



August 25, 2014

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

Re: Notice of Exempt Modification
Proposal to Add Three (3) Remote Radio Heads
Property Address: 1233 Wolcott Road, Wolcott, CT 06716 (the "Property")
Applicant: New Cingular Wireless PCS, LLC ("AT&T")

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 350-foot Self Support tower location on the Property, owned by SBA Structures, Inc. (the "Tower"). AT&T's facility consists of nine (9) wireless telecommunication antennas at a height of 188 feet.

The Connecticut Siting Council (the "Council") approved AT&T's use of the tower in the following prior decisions; EM-AT&T-166-020626, EM-CING-166-040121, EM-CING-166-070815 and EM-AT&T-166-120601. In its decision dated June 22, 2012, (the "Decision"), the Council approved AT&T to install six (6) Remote Radio Heads ("RRUs"), but AT&T installed only three (3) RRUs. AT&T now intends to install the remaining RRUs to complete the installation. This exempt modification notification is necessary because the Decision is over one year old. Please refer to Tab 1 for further specifications of the RRUs.

Please accept this correspondence as notification pursuant to R.C.S.A. §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 Thomas G. Dunn, Mayor for the Town of Wolcott, 10 Kenea Avenue, Wolcott, CT 06716 and to the land owner, SBA Structures, Inc. 5900 Broken Sound Parkway N.W., 2nd Floor Boca Raton, FL 33487-2797.

The planned modifications to AT&T's 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 Tower. AT&T's new RRUs will be installed at or below the height of its existing antennas currently on the Tower.

33 Boston Post Road West, Marlborough, Massachusetts 01752
p: 508.954.7702 • adam.brillard@smartlinkllc.com
www.smartlinkllc.com



2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require an extension of the site boundary.
3. The proposed modifications will not increase the noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A RF emissions calculation for AT&T's modified facility was provided in the application which led to the - Decision. See Tab 2 attached.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The Tower and its foundation can support AT&T's proposed modifications. (See Structural Analysis Report included in Tab 3).

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

Sincerely,

Adam F. Braillard

cc: Thomas G. Dunn, Mayor, Town of Wolcott, 10 Kenea Avenue, Wolcott, CT 06716
SBA Structures, Inc. 5900 Broken Sound Parkway N.W., 2nd Floor Boca Raton, FL
33487-2797.

TAB 1

PROJECT INFORMATION

SCOPE OF WORK: ITEMS TO BE MOUNTED ON THE EXISTING TOWER:
 • NEW AT&T RRU'S: (1) RRU'S PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (3) RRU'S

ITEMS TO BE INSTALLED AT AT&T EQUIPMENT AREA:
 • (1) (850) RXAIT & (1) 850 LLC IN PROPOSED 23" RACK
 • (1) GE INFINITY DC POWER PLANT TO REPLACE EXISTING TYCO DC PLANT
 • (6) NEW AT&T DIPLEXERS TO REPLACE EXISTING (12) DIPLEXERS

ITEMS TO REMAIN:
 (6) GSM/UMTS ANTENNAS, (3) LTE ANTENNAS, (6) TMA'S, (3) RRU'S, & (1) SURGE SUPPRESSOR

SITE ADDRESS: 1233 WOLCOTT RD
 WOLCOTT, CT 06716

LATITUDE: 41.6216 N 41° 37' 16.32" N
 LONGITUDE: -72.9736 W 72° 58' 24.60" W
 26036

LANDLORD: SBA
 5900 BROKEN SOUND PARKWAY N.W.
 2ND FLOOR
 BOCA RATON, FL 33487

USID: EDWARD F. CLEARY
 50 BEACH RD
 WOLCOTT, CT 06716

PROPERTY OWNER: EDWARD F. CLEARY
 50 BEACH RD
 WOLCOTT, CT 06716

TYPE OF SITE: LATTICE TOWER/INDOOR EQUIPMENT

TOWER HEIGHT: 350'-0"±
 RAD CENTER: 188'-0"±

CURRENT USE: TELECOMMUNICATIONS FACILITY
 PROPOSED USE: TELECOMMUNICATIONS FACILITY



FA NUMBER: 10041812
SITE NUMBER: CT1111
SITE NAME:
WOLCOTT-WOLCOTT RD

PROJECT TEAM

CLIENT REPRESENTATIVE

COMPANY: SMARTLINK, LLC
 ADDRESS: 1997 ANNAPOLIS EXCHANGE PARKWAY, SUITE 200 ANNAPOLIS, MD 21401
 CITY, STATE, ZIP: ANNAPOLIS, MD 21401
 CONTACT: TIM BOYCE
 PHONE: (980) 333-3640
 E-MAIL: tboyce@smartlinkllc.com

SITE ACQUISITION

COMPANY: SMARTLINK, LLC
 ADDRESS: 33 BOSTON POST ROAD WEST, SUITE 210 MARLBOROUGH, MA 01752
 CITY, STATE, ZIP: MARLBOROUGH, MA 01752
 CONTACT: TODD OLIVER
 PHONE: (774) 369-3618
 E-MAIL: todd.oliver@smartlinkllc.com

ENGINEERING

COMPANY: HUDSON DESIGN GROUP, LLC.
 ADDRESS: 1600 OSGOOD STREET BUILDING 20 NORTH, SUITE 3090 NORTH ANDOVER, MA 01845
 CITY, STATE, ZIP: NORTH ANDOVER, MA 01845
 CONTACT: DANIEL P. HAMM, PE
 PHONE: (978) 557-5553
 E-MAIL: info@hudsondesigngroupllc.com

RF ENGINEER

COMPANY: AT&T MOBILITY -NEW ENGLAND
 ADDRESS: 550 COCHITUATE ROAD SUITE 550 13 AND 14 FRAMINGHAM, MA 01701
 CITY, STATE, ZIP: FRAMINGHAM, MA 01701
 CONTACT: CAMERON SYME
 PHONE: (508) 596-7146
 E-MAIL: cs6970@att.com

CONSTRUCTION MANAGER

COMPANY: SMARTLINK, LLC.
 ADDRESS: 33 BOSTON POST ROAD WEST SUITE 210 MARLBOROUGH, MA 01752
 CITY, STATE, ZIP: MARLBOROUGH, MA 01752
 CONTACT: MARK DONNELLY
 PHONE: (617) 515-2080
 E-MAIL: mark.donnely@smartlinkllc.com

DRAWING INDEX

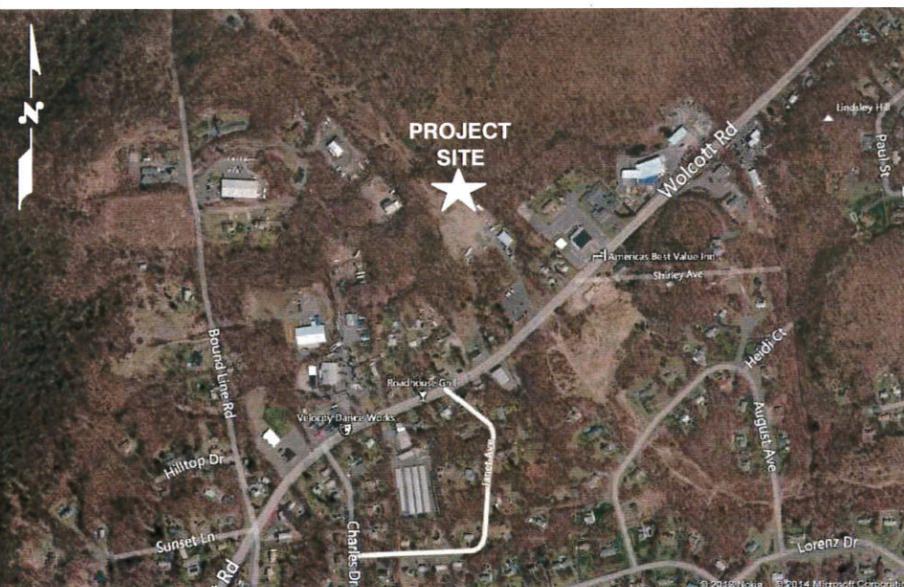
REV

- T-1 TITLE SHEET
- GN-1 GENERAL NOTES
- A-1 COMPOUND & EQUIPMENT PLANS
- A-2 ANTENNA LAYOUTS & ELEVATIONS
- A-3 DETAILS
- G-1 GROUNDING, ONE-LINE DIAGRAM & DETAILS

