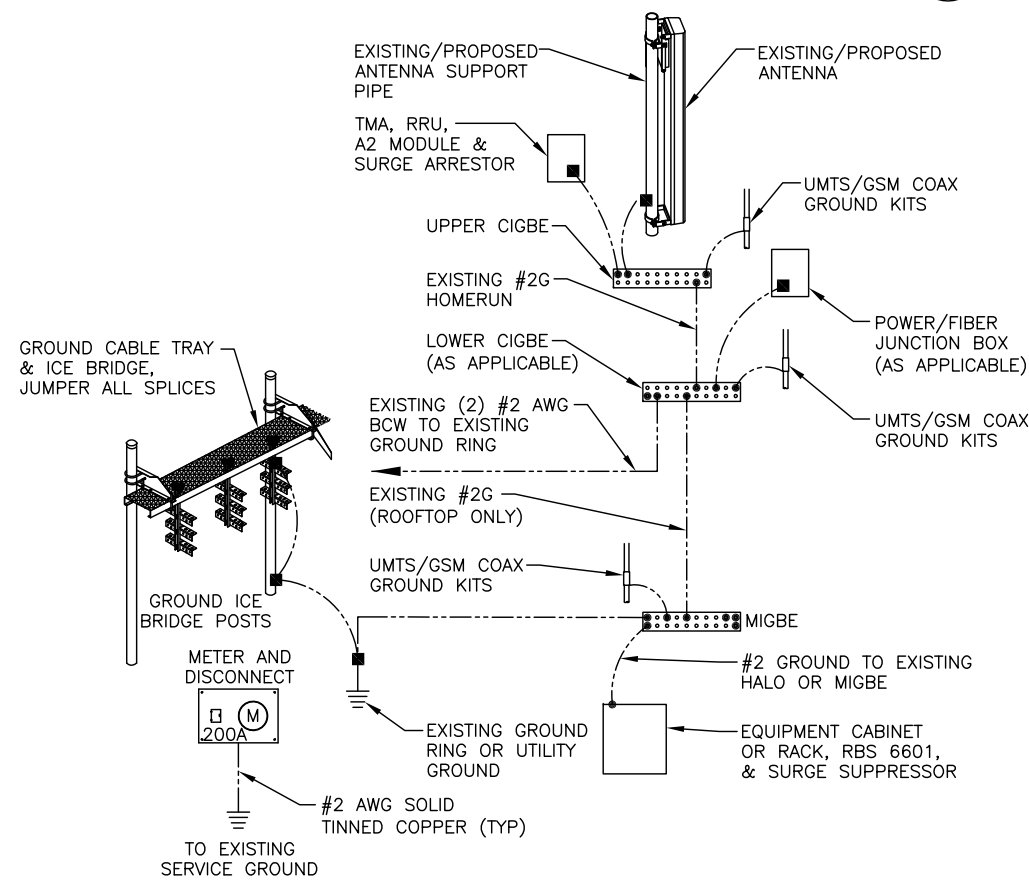
NO.	DATE	REVISIONS	BY	CHK	APP'D
5	06/09/16	ISSUED FOR CONSTRUCTION	EB	AT	DPH
4	04/06/16	ISSUED FOR CONSTRUCTION	RB	AT	DPH
3	10/23/14	ISSUED FOR CONSTRUCTION	SG	AT	DPH
2	04/29/14	ISSUED FOR CONSTRUCTION	SB	AT	DPH
1	02/24/14	ISSUED FOR CONSTRUCTION	SB	AT	DPH

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: AL

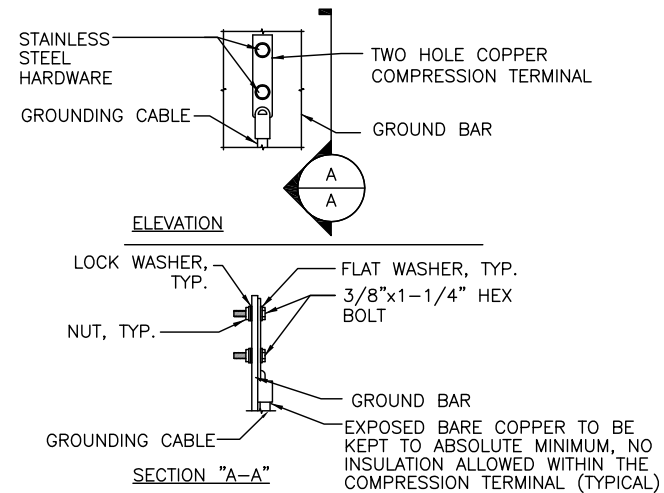
AT&T		
RF PLUMBING DIAGRAM (LTE)		
SITE NUMBER	DRAWING NUMBER	REV
1171.05	RF-1	5



GROUND WIRE TO GROUND BAR CONNECTION DETAIL 1
SCALE: N.T.S. G-1



GROUNDING RISER DIAGRAM 2
SCALE: N.T.S. G-1



- NOTE:
- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 - OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATION.
 - CADWELDED DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB

TYPICAL GROUND BAR CONNECTION DETAIL 3
SCALE: N.T.S. G-1

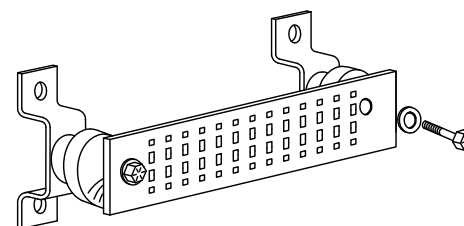
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

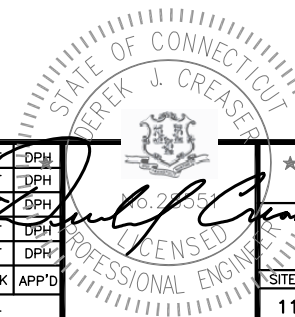
- CABLE ENTRY PORTS (HATCH PLATES) (#2)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
- +24V POWER SUPPLY RETURN BAR (#2)
- 48V POWER SUPPLY RETURN BAR (#2)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

- INTERIOR GROUND RING (#2)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
- BUILDING STEEL (IF AVAILABLE) (#2)



GROUND BAR - DETAIL 4
SCALE: N.T.S. G-1



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SALEM, NH 03079

SITE NUMBER: CT1171
SITE NAME: SIMSBURY-BUSHY HILL ROAD
530 BUSHY HILL ROAD
SIMSBURY, CT 06092
HARTFORD COUNTY

at&t
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1	02/24/14	ISSUED FOR CONSTRUCTION	SB	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: AL		