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- Q
- Q
- Q
- Q
- Q

VICINITY MAP

DIRECTIONS TO SITE:
 FROM FRAMINGHAM, MA:
 DEPART RT-30 W / COCHITUATE RD TOWARD BURR ST. 0.3 MI. TURN BACK ON RT-30 E / COCHITUATE RD. 0.3 MI. TAKE RAMP RIGHT FOR I-90 WEST TOWARD WORCESTER / SPRINGFIELD. TOLL ROAD. 38.9 MI. AT EXIT 9, TAKE RAMP RIGHT FOR I-84 TOWARD NEW YORK CITY / HARTFORD. STOP FOR TOLL BOOTH. ENTERING CONNECTICUT. 56.7 MI. AT EXIT 33, TAKE RAMP RIGHT FOR CT-72 WEST TOWARD BRISTOL. 1.5 MI. ROAD NAME CHANGES TO CT-72. 1.2 MI. KEEP STRAIGHT ONTO CT-72 W. 1.2 MI. BEAR RIGHT ONTO CT-72 / PINE ST. 0.7 MI. KEEP STRAIGHT ONTO PINE ST. 0.1 MI. ROAD NAME CHANGES TO MOUNTAIN RD. 0.3 MI. KEEP STRAIGHT ONTO SOUTH ST. 1.1 MI. TURN LEFT ONTO CT-69 / WOLCOTT ST. 4.2 MI. ARRIVE AT SITE ON THE RIGHT.



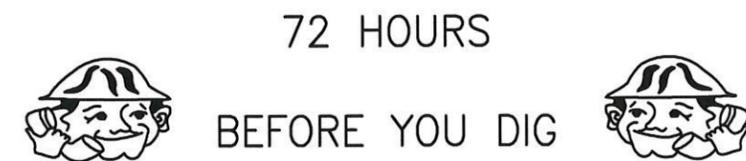
GENERAL NOTES

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 REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

APPROVALS

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

DISCIPLINE:	SIGNATURE:	DATE:
SMARTLINK SITE ACQUISITION:		
SMARTLINK CONSTRUCTION MANAGER:		
AT&T PROJECT MANAGER:		



CALL TOLL FREE 800-922-4455

UNDERGROUND SERVICE ALERT

Daniel P. Hamm
 LICENSED PROFESSIONAL ENGINEER
 No. 24178

AT&T

TITLE SHEET
 (LTE-2C)



SITE NUMBER: CT1111
SITE NAME:
WOLCOTT-WOLCOTT RD
 1233 WOLCOTT RD
 WOLCOTT, CT 06716
 NEW HAVEN COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP'D
0	08/11/14	RE-DESIGN PER RFDS	VP	RP	DPH
1	05/21/14	ISSUED FOR CONSTRUCTION	SZB	TH	DPH

SCALE: AS SHOWN DESIGNED BY: TH DRAWN BY: SB

JOB NUMBER	DRAWING NUMBER	REV
1111.01	T-1	Q

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 THE BRIDGE AND THE TOWER 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 AWG 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 - SMARTLINK
 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 MOBILITY 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 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, NINTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER 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	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF.	REFERENCE	TYP	TYPICAL
EGR	EQUIPMENT GROUND RING	REQUIRED	REQUIRED		

SITE NUMBER: CT1111
SITE NAME:
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 1233 WOLCOTT RD
 WOLCOTT, CT 06716
 NEW HAVEN COUNTY



550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

Daniel P. Hamm
 Daniel P. Hamm
 No. 24178
 LICENSED PROFESSIONAL ENGINEER

AT&T

GENERAL NOTES
 (LTE-2C)

Q	08/11/14	RE-DESIGN PER RFDS	VP	RP	DPH
I	05/21/14	ISSUED FOR CONSTRUCTION	SZB	TH	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: TH	DRAWN BY: SB		

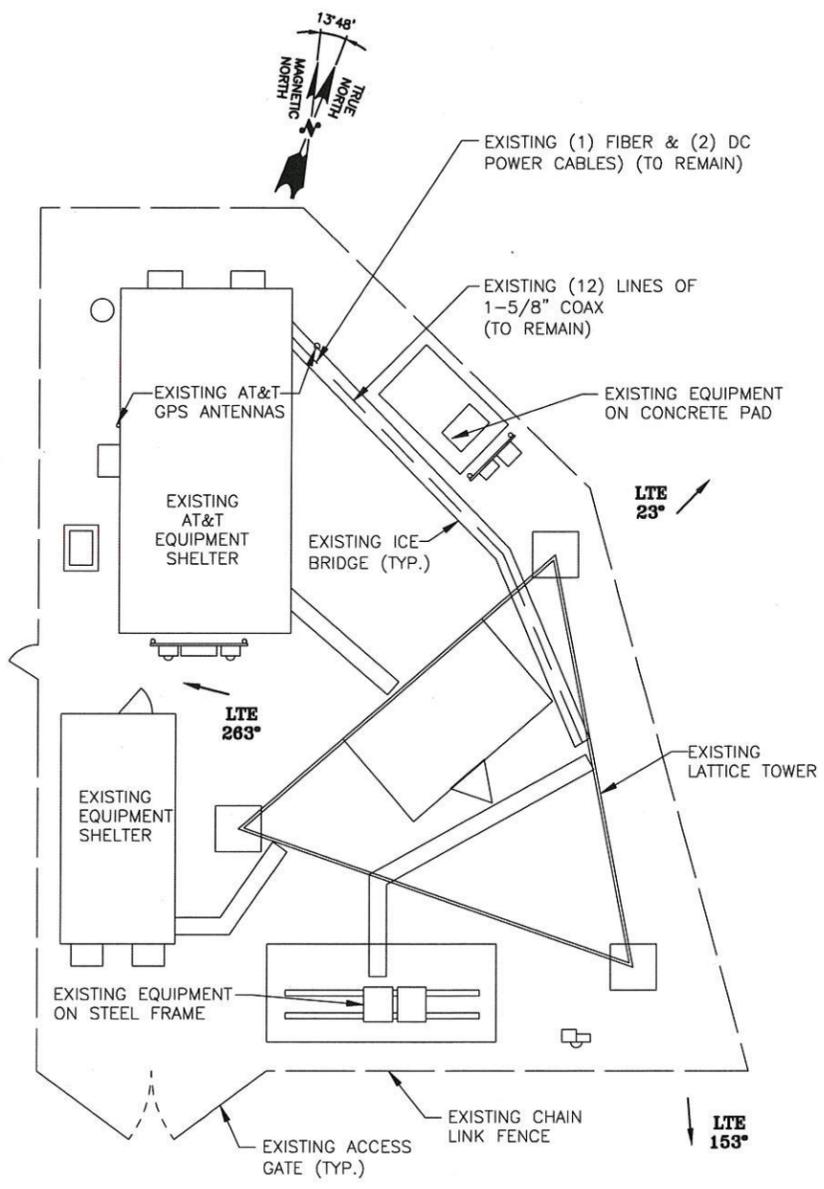
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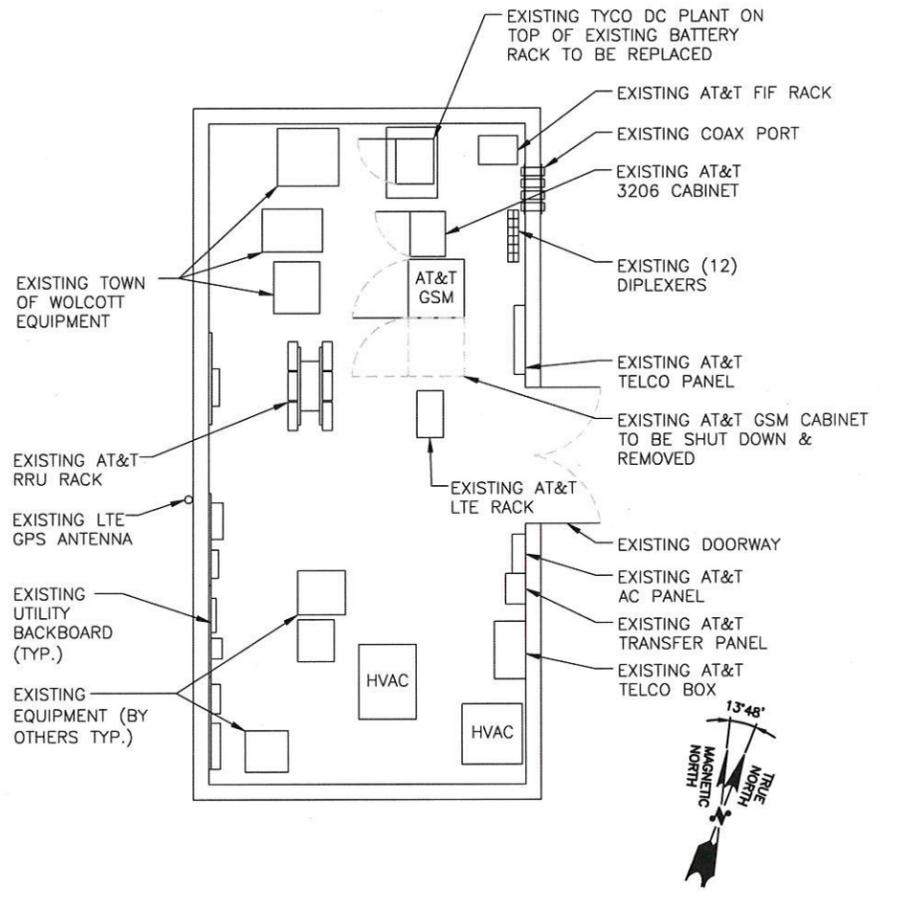
smartlink
 1997 ANNAPOLIS EXCHANGE PKWY
 SUITE 200
 ANNAPOLIS, MD 21401

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

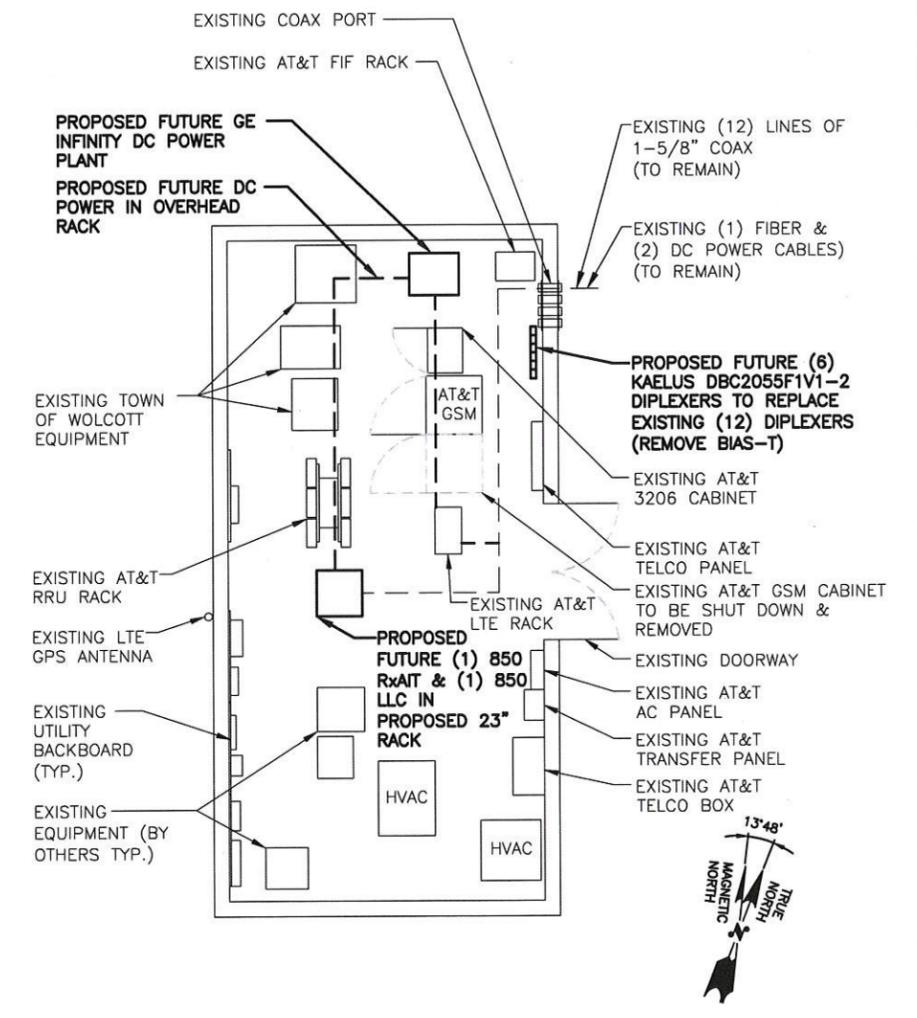
NOTE:
*RF DATA BASED ON PRELIMINARY RFDS. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



COMPOUND PLAN
SCALE: 1/8"=1'-0"



EXISTING EQUIPMENT PLAN
SCALE: 1/4"=1'-0"



PROPOSED EQUIPMENT PLAN
SCALE: 1/4"=1'-0"