AT&T		
GROUNDING DETAILS (LTE)		
SITE NUMBER	DRAWING NUMBER	REV
1171.05	G-1	5

STRUCTURAL ANALYSIS REPORT

For

CT1171

SIMSBURY – BUSHY HILL ROAD

530 Bushy Hill Road
Simsbury, CT 06070

Antennas Enclosed within Fiberglass Shroud Secured to the Existing Flag Pole



Prepared for:



at&t

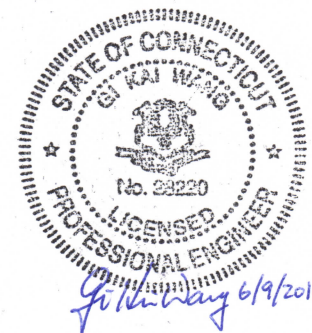
Dated: June 9, 2016

Prepared by:

Hudson
Design Group LLC



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SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by AT&T to conduct a structural evaluation of the 120' flagpole supporting the proposed AT&T antennas located at elevation 88'-98' above the ground level.

This report represents this office's findings, conclusions and recommendations pertaining to the support of AT&T's existing and proposed antennas listed below.

Record drawings of the existing flagpole and foundation prepared by Engineered Endeavors Inc., dated August 12, 2004, were available for our use. Geotechnical study prepared by Dr. Clarence Welti, PE, P.C., dated July 18, 2003, was also available and obtained for our use.

CONCLUSION SUMMARY:

Based on our evaluation, we have determined that the existing flagpole and foundation are in conformance with the ANSI/TIA-222-F Standard for the loading considered under the criteria listed in this report. The flagpole structure is rated at 81.8% - (Base Plate at EL.1.5' Controlling).



APPURTENANCES CONFIGURATION:

Tenant	Appurtenances	Elev.	Mount
	20" dia. x 10.0' Fiberglass Shroud	108'-118'	
<i>AT&T</i>	30" dia. x 10.0' Fiberglass Shroud	98'-108'	
<i>AT&T</i>	30" dia. x 10.0' Fiberglass Shroud	88'-98'	

**Proposed AT&T Appurtenances shown in Bold.*

AT&T EXISTING/PROPOSED COAX CABLES:

Tenant	Coax Cables	Elev.	Mount
<i>AT&T</i>	<i>(9) 1 1/4" Cables</i>	103'	Inside Flagpole
<i>AT&T</i>	<i>(9) 1 1/4" Cables</i>	93'	Inside Flagpole

**Proposed AT&T Coax Cables shown in Bold.*

ANALYSIS RESULTS SUMMARY:

Component	Max. Stress Ratio	Elev. of Component (ft)	Pass/Fail	Comments
Pole Section-L1	33.2 %	108.0 – 118.0	PASS	
Pole Section-L2	66.0 %	98.0 – 108.0	PASS	
Pole Section-L3	77.4 %	88.0 – 98.0	PASS	
Pole Section-L4	36.0 %	48.7 – 88.0	PASS	
Pole Section-L5	64.2 %	1.5 – 48.7	PASS	
Base Plate	81.8 %	1.5	PASS	Controlling



DESIGN CRITERIA:

1. EIA/TIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures

County: Hartford

Wind Load: 80 mph (fastest mile)

100 mph (3 second gust)

Nominal Ice Thickness: 1/2 inch

2. Approximate height above grade to proposed antennas: 88'-98'

***Calculations and referenced documents are attached.**

ASSUMPTIONS:

1. HDG did not perform any mapping of the flag pole or the spinal pipes within the flag pole shroud.
2. The appurtenances configuration is as stated in this report. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
3. The flagpole and foundation are properly constructed and maintained. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
4. The support mounts and platforms are not analyzed and are considered adequate to support the loading. The analysis is limited to the primary support structure itself.
5. All prior structural modification, if any, are assumed to be as per the data supplied (if available), and installed properly.



SUPPORT RECOMMENDATIONS:

HDG recommends that the proposed antennas and TMAs be mounted on the inside of fiberglass shroud supported by the flagpole.

Reference HDG's Latest Construction Drawings for all component and connection requirements (attached).

ONGOING AND PERIODIC INSPECTION AND MAINTENANCE:

After the Contractor has successfully completed the installation and the work has been accepted, the Owner will be responsible for the ongoing and periodic inspection and maintenance of the tower.

The owner shall refer to TIA/EIA-222-F for recommendations for maintenance and inspection. The frequency of the inspection and maintenance intervals is to be determined by the owner based upon actual site and environmental conditions. It is recommended that a complete and thorough inspection of the entire tower structural system be performed at least yearly and more frequently as conditions warrant. According to TIA/EIA-222-F section 14.1, Note 1: It is recommended that the structure be inspected after severe wind and/or ice storms or other extreme loading conditions.



Photo 1: Photo illustrating the Flagpole with Appurtenances shown.



CALCULATIONS

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
20"x10' Shroud (CT 1171)	113	30"x10' Shroud (CT 1171) (ATI - existing)	93
30"x10' Shroud (CT 1171) (ATI - existing)	103		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

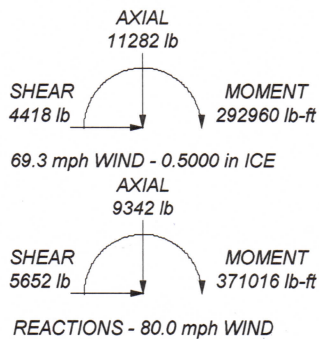
1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80.0 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 69.3 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50.0 mph wind.
5. TOWER RATING: 81.8%


Section	1	2
Length (ft)	39.32	50.82
Number of Sides	18	18
Thickness (in)	0.1875	0.1875
Socket Length (ft)	3.64	
Top Dia (in)	19.5000	24.1794
Bot Dia (in)	25.0700	31.2500
Grade	A572-65	
Weight (lb)	1759.5	2833.0

88.0 ft

48.7 ft

1.5 ft



 Hudson Design Group LLC 1600 Osgood Street Bldg. 20N Suite 3090 North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job: CT 1171 Simsbury, CT		
	Project: 120 ft Flagpole		
	Client: AT&T	Drawn by: kw	App'd:
	Code: TIA/EIA-222-F	Date: 06/09/16	Scale: NTS
	Path:	Dwg No. E-1	



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Job	CT 1171 Simsbury, CT	Page	1 of 5
Project	120 ft Flagpole	Date	10:13:28 06/09/16
Client	AT&T	Designed by	kw

Tower Input Data

There is a pole section.