Hudson Design Group

1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090
N. ANDOVER, MA 01845

TEL: (978) 557-5553
FAX: (978) 336-5586

smartlink

1997 ANNAPOLIS EXCHANGE PKWY
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at&t

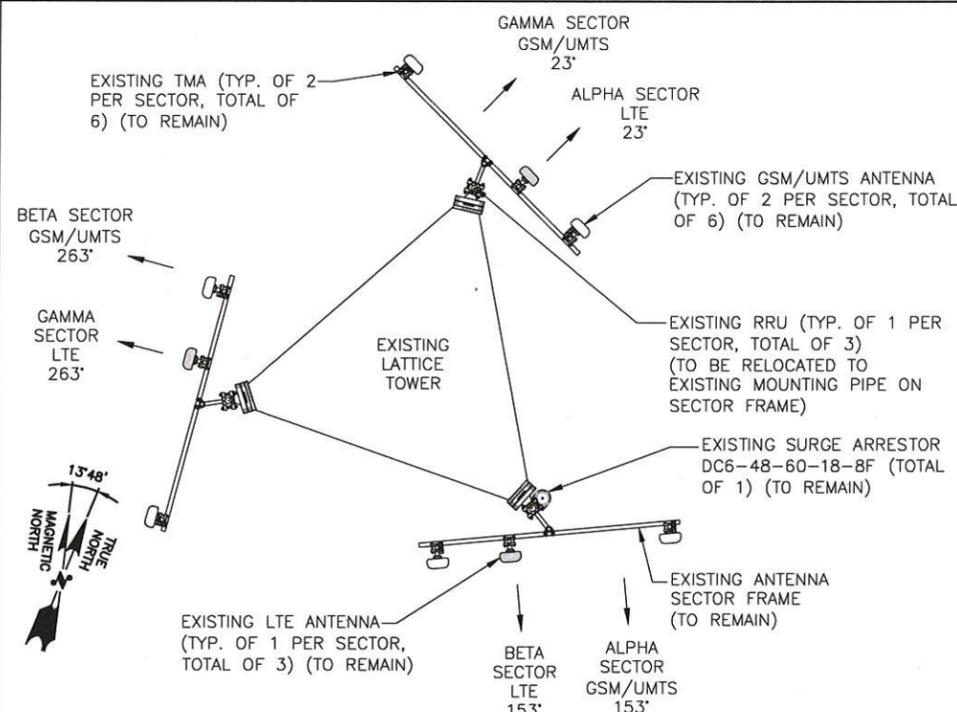
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Daniel P. Hamm

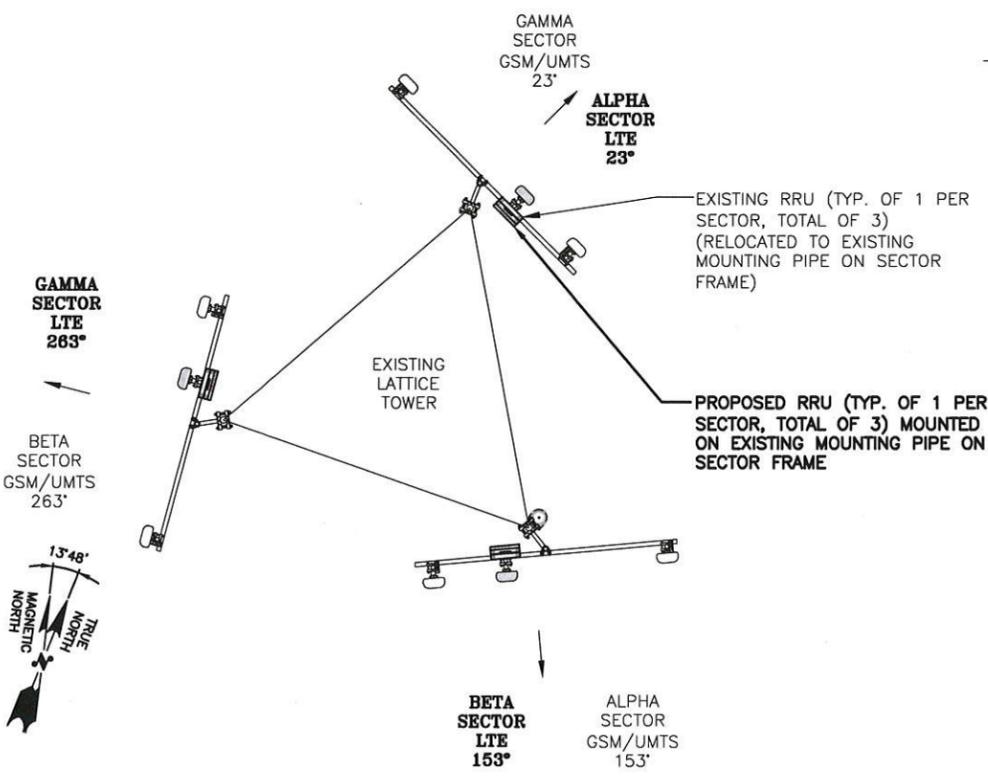
STATE OF CONNECTICUT
DANIEL P. HAMM
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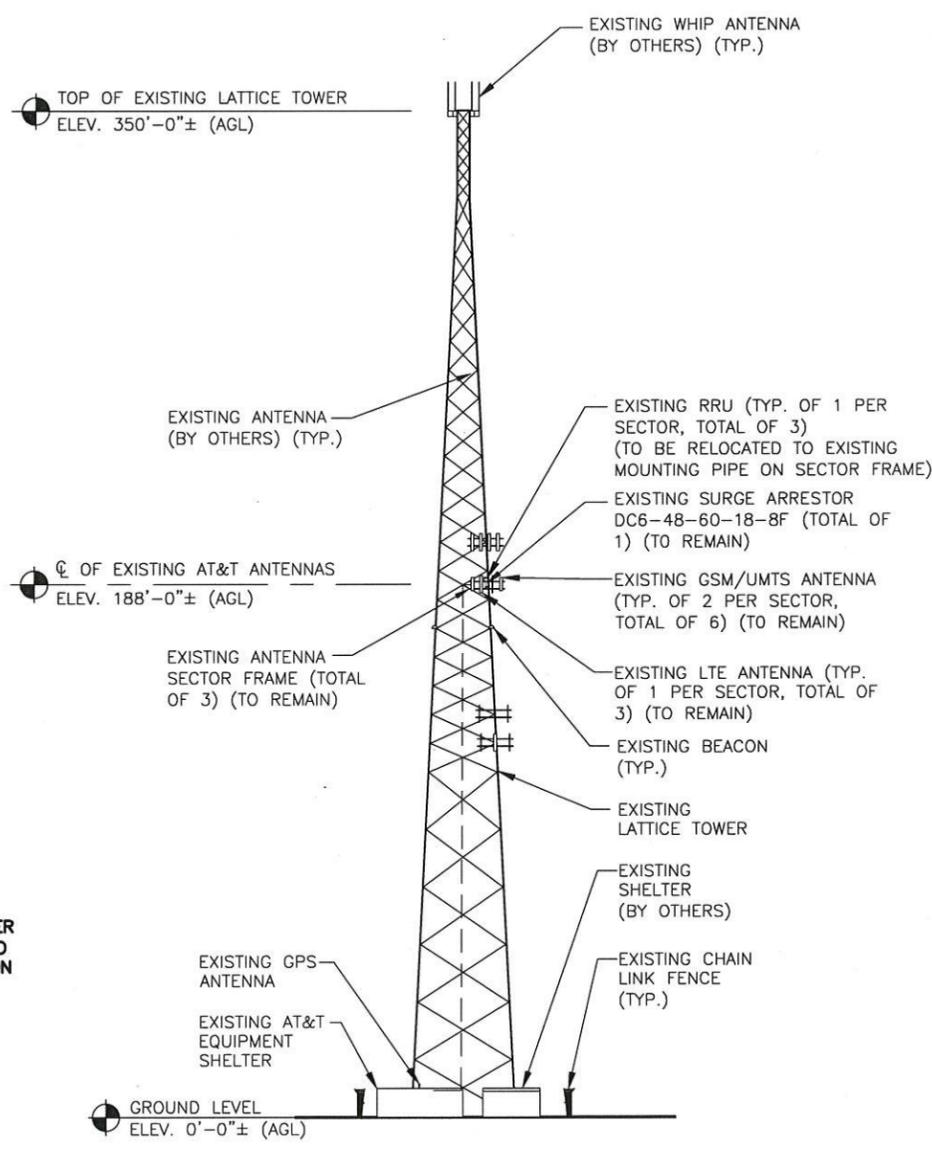
EXISTING ANTENNA LAYOUT

SCALE: N.T.S.



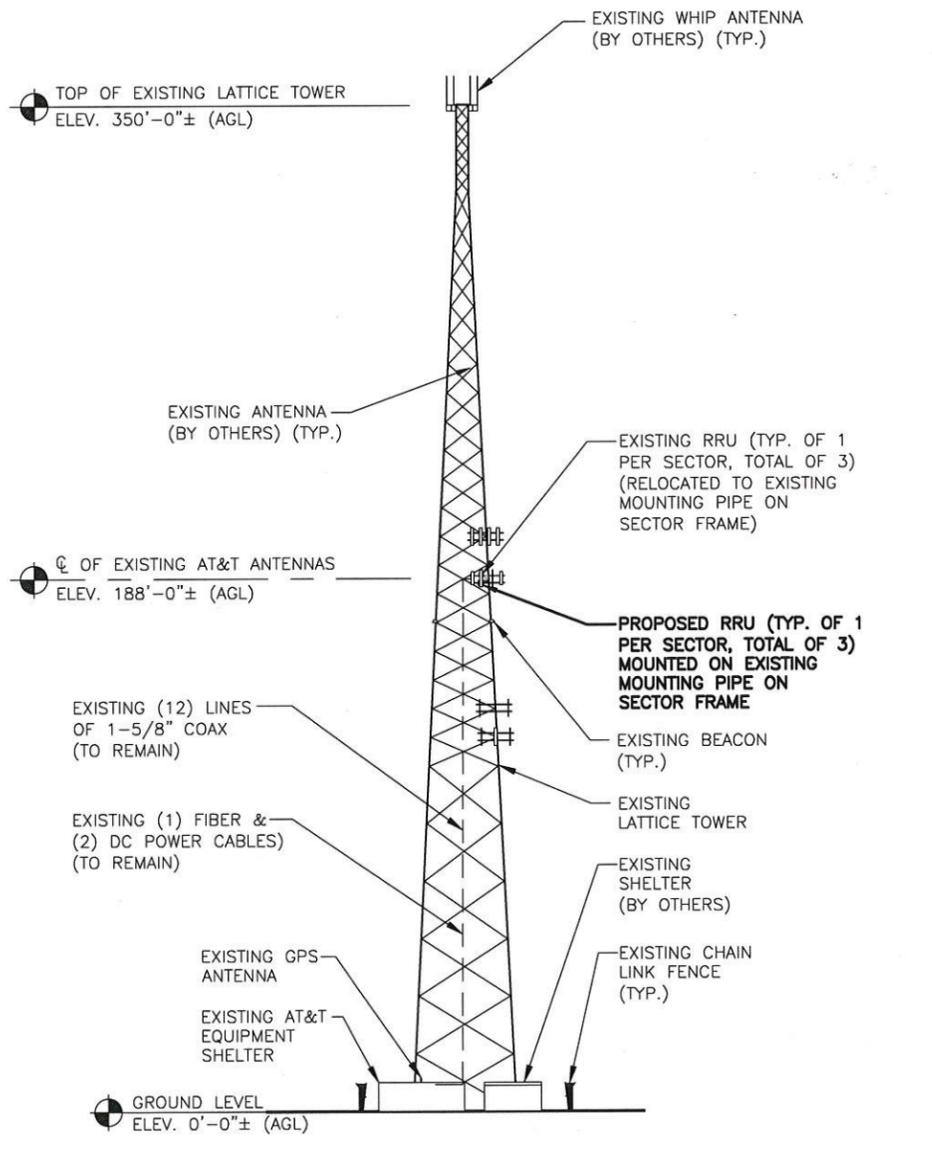
PROPOSED ANTENNA LAYOUT

SCALE: N.T.S.



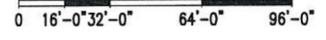
EXISTING WEST ELEVATION

SCALE: 1/32"=1'-0"



PROPOSED WEST ELEVATION

SCALE: 1/32"=1'-0"



NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

NOTE:
*RF DATA BASED ON PRELIMINARY RFDS. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

Hudson Design Group
1600 OSGOOD STREET
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550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

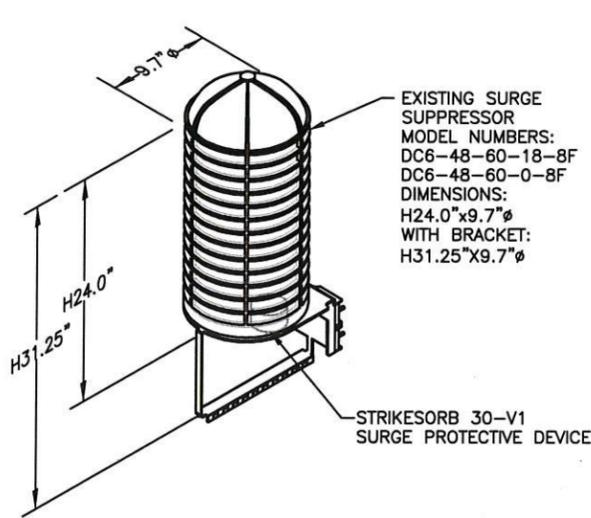
Q	08/11/14	RE-DESIGN PER RFDS	VP	RP	DPH
1	05/21/14	ISSUED FOR CONSTRUCTION	SZB	TH	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: TH	DRAWN BY: SB		

Daniel P. Hamm
STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

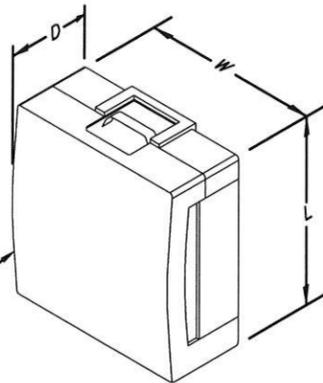
ANTENNA LAYOUT AND ELEVATION (LTE-2C)

JOB NUMBER	DRAWING NUMBER	REV
1111.01	A-2	Q



EXISTING SURGE SUPPRESSOR
 MODEL NUMBERS:
 DC6-48-60-18-8F
 DC6-48-60-0-8F
 DIMENSIONS:
 H24.0"x9.7"φ
 WITH BRACKET:
 H31.25"x9.7"φ

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



	L	W	D
RRUS - 11	19.7"	17.0"	7.2"
RRUS - 12	20.4"	18.5"	7.5"
RRUS - 32	26.7"	12.1"	6.7"
RRUS - E2	20"	20.4"	9.5"
LTE - A2	16.4"	15.2"	3.4"

EXISTING & PROPOSED ANTENNA SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	KMW	AM-X-CD-16-65-00	72.0x11.8x5.9
	KMW	AM-X-CD-16-65-00	72.0x11.8x5.9
	KMW	AM-X-CD-16-65-00	72.0x11.8x5.9
BETA:	KATHREIN	800-10121	54.5x10.3x5.9
	KMW	AM-X-CD-16-65-00	72.0x11.8x5.9
	KMW	AM-X-CD-16-65-00	72.0x11.8x5.9
GAMMA:	KATHREIN	800-10121	54.5x10.3x5.9
	KMW	AM-X-CD-16-65-00	72.0x11.8x5.9
	KMW	AM-X-CD-16-65-00	72.0x11.8x5.9

EXISTING & PROPOSED RRU SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	ERICSSON	RRUS-11	19.7x17.0x7.2
	ERICSSON	RRUS-11	19.7x17.0x7.2
BETA:	ERICSSON	RRUS-11	19.7x17.0x7.2
	ERICSSON	RRUS-11	19.7x17.0x7.2
GAMMA:	ERICSSON	RRUS-11	19.7x17.0x7.2
	ERICSSON	RRUS-11	19.7x17.0x7.2

NOTE:
 MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL

SCALE: N.T.S.