This tower is designed using the TIA/EIA-222-F standard.

The following design criteria apply:

Tower is located in Hartford County, Connecticut.

Basic wind speed of 80.0 mph.

Nominal ice thickness of 0.5000 in.

Ice density of 56.0 pcf.

A wind speed of 69.3 mph is used in combination with ice.

Temperature drop of 50.0 °F.

Deflections calculated using a wind speed of 50.0 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.333.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	88.00-48.68	39.32	3.64	18	19.5000	25.0700	0.1875	0.7500	A572-65 (65 ksi)
L2	48.68-1.50	50.82		18	24.1794	31.2500	0.1875	0.7500	A572-65 (65 ksi)

Monopole Base Plate Data

Base Plate Data

Base plate is square	
Base plate is grouted	
Anchor bolt grade	A615-75
Anchor bolt size	2.2500 in
Number of bolts	4
Embedment length	72.0000 in
f_c	4.0 ksi
Grout space	3.2500 in
Base plate grade	A572-60
Base plate thickness	1.5000 in
Bolt circle diameter	39.0000 in
Outer diameter	45.0000 in
Inner diameter	21.2500 in
Base plate type	Plain Plate



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Job	CT 1171 Simsbury, CT	Page	2 of 5
Project	120 ft Flagpole	Date	10:13:28 06/09/16
Client	AT&T	Designed by	kw

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_{AA}	Weight
					No Ice	1/2" Ice	ft^2/ft	plf
1 5/8	A	No	Inside Pole	88.00 - 8.00	6	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
1 1/4 (AT&T - proposed)	A	No	Inside Pole	88.00 - 8.00	9	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
1 1/4 (AT&T - proposed)	A	No	Inside Pole	88.00 - 8.00	9	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft	C_{AA}	C_{AA}	Weight lb
			Horz Lateral ft	Vert ft			Front ft^2	Side ft^2	
20"x10' Shroud (CT 1171)	A	None			0.0000	113.00	No Ice 13.33	No Ice 13.33	900.00
							1/2" Ice 14.12	1/2" Ice 14.12	1036.45
30"x10' Shroud (CT 1171) (AT&T - existing)	A	None			0.0000	103.00	No Ice 20.00	No Ice 20.00	1200.00
							1/2" Ice 20.84	1/2" Ice 20.84	1410.77
30"x10' Shroud (CT 1171) (AT&T - existing)	A	None			0.0000	93.00	No Ice 20.00	No Ice 20.00	1200.00
							1/2" Ice 20.84	1/2" Ice 20.84	1410.77

Load Combinations

Comb. No.	Description
1	Dead Only
2	Dead+Wind 0 deg - No Ice
3	Dead+Wind 30 deg - No Ice
4	Dead+Wind 60 deg - No Ice
5	Dead+Wind 90 deg - No Ice
6	Dead+Wind 120 deg - No Ice
7	Dead+Wind 150 deg - No Ice
8	Dead+Wind 180 deg - No Ice
9	Dead+Wind 210 deg - No Ice
10	Dead+Wind 240 deg - No Ice
11	Dead+Wind 270 deg - No Ice
12	Dead+Wind 300 deg - No Ice
13	Dead+Wind 330 deg - No Ice
14	Dead+Ice+Temp
15	Dead+Wind 0 deg+Ice+Temp
16	Dead+Wind 30 deg+Ice+Temp
17	Dead+Wind 60 deg+Ice+Temp
18	Dead+Wind 90 deg+Ice+Temp
19	Dead+Wind 120 deg+Ice+Temp
20	Dead+Wind 150 deg+Ice+Temp
21	Dead+Wind 180 deg+Ice+Temp
22	Dead+Wind 210 deg+Ice+Temp
23	Dead+Wind 240 deg+Ice+Temp



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Job	CT 1171 Simsbury, CT	Page	3 of 5
Project	120 ft Flagpole	Date	10:13:28 06/09/16
Client	AT&T	Designed by	kw

Comb. No.	Description
24	Dead+Wind 270 deg+Ice+Temp
25	Dead+Wind 300 deg+Ice+Temp
26	Dead+Wind 330 deg+Ice+Temp
27	Dead+Wind 0 deg - Service
28	Dead+Wind 30 deg - Service
29	Dead+Wind 60 deg - Service
30	Dead+Wind 90 deg - Service
31	Dead+Wind 120 deg - Service
32	Dead+Wind 150 deg - Service
33	Dead+Wind 180 deg - Service
34	Dead+Wind 210 deg - Service
35	Dead+Wind 240 deg - Service
36	Dead+Wind 270 deg - Service
37	Dead+Wind 300 deg - Service
38	Dead+Wind 330 deg - Service

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	18	11281.95	-4417.87	0.00
	Max. H _x	11	9342.10	5652.31	0.00
	Max. H _z	2	9342.10	0.00	5652.31
	Max. M _x	2	371015.08	0.00	5652.31
	Max. M _z	5	371015.08	-5652.31	0.00
	Max. Torsion	4	0.00	-4895.04	2826.15
	Min. Vert	1	9342.10	0.00	0.00
	Min. H _x	5	9342.10	-5652.31	0.00
	Min. H _z	8	9342.10	0.00	-5652.31
	Min. M _x	8	-371015.08	0.00	-5652.31
	Min. M _z	11	-371015.08	5652.31	0.00
	Min. Torsion	6	-0.00	-4895.04	-2826.15

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
Dead Only	9342.10	0.00	0.00	0.00	0.00	0.00
Dead+Wind 0 deg - No Ice	9342.10	0.00	-5652.31	-371015.08	0.00	0.00
Dead+Wind 30 deg - No Ice	9342.10	2826.15	-4895.04	-321309.60	-185508.18	0.00
Dead+Wind 60 deg - No Ice	9342.10	4895.04	-2826.15	-185508.18	-321309.60	-0.00
Dead+Wind 90 deg - No Ice	9342.10	5652.31	0.00	0.00	-371015.08	0.00
Dead+Wind 120 deg - No Ice	9342.10	4895.04	2826.15	185508.18	-321309.60	0.00
Dead+Wind 150 deg - No Ice	9342.10	2826.15	4895.04	321309.60	-185508.18	-0.00
Dead+Wind 180 deg - No Ice	9342.10	0.00	5652.31	371015.08	0.00	0.00
Dead+Wind 210 deg - No Ice	9342.10	-2826.15	4895.04	321309.60	185508.18	0.00
Dead+Wind 240 deg - No Ice	9342.10	-4895.04	2826.15	185508.18	321309.60	-0.00
Dead+Wind 270 deg - No Ice	9342.10	-5652.31	0.00	0.00	371015.08	0.00
Dead+Wind 300 deg - No Ice	9342.10	-4895.04	-2826.15	-185508.18	321309.60	0.00
Dead+Wind 330 deg - No Ice	9342.10	-2826.15	-4895.04	-321309.60	185508.18	-0.00
Dead+Ice+Temp	11281.95	0.00	0.00	0.00	0.00	0.00



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Job	CT 1171 Simsbury, CT	Page	4 of 5
Project	120 ft Flagpole	Date	10:13:28 06/09/16
Client	AT&T	Designed by	kw

Load Combination	Vertical	Shear _x	Shear _z	Overturning Moment, M _x	Overturning Moment, M _z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead+Wind 0 deg+Ice+Temp	11281.95	0.00	-4417.87	-292959.56	0.00	0.00
Dead+Wind 30 deg+Ice+Temp	11281.95	2208.94	-3825.99	-253710.42	-146479.78	0.00
Dead+Wind 60 deg+Ice+Temp	11281.95	3825.99	-2208.94	-146479.78	-253710.42	-0.00
Dead+Wind 90 deg+Ice+Temp	11281.95	4417.87	0.00	0.00	-292959.56	0.00
Dead+Wind 120 deg+Ice+Temp	11281.95	3825.99	2208.94	146479.78	-253710.42	0.00
Dead+Wind 150 deg+Ice+Temp	11281.95	2208.94	3825.99	253710.42	-146479.78	-0.00
Dead+Wind 180 deg+Ice+Temp	11281.95	0.00	4417.87	292959.56	0.00	0.00
Dead+Wind 210 deg+Ice+Temp	11281.95	-2208.94	3825.99	253710.42	146479.78	0.00
Dead+Wind 240 deg+Ice+Temp	11281.95	-3825.99	2208.94	146479.78	253710.42	-0.00
Dead+Wind 270 deg+Ice+Temp	11281.95	-4417.87	0.00	0.00	292959.56	0.00
Dead+Wind 300 deg+Ice+Temp	11281.95	-3825.99	-2208.94	-146479.78	253710.42	0.00
Dead+Wind 330 deg+Ice+Temp	11281.95	-2208.94	-3825.99	-253710.42	146479.78	-0.00
Dead+Wind 0 deg - Service	9342.10	0.00	-2207.93	-144982.66	0.00	0.00
Dead+Wind 30 deg - Service	9342.10	1103.97	-1912.13	-125558.67	-72491.33	0.00
Dead+Wind 60 deg - Service	9342.10	1912.13	-1103.97	-72491.33	-125558.67	-0.00
Dead+Wind 90 deg - Service	9342.10	2207.93	0.00	0.00	-144982.66	0.00
Dead+Wind 120 deg - Service	9342.10	1912.13	1103.97	72491.33	-125558.67	0.00
Dead+Wind 150 deg - Service	9342.10	1103.97	1912.13	125558.67	-72491.33	-0.00
Dead+Wind 180 deg - Service	9342.10	0.00	2207.93	144982.66	0.00	0.00
Dead+Wind 210 deg - Service	9342.10	-1103.97	1912.13	125558.67	72491.33	0.00
Dead+Wind 240 deg - Service	9342.10	-1912.13	1103.97	72491.33	125558.67	-0.00
Dead+Wind 270 deg - Service	9342.10	-2207.93	0.00	0.00	144982.66	0.00
Dead+Wind 300 deg - Service	9342.10	-1912.13	-1103.97	-72491.33	125558.67	0.00
Dead+Wind 330 deg - Service	9342.10	-1103.97	-1912.13	-125558.67	72491.33	-0.00

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
1	0.00	-9342.10	0.00	0.00	9342.10	0.00	0.000%
2	0.00	-9342.10	-5652.31	0.00	9342.10	5652.31	0.000%
3	2826.15	-9342.10	-4895.04	-2826.15	9342.10	4895.04	0.000%
4	4895.04	-9342.10	-2826.15	-4895.04	9342.10	2826.15	0.000%
5	5652.31	-9342.10	0.00	-5652.31	9342.10	0.00	0.000%
6	4895.04	-9342.10	2826.15	-4895.04	9342.10	-2826.15	0.000%
7	2826.15	-9342.10	4895.04	-2826.15	9342.10	-4895.04	0.000%
8	0.00	-9342.10	5652.31	0.00	9342.10	-5652.31	0.000%
9	-2826.15	-9342.10	4895.04	2826.15	9342.10	-4895.04	0.000%
10	-4895.04	-9342.10	2826.15	4895.04	9342.10	-2826.15	0.000%
11	-5652.31	-9342.10	0.00	5652.31	9342.10	0.00	0.000%
12	-4895.04	-9342.10	-2826.15	4895.04	9342.10	2826.15	0.000%
13	-2826.15	-9342.10	-4895.04	2826.15	9342.10	4895.04	0.000%
14	0.00	-11281.95	0.00	0.00	11281.95	0.00	0.000%
15	0.00	-11281.95	-4417.87	0.00	11281.95	4417.87	0.000%
16	2208.94	-11281.95	-3825.99	-2208.94	11281.95	3825.99	0.000%
17	3825.99	-11281.95	-2208.94	-3825.99	11281.95	2208.94	0.000%
18	4417.87	-11281.95	0.00	-4417.87	11281.95	0.00	0.000%
19	3825.99	-11281.95	2208.94	-3825.99	11281.95	-2208.94	0.000%
20	2208.94	-11281.95	3825.99	-2208.94	11281.95	-3825.99	0.000%
21	0.00	-11281.95	4417.87	0.00	11281.95	-4417.87	0.000%
22	-2208.94	-11281.95	3825.99	2208.94	11281.95	-3825.99	0.000%
23	-3825.99	-11281.95	2208.94	3825.99	11281.95	-2208.94	0.000%
24	-4417.87	-11281.95	0.00	4417.87	11281.95	0.00	0.000%
25	-3825.99	-11281.95	-2208.94	3825.99	11281.95	2208.94	0.000%
26	-2208.94	-11281.95	-3825.99	2208.94	11281.95	3825.99	0.000%
27	0.00	-9342.10	-2207.93	0.00	9342.10	2207.93	0.000%