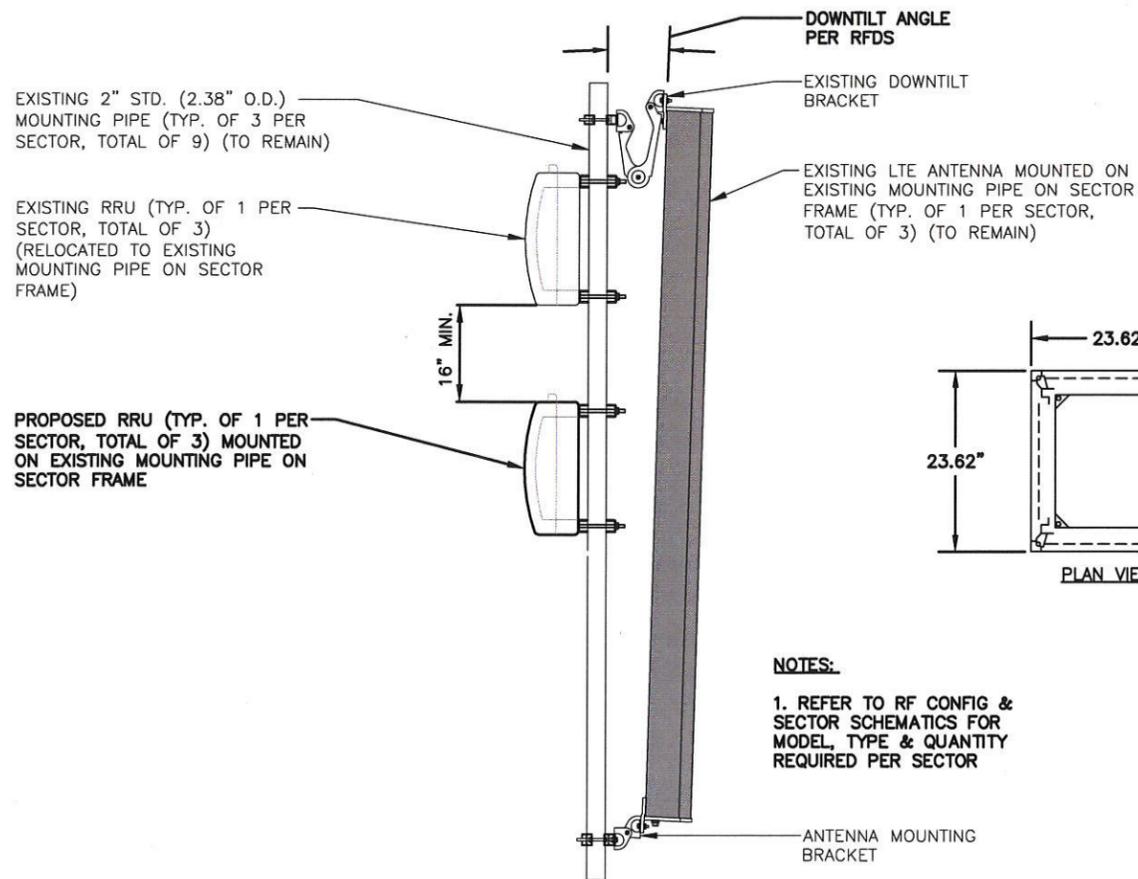
NOTE:
 MOUNT PER MANUFACTURER'S SPECIFICATIONS.

RRU DETAIL

SCALE: N.T.S.

NOTE:
 *RF DATA BASED ON PRELIMINARY RFDS. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

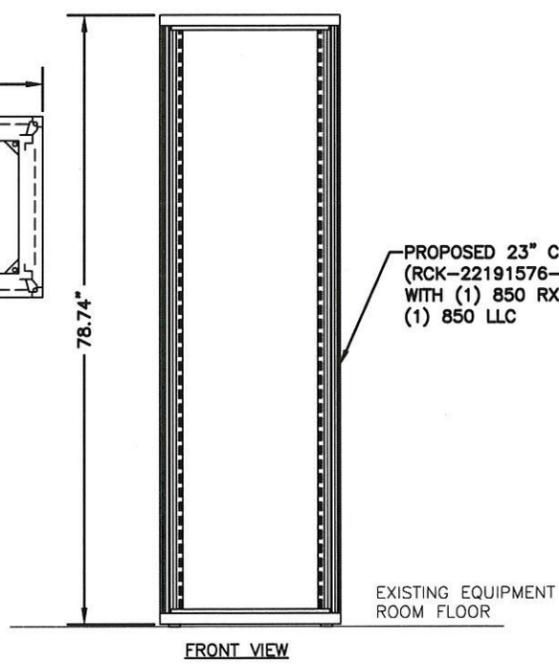
NOTE:
 AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



PROPOSED LTE ANTENNA, RRU, & SURGE ARRESTOR MOUNTING DETAIL

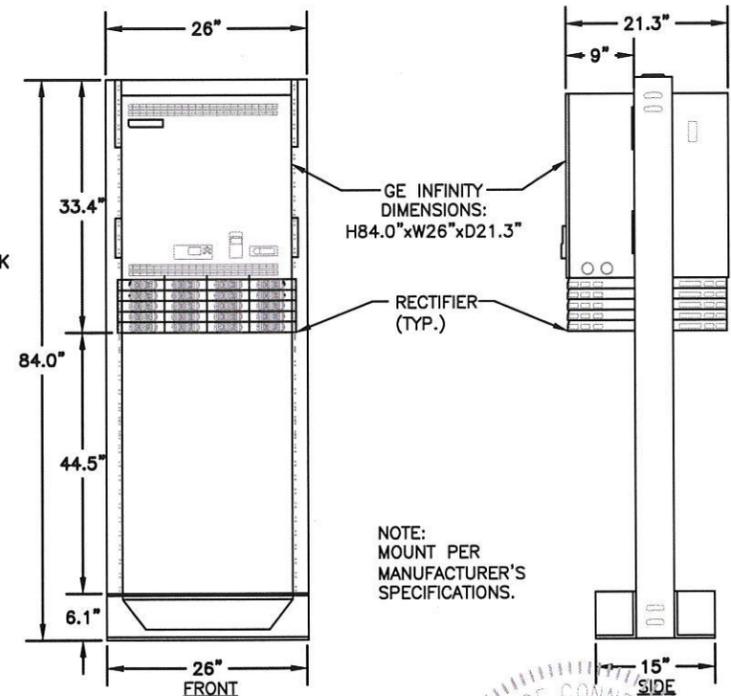
SCALE: N.T.S.

NOTES:
 1. REFER TO RF CONFIG & SECTOR SCHEMATICS FOR MODEL, TYPE & QUANTITY REQUIRED PER SECTOR



PROPOSED EQUIPMENT RACK DETAIL

SCALE: N.T.S.



GE INFINITY POWER PLANT

SCALE: N.T.S.