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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
28	1103.97	-9342.10	-1912.13	-1103.97	9342.10	1912.13	0.000%
29	1912.13	-9342.10	-1103.97	-1912.13	9342.10	1103.97	0.000%
30	2207.93	-9342.10	0.00	-2207.93	9342.10	0.00	0.000%
31	1912.13	-9342.10	1103.97	-1912.13	9342.10	-1103.97	0.000%
32	1103.97	-9342.10	1912.13	-1103.97	9342.10	-1912.13	0.000%
33	0.00	-9342.10	2207.93	0.00	9342.10	-2207.93	0.000%
34	-1103.97	-9342.10	1912.13	1103.97	9342.10	-1912.13	0.000%
35	-1912.13	-9342.10	1103.97	1912.13	9342.10	-1103.97	0.000%
36	-2207.93	-9342.10	0.00	2207.93	9342.10	0.00	0.000%
37	-1912.13	-9342.10	-1103.97	1912.13	9342.10	1103.97	0.000%
38	-1103.97	-9342.10	-1912.13	1103.97	9342.10	1912.13	0.000%

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	88 - 48.68	12.4110	27	1.1918	0.0000
L2	52.32 - 1.5	4.7029	27	0.8253	0.0000

Critical Deflections and Radius of Curvature - Service Wind

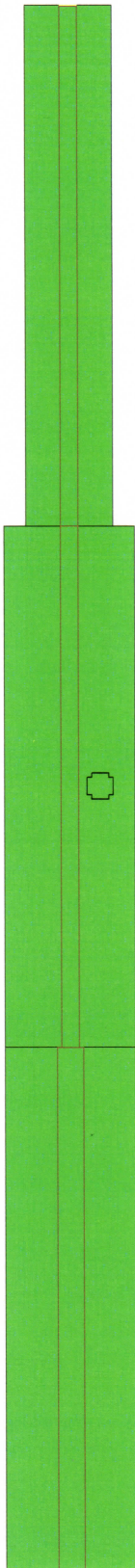
Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
113.00	20"x10' Shroud (CT 1171)	27	12.4110	1.1918	0.0000	20005
103.00	30"x10' Shroud (CT 1171)	27	12.4110	1.1918	0.0000	20005
93.00	30"x10' Shroud (CT 1171)	27	12.4110	1.1918	0.0000	20005

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	SF*P _{allow} lb	% Capacity	Pass Fail	
L1	88 - 48.68	Pole	TP25.07x19.5x0.1875	1	-5390.19	753880.78	36.0	Pass	
L2	48.68 - 1.5	Pole	TP31.25x24.1794x0.1875	2	-9336.34	918015.73	64.2	Pass	
							Summary		
							Pole (L2)	64.2	Pass
							Base Plate	81.8	Pass
							RATING =	81.8	Pass

118.0 ft

Section	1						
Size	P4x.337						
Length (ft)	10.00						
Grade	A53-B-35						
Weight (lb)	150.0						
							108.0 ft
	2	4" round bar	10.00	A572-50	427.6		
							98.0 ft
	3	5" round bar	10.00		668.1		
							88.0 ft



DESIGNED APPURTENANCE LOADING


TYPE	ELEVATION	TYPE	ELEVATION
20"x10' Shroud (CT 1171)	113	30"x10' Shroud (CT 1171) (ATI - existing)	93
30"x10' Shroud (CT 1171) (ATI - existing)	103		


MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-35	35 ksi	63 ksi	A572-50	50 ksi	65 ksi

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80.0 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 69.3 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50.0 mph wind.

 <p>Hudson Design Group LLC 1600 Osgood Street Bldg. 20N Suite 3090 North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586</p>	<p>Job: CT 1171 Simsbury, CT</p>		
	<p>Project: 120 ft Flagpole</p>		
	<p>Client: AT&T</p>	<p>Drawn by: kw</p>	<p>App'd:</p>
	<p>Code: TIA/EIA-222-F</p>	<p>Date: 06/09/16</p>	<p>Scale: NTS</p>
<p>Path:</p>	<p>Dwg No. E-1</p>		

 Hudson Design Group LLC 1600 Osgood Street Bldg. 20N Suite 3090 North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Job	CT 1171 Simsbury, CT	Page	1 of 5
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Tower Input Data

There is a pole section.

This tower is designed using the TIA/EIA-222-F standard.

The following design criteria apply:

Tower is located in Hartford County, Connecticut.

Basic wind speed of 80.0 mph.

Nominal ice thickness of 0.5000 in.

Ice density of 56.0 pcf.

A wind speed of 69.3 mph is used in combination with ice.

Temperature drop of 50.0 °F.

Deflections calculated using a wind speed of 50.0 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.333.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Pole Section Geometry

Section	Elevation <i>ft</i>	Section Length <i>ft</i>	Pole Size	Pole Grade	Socket Length <i>ft</i>
L1	118.00-108.00	10.00	P4x.337	A53-B-35 (35 ksi)	
L2	108.00-98.00	10.00	4" round bar	A572-50 (50 ksi)	
L3	98.00-88.00	10.00	5" round bar	A572-50 (50 ksi)	

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement <i>ft</i>	Total Number	<i>C_AA_A</i> <i>ft²/ft</i>	Weight <i>plf</i>
1 5/8	A	No	Inside Pole	113.00 - 88.00	6	No Ice 1/2" Ice	0.00 0.00
1 1/4 (AT&T - proposed)	A	No	Inside Pole	103.00 - 88.00	9	No Ice 1/2" Ice	0.00 0.66
1 1/4 (AT&T - proposed)	A	No	Inside Pole	93.00 - 88.00	9	No Ice 1/2" Ice	0.00 0.66

Discrete Tower Loads



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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			ft ft ft	°	ft	ft ²	ft ²	lb
20"x10' Shroud (CT 1171)	A	None		0.0000	113.00	No Ice 1/2" Ice	13.33 14.12	900.00 1036.45
30"x10' Shroud (CT 1171) (AT&T - existing)	A	None		0.0000	103.00	No Ice 1/2" Ice	20.00 20.84	1200.00 1410.77
30"x10' Shroud (CT 1171) (AT&T - existing)	A	None		0.0000	93.00	No Ice 1/2" Ice	20.00 20.84	1200.00 1410.77

Load Combinations

Comb. No.	Description
1	Dead Only
2	Dead+Wind 0 deg - No Ice
3	Dead+Wind 30 deg - No Ice
4	Dead+Wind 60 deg - No Ice
5	Dead+Wind 90 deg - No Ice
6	Dead+Wind 120 deg - No Ice
7	Dead+Wind 150 deg - No Ice
8	Dead+Wind 180 deg - No Ice
9	Dead+Wind 210 deg - No Ice
10	Dead+Wind 240 deg - No Ice
11	Dead+Wind 270 deg - No Ice
12	Dead+Wind 300 deg - No Ice
13	Dead+Wind 330 deg - No Ice
14	Dead+Ice+Temp
15	Dead+Wind 0 deg+Ice+Temp
16	Dead+Wind 30 deg+Ice+Temp
17	Dead+Wind 60 deg+Ice+Temp
18	Dead+Wind 90 deg+Ice+Temp
19	Dead+Wind 120 deg+Ice+Temp
20	Dead+Wind 150 deg+Ice+Temp
21	Dead+Wind 180 deg+Ice+Temp
22	Dead+Wind 210 deg+Ice+Temp
23	Dead+Wind 240 deg+Ice+Temp
24	Dead+Wind 270 deg+Ice+Temp
25	Dead+Wind 300 deg+Ice+Temp
26	Dead+Wind 330 deg+Ice+Temp
27	Dead+Wind 0 deg - Service
28	Dead+Wind 30 deg - Service
29	Dead+Wind 60 deg - Service
30	Dead+Wind 90 deg - Service
31	Dead+Wind 120 deg - Service
32	Dead+Wind 150 deg - Service
33	Dead+Wind 180 deg - Service
34	Dead+Wind 210 deg - Service
35	Dead+Wind 240 deg - Service
36	Dead+Wind 270 deg - Service
37	Dead+Wind 300 deg - Service
38	Dead+Wind 330 deg - Service



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Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	15	5470.15	0.00	1864.12
	Max. H _x	11	4820.52	2286.61	0.00
	Max. H _z	2	4820.52	0.00	2286.61
	Max. M _x	2	34554.61	0.00	2286.61
	Max. M _z	5	34554.61	-2286.61	0.00
	Max. Torsion	4	0.00	-1980.26	1143.31
	Min. Vert	1	4820.52	0.00	0.00
	Min. H _x	5	4820.52	-2286.61	0.00
	Min. H _z	8	4820.52	0.00	-2286.61
	Min. M _x	8	-34554.61	0.00	-2286.61
	Min. M _z	11	-34554.61	2286.61	0.00
	Min. Torsion	6	-0.00	-1980.26	-1143.31

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
Dead Only	4820.52	0.00	0.00	0.00	0.00	0.00
Dead+Wind 0 deg - No Ice	4820.52	0.00	-2286.61	-34554.61	0.00	0.00
Dead+Wind 30 deg - No Ice	4820.52	1143.31	-1980.26	-29925.18	-17277.31	0.00
Dead+Wind 60 deg - No Ice	4820.52	1980.26	-1143.31	-17277.31	-29925.18	-0.00
Dead+Wind 90 deg - No Ice	4820.52	2286.61	0.00	0.00	-34554.61	0.00
Dead+Wind 120 deg - No Ice	4820.52	1980.26	1143.31	17277.31	-29925.18	0.00
Dead+Wind 150 deg - No Ice	4820.52	1143.31	1980.26	29925.18	-17277.31	-0.00
Dead+Wind 180 deg - No Ice	4820.52	0.00	2286.61	34554.61	0.00	0.00
Dead+Wind 210 deg - No Ice	4820.52	-1143.31	1980.26	29925.18	17277.31	0.00
Dead+Wind 240 deg - No Ice	4820.52	-1980.26	1143.31	17277.31	29925.18	-0.00
Dead+Wind 270 deg - No Ice	4820.52	-2286.61	0.00	0.00	34554.61	0.00
Dead+Wind 300 deg - No Ice	4820.52	-1980.26	-1143.31	-17277.31	29925.18	0.00
Dead+Wind 330 deg - No Ice	4820.52	-1143.31	-1980.26	-29925.18	17277.31	-0.00
Dead+Ice+Temp	5470.15	0.00	0.00	0.00	0.00	0.00
Dead+Wind 0 deg+Ice+Temp	5470.15	0.00	-1864.12	-28543.49	0.00	0.00
Dead+Wind 30 deg+Ice+Temp	5470.15	932.06	-1614.37	-24719.39	-14271.75	0.00
Dead+Wind 60 deg+Ice+Temp	5470.15	1614.37	-932.06	-14271.75	-24719.39	-0.00
Dead+Wind 90 deg+Ice+Temp	5470.15	1864.12	0.00	0.00	-28543.49	0.00
Dead+Wind 120 deg+Ice+Temp	5470.15	1614.37	932.06	14271.75	-24719.39	0.00
Dead+Wind 150 deg+Ice+Temp	5470.15	932.06	1614.37	24719.39	-14271.75	-0.00
Dead+Wind 180 deg+Ice+Temp	5470.15	0.00	1864.12	28543.49	0.00	0.00
Dead+Wind 210 deg+Ice+Temp	5470.15	-932.06	1614.37	24719.39	14271.75	0.00
Dead+Wind 240 deg+Ice+Temp	5470.15	-1614.37	932.06	14271.75	24719.39	-0.00
Dead+Wind 270 deg+Ice+Temp	5470.15	-1864.12	0.00	0.00	28543.49	0.00
Dead+Wind 300 deg+Ice+Temp	5470.15	-1614.37	-932.06	-14271.75	24719.39	0.00
Dead+Wind 330 deg+Ice+Temp	5470.15	-932.06	-1614.37	-24719.39	14271.75	-0.00
Dead+Wind 0 deg - Service	4820.52	0.00	-897.37	-13530.90	0.00	0.00
Dead+Wind 30 deg - Service	4820.52	448.69	-777.15	-11718.10	-6765.45	0.00
Dead+Wind 60 deg - Service	4820.52	777.15	-448.69	-6765.45	-11718.10	-0.00
Dead+Wind 90 deg - Service	4820.52	897.37	0.00	0.00	-13530.90	0.00
Dead+Wind 120 deg - Service	4820.52	777.15	448.69	6765.45	-11718.10	0.00
Dead+Wind 150 deg - Service	4820.52	448.69	777.15	11718.10	-6765.45	-0.00
Dead+Wind 180 deg - Service	4820.52	0.00	897.37	13530.90	0.00	0.00
Dead+Wind 210 deg - Service	4820.52	-448.69	777.15	11718.10	6765.45	0.00
Dead+Wind 240 deg - Service	4820.52	-777.15	448.69	6765.45	11718.10	-0.00