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

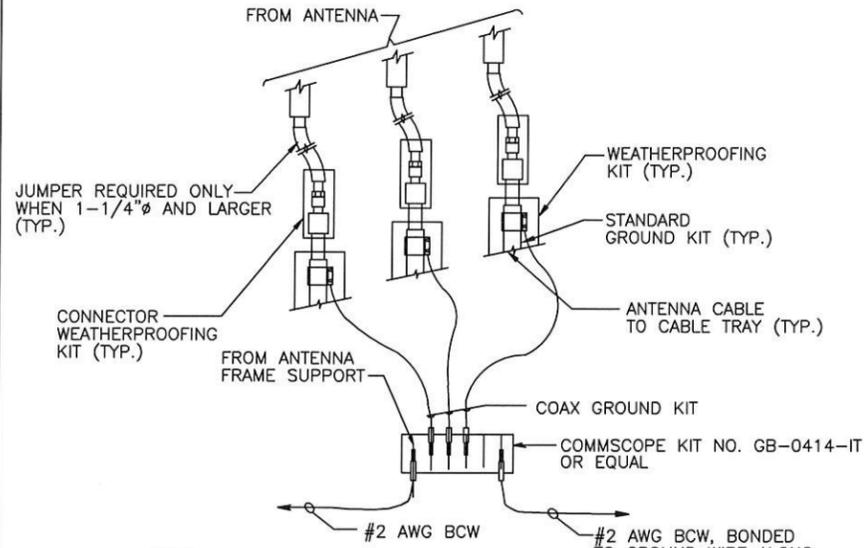
smartlink
 1997 ANNAPOLIS EXCHANGE PKWY
 SUITE 200
 ANNAPOLIS, MD 21401

SITE NUMBER: CT1111
 SITE NAME:
WOLCOTT-WOLCOTT RD
 1233 WOLCOTT RD
 WOLCOTT, CT 06716
 NEW HAVEN COUNTY

at&t
 550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

Q	08/11/14	RE-DESIGN PER RFDS	VP	RP	DPH
1	05/21/14	ISSUED FOR CONSTRUCTION	SZB	TH	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE:	AS SHOWN	DESIGNED BY:	TH	DRAWN BY:	SB

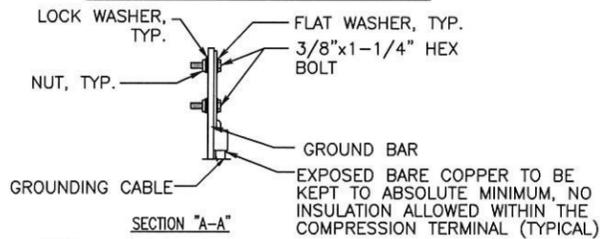
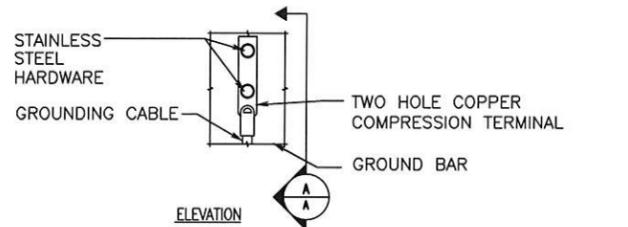
Daniel P. Hamm
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF CONNECTICUT
 No. 24178
 AT&T
 DETAILS (LTE-2C)
 JOB NUMBER: 1111.01
 DRAWING NUMBER: A-3
 REV: Q



NOTE:
 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

GROUND WIRE TO GROUND BAR CONNECTION DETAIL

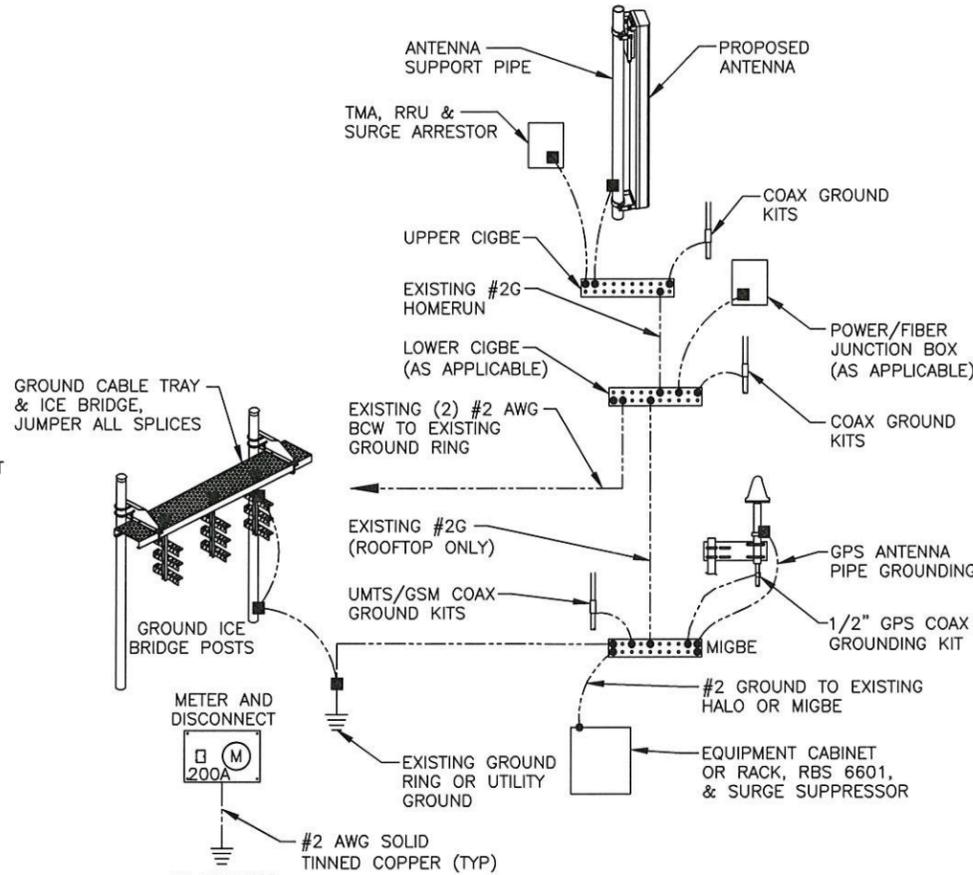
1
 N.T.S.



NOTE:
 1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
 3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.

TYPICAL GROUND BAR CONNECTION DETAIL

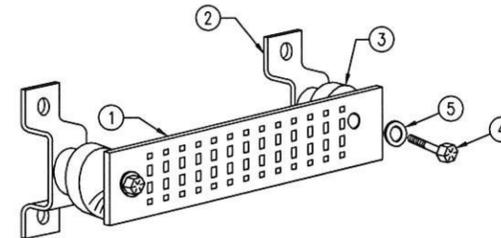
4
 N.T.S.



GROUNDING RISER DIAGRAM

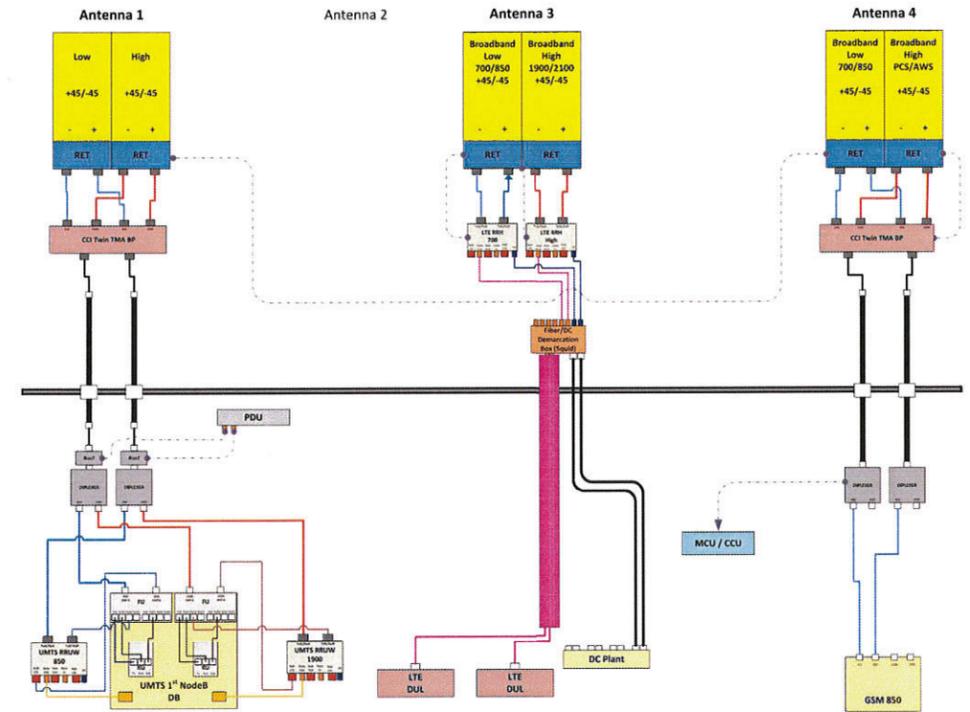
2
 N.T.S.

WIRELESS SOLUTIONS INC.			
NO.	REQ.	PART NO.	DESCRIPTION
①	1	HLGB-0420-IS	SOLID GND. BAR (20"x4"x1/4")
②	2		WALL MTG. BRKT.
③	2		INSULATORS
④	4		5/8"-11x1" H.H.C.S.
⑤	4		5/8 LOCKWASHER



GROUND BAR - DETAIL

5
 N.T.S.



PLUMBING DIAGRAM

3
 N.T.S.

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)

TAB 2

Carrier		#Channels	ERP/Ch	Ant Ht	Power Density (mW/cm2)	MHz	S	%MPE	Site Total
EM-NEXTEL-166-010723	Wolcott - 1233 Sprint	11	122	300	0.0054	1962	1.0000	0.54%	
EM-NEXTEL-166-010723	Wolcott - 1233 LoJack	1	0.1	350	0.0000	173.075	0.2000	0.00%	
EM-NEXTEL-166-010723	Wolcott - 1233 TSR Wireless	1	1000	350	0.0029	929	0.6193	0.47%	
EM-NEXTEL-166-010723	Wolcott - 1233 Weblink Wireless	5	1000	320	0.0176	929	0.6193	2.83%	
EM-NEXTEL-166-010723	Wolcott - 1233 Wolcott Ambulance	1	100	150	0.0016	463.475	0.3090	0.52%	
EM-NEXTEL-166-010723	Wolcott - 1233 Nextel	9	100	200	0.0081	851	0.5673	1.43%	
EM-Sprint-166-120907	Wolcott - 1201 Sprint CDMA/LTE	3	778	134	0.0467	1900	1.0000	4.67%	
EM-Sprint-166-120907	Wolcott - 1201 Sprint CDMA/LTE	1	438	134	0.0088	850	0.5667	1.55%	
EM-Clearwire-166-091211	Wolcott - 1233 Clearwire	2	153	210	0.0025	2496	1.0000	0.25%	
EM-Clearwire-166-091211	Wolcott - 1233 Clearwire	1	211	210	0.0017	11 GHz	1.0000	0.17%	
EM-Marcus-166-020226	Wolcott - 1233 Marcus	5	100000	328	0.0040	450	0.3000	1.32%	
EM-Marcus-166-020226	Wolcott - 1233 Marcus	5	100000	328	0.0040	450	0.3000	1.32%	
EM-Marcus-166-020226	Wolcott - 1233 Marcus	1	100	165	0.0000	5.8GHz	1.0000	0.00%	
EM-Marcus-166-020226	Wolcott - 1233 Marcus	1	100	165	0.0000	5.8GHz	1.0000	0.00%	
EM-Marcus-166-020226	Wolcott - 1233 Marcus	1	100	165	0.0000	5.8GHz	1.0000	0.00%	
EM-Marcus-166-020226	Wolcott - 1233 Marcus	1	100	165	0.0000	5.8GHz	1.0000	0.00%	
EM-CING-166-120604	Wolcott - 1233 AT&T UMTS	2	565	186	0.0117	880	0.5867	2.00%	
EM-CING-166-120604	Wolcott - 1233 AT&T UMTS	1	296	185	0.0031	1900	1.0000	0.31%	
EM-CING-166-120604	Wolcott - 1233 AT&T GSM	1	491	186	0.0051	880	0.5867	0.87%	
EM-CING-166-120604	Wolcott - 1233 AT&T GSM	4	813	186	0.0338	1900	1.0000	3.38%	
EM-CING-166-120604	Wolcott - 1233 AT&T LTE	1	1313	186	0.0136	734	0.4893	2.79%	
TS MetroPCS-166-120214MA	Wolcott - 1233 MetroPCS	3	727	222	0.0159	2140	1.0000	1.59%	26.02%

TAB 3



FDH Engineering, Inc., 6521 Meridien Dr. Raleigh, NC 27616, Ph. 919.755.1012, Fax 919.755.1031

**Structural Analysis for
SBA Network Services, Inc.**

350' Self-Support Tower

SBA Site Name: Cleary Tower (Edward)
SBA Site ID: CT20021-A
AT&T Site ID: CT1111
AT&T Site Name: Wolcott

FDH Project Number 12-04939E S1

Analysis Results

Tower Components	100.4%	Sufficient
Foundation	69.1%	Sufficient

Prepared By:

Randy C. Williams

Randy C. Williams, EI
Project Engineer

Reviewed By:

Christopher M. Murphy

Christopher M. Murphy, PE
President
CT PE License No. 25842

FDH Engineering, Inc.
6521 Meridien Dr.
Raleigh, NC 27616
(919) 755-1012
info@fdh-inc.com



May 18, 2012

Prepared pursuant to TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures and 2005 Connecticut Building Code

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Conclusions	3
Recommendation.....	3
APPURTENANCE LISTING	4
RESULTS	6
GENERAL COMMENTS	9
LIMITATIONS	9
APPENDIX	10

EXECUTIVE SUMMARY

At the request of SBA Network Services, Inc., FDH Engineering, Inc. performed a structural analysis of the existing self-supported tower located in Wolcott, CT to determine whether the tower is structurally adequate to support both the existing and proposed loads pursuant to the *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, TIA/EIA-222-F* and *2005 Connecticut Building Code*. Information pertaining to the existing/proposed antenna loading, current tower geometry, the member sizes, and foundation dimensions was obtained from:

- Paul J. Ford & Co. (Job No. A03-T143) Structural Analysis Report dated December 22, 2003
- FDH, Inc. (Job No. 06-0879T) EIA/TIA Inspection Report dated September 19, 2006
- FDH Engineering, Inc. (Project No. 11-11229E S2) Modifications Drawings for a 350' Self-Support Tower dated January 31, 2012
- FDH Engineering, Inc. (Project No. 11-11229E S2) Post Construction Inspection Report dated March 7, 2012
- SBA Network Services, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards and *2005 Connecticut Building Code* is 85 mph without ice and 38 mph with 3/4" radial ice. Ice is considered to increase in thickness with height.

Conclusions

With the existing and proposed antennas from AT&T in place at 186 ft, the tower meets the requirements of the *TIA/EIA-222-F* standards and *2005 Connecticut Building Code* provided the **Recommendations** listed below are satisfied. Furthermore, provided the foundations were designed and constructed to support the original design reactions (see Paul J. Ford & Co. Job No. A03-T143), the foundations should have the necessary capacity to support the existing and proposed loading. For a more detailed description of the analysis of the tower, see the **Results** section of this report.

Our structural analysis has been performed assuming all information provided to FDH Engineering, Inc. is accurate (i.e., the steel data, tower layout, existing antenna loading, and proposed antenna loading) and that the tower has been properly erected and maintained per the original design drawings.

Recommendations

To ensure the requirements of the *TIA/EIA-222-F* standards and *2005 Connecticut Building Code* are met with the existing and proposed loading in place, we have the following recommendations:

1. Coax must be installed as shown in **Figure 1**.
2. The proposed TMAs should be installed directly behind the proposed panel antennas.

APPURTENANCE LISTING

The proposed and existing antennas with their corresponding cables/coax lines are shown in **Table 1**. *