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Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
Dead+Wind 270 deg - Service	4820.52	-897.37	0.00	0.00	13530.90	0.00
Dead+Wind 300 deg - Service	4820.52	-777.15	-448.69	-6765.45	11718.10	0.00
Dead+Wind 330 deg - Service	4820.52	-448.69	-777.15	-11718.10	6765.45	-0.00

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
1	0.00	-4820.52	0.00	0.00	4820.52	0.00	0.000%
2	0.00	-4820.52	-2286.61	0.00	4820.52	2286.61	0.000%
3	1143.31	-4820.52	-1980.26	-1143.31	4820.52	1980.26	0.000%
4	1980.26	-4820.52	-1143.31	-1980.26	4820.52	1143.31	0.000%
5	2286.61	-4820.52	0.00	-2286.61	4820.52	0.00	0.000%
6	1980.26	-4820.52	1143.31	-1980.26	4820.52	-1143.31	0.000%
7	1143.31	-4820.52	1980.26	-1143.31	4820.52	-1980.26	0.000%
8	0.00	-4820.52	2286.61	0.00	4820.52	-2286.61	0.000%
9	-1143.31	-4820.52	1980.26	1143.31	4820.52	-1980.26	0.000%
10	-1980.26	-4820.52	1143.31	1980.26	4820.52	-1143.31	0.000%
11	-2286.61	-4820.52	0.00	2286.61	4820.52	0.00	0.000%
12	-1980.26	-4820.52	-1143.31	1980.26	4820.52	1143.31	0.000%
13	-1143.31	-4820.52	-1980.26	1143.31	4820.52	1980.26	0.000%
14	0.00	-5470.15	0.00	0.00	5470.15	0.00	0.000%
15	0.00	-5470.15	-1864.12	0.00	5470.15	1864.12	0.000%
16	932.06	-5470.15	-1614.37	-932.06	5470.15	1614.37	0.000%
17	1614.37	-5470.15	-932.06	-1614.37	5470.15	932.06	0.000%
18	1864.12	-5470.15	0.00	-1864.12	5470.15	0.00	0.000%
19	1614.37	-5470.15	932.06	-1614.37	5470.15	-932.06	0.000%
20	932.06	-5470.15	1614.37	-932.06	5470.15	-1614.37	0.000%
21	0.00	-5470.15	1864.12	0.00	5470.15	-1864.12	0.000%
22	-932.06	-5470.15	1614.37	932.06	5470.15	-1614.37	0.000%
23	-1614.37	-5470.15	932.06	1614.37	5470.15	-932.06	0.000%
24	-1864.12	-5470.15	0.00	1864.12	5470.15	0.00	0.000%
25	-1614.37	-5470.15	-932.06	1614.37	5470.15	932.06	0.000%
26	-932.06	-5470.15	-1614.37	932.06	5470.15	1614.37	0.000%
27	0.00	-4820.52	-897.37	0.00	4820.52	897.37	0.000%
28	448.69	-4820.52	-777.15	-448.69	4820.52	777.15	0.000%
29	777.15	-4820.52	-448.69	-777.15	4820.52	448.69	0.000%
30	897.37	-4820.52	0.00	-897.37	4820.52	0.00	0.000%
31	777.15	-4820.52	448.69	-777.15	4820.52	-448.69	0.000%
32	448.69	-4820.52	777.15	-448.69	4820.52	-777.15	0.000%
33	0.00	-4820.52	897.37	0.00	4820.52	-897.37	0.000%
34	-448.69	-4820.52	777.15	448.69	4820.52	-777.15	0.000%
35	-777.15	-4820.52	448.69	777.15	4820.52	-448.69	0.000%
36	-897.37	-4820.52	0.00	897.37	4820.52	0.00	0.000%
37	-777.15	-4820.52	-448.69	777.15	4820.52	448.69	0.000%
38	-448.69	-4820.52	-777.15	448.69	4820.52	777.15	0.000%

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
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Hudson Design Group LLC
 1600 Osgood Street Bldg. 20N Suite 3090
 North Andover, MA 01845
 Phone: (978) 557-5553
 FAX: (978) 336-5586

Job	CT 1171 Simsbury, CT	Page	5 of 5
Project	120 ft Flagpole	Date	08:47:11 06/09/16
Client	AT&T	Designed by	kw

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	118 - 108	7.3396	27	1.7129	0.0000
L2	108 - 98	3.7974	27	1.6015	0.0000
L3	98 - 88	1.0329	27	0.8682	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
113.00	20"x10' Shroud (CT 1171)	27	5.5340	1.7160	0.0000	4356
103.00	30"x10' Shroud (CT 1171)	27	2.2270	1.2916	0.0000	798
93.00	30"x10' Shroud (CT 1171)	28	0.3627	0.4320	0.0000	976

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	SF*P _{allow} lb	% Capacity	Pass Fail
L1	118 - 108	Pole	P4x.337	1	-1032.76	123377.41	33.2	Pass
L2	108 - 98	Pole	4" round bar	2	-2737.78	502528.98	66.0	Pass
L3	98 - 88	Pole	5" round bar	3	-4814.25	785202.28	77.4	Pass
Summary								
Pole (L3)							77.4	Pass
RATING =							77.4	Pass

Monopole Pier and Pad Foundation

BU # : CT 1171

Site Name:

App. Number:

TIA-222 Revision: F

Design Reactions		
Shear, S:	5.7	kips
Moment, M:	371	ft-kips
Tower Height, H:	120	ft
Tower Weight, Wt:	9.3	kips
Base Diameter, BD:	2.60	ft

Foundation Dimensions		
Depth, D:	6.5	ft
Pad Width, W:	12.5	ft
Neglected Depth, N:	0	ft
Thickness, T:	3.00	ft
Pier Diameter, Pd:	5.60	ft
Ext. Above Grade, E:	1.00	ft
BP Dist. Above Pier:	3	in.
Clear Cover, Cc:	3.0	in

Soil Properties		
Soil Unit Weight, γ :	0.125	kcf
Ult. Bearing Capacity, Bc:	6.0	ksf
Angle of Friction, Φ :	34	deg
Cohesion, Co:	0.000	ksf
Passive Pressure, Pp:	0.000	ksf
Base Friction, μ :	0.60	

Material Properties		
Rebar Yield Strength, Fy:	60000	psi
Concrete Strength, F'c:	4000	psi
Concrete Unit Weight, δ_c :	0.150	kcf
Seismic Zone, z:	1	

Rebar Properties		
Pier Rebar Size, Sp:	8	
Pier Rebar Quantity, mp:	24	23
Pad Rebar Size, Spad:	8	
Pad Rebar Quantity, mpad:	13	7
Pier Tie Size, St:	4	3
Tie Quantity, mt:	5	6

Design Checks			
	Capacity/ Availability	Demand/ Limits	Check
<i>Req'd Pier Diam.(ft)</i>	5.6	4.1	OK
<i>Overturning (ft-kips)</i>	496.29	371.00	74.8%
<i>Shear Capacity (kips)</i>	54.87	5.70	10.4%
<i>Bearing (ksf)</i>	4.50	2.69	59.7%
<i>Pad Shear - 1-way (kips)</i>	462.48	28.57	6.2%
<i>Pad Shear - 2-way (kips)</i>	1931.43	48.11	2.5%
<i>Pad Moment Capacity (k-ft)</i>	1474.07	106.37	7.2%
<i>Pier Moment Capacity (k-ft)</i>	9815.92	396.65	4.0%

Town of Simsbury

Geographic Information System (GIS)



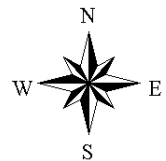
Date Printed: 6/2/2016



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Simsbury and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 200 feet



The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2012.



Information on the Property Records for the Municipality of Simsbury was last updated on 6/2/2016.

Parcel Information

Location:	530 BUSHY HILL ROAD	Property Use:	Retail	Primary Use:	Community Shopping Center
Unique ID:	31116200	Map Block Lot:	B20 508 001-B	Acres:	16.40
490 Acres:	0.00	Zone:	B-3	Volume / Page:	0676/0582
Developers Map / Lot:		Census:	4661020		

Value Information

	Appraised Value	70% Assessed Value
Land	8,200,000	5,740,000

	Appraised Value	70% Assessed Value
Buildings	22,678,000	15,874,600
Detached Outbuildings	2,622,000	1,835,400
Total	33,500,000	23,450,000

Owner's Information

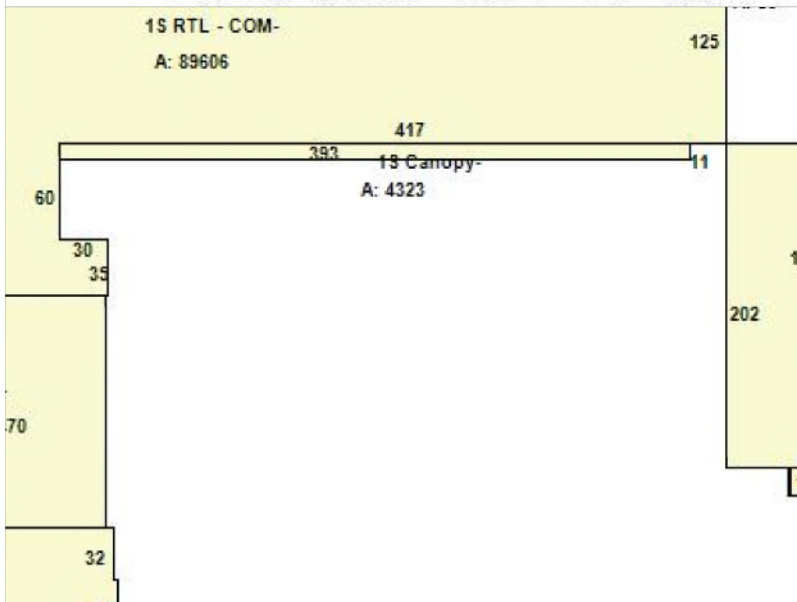
Owner's Data

E AND A/ I AND G SIMSBURY COMMONS LP
PO BOX 528
COLUMBIA SC 29202

Building 1



B20-508-001-B 05/17/2012



Category:	Retail	Use:	Community Shopping Center	Stories:	1.00
Above Grade:	173,538	Below Grade:	24,032	Below Grade Finish:	24,032
Construction:	Good/Very Good	Year Built:	1972	Heating:	FHA

Fuel:		Cooling Percent:	88%	Siding:	Stucco
Roof Material:	Compo_Built-Up	Beds/Units:	0		

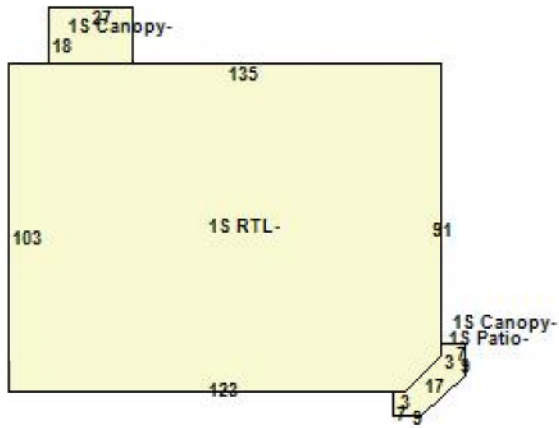
Special Features

Commercial Elevator	1
Wet Sprinklers	173538

Attached Components

Type:	Year Built:	Area:
Canopy Canopy	2000	300
Canopy Canopy	1999	1,350
Canopy Canopy	2000	4,323
Canopy Canopy	1972	156
Finished Mezzanine Mezzanine	1999	5,846
Comm Concrete/Masonry Patio	2000	80
Comm Concrete/Masonry Patio	1999	1,350
Comm Flagstone Patio	1972	156

Building 2



Category:	Retail	Use:	Drug Store	Stories:	1.00
Above Grade:	13,833	Below Grade:	0	Below Grade Finish:	0
Construction:	Very Good	Year Built:	1999	Heating:	FHA
Fuel:	Heat Pump	Cooling Percent:	85%	Siding:	Concrete Block
Roof Material:	Compo_Built-Up	Beds/Units:	0		

Special Features

Wet Sprinklers	13833
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Attached Components

Type:	Year Built:	Area:
Canopy Canopy	1999	247
Canopy Canopy	1999	486
Comm Concrete/Masonry Patio	1999	246

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
Paving Paving	2000			527,000

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price
E AND A/I I AND G COMMONS LP	0676	0582	11/10/2004		No	\$0
SIMSBURY COMMONS SOUTH E&A LLC	0595	0584	11/21/2002	Quit Claim	No	\$24,467,182
AVON SIMSBURY MALL ASSOCIATES	0444	0321	07/05/1995	Warranty Deed	No	\$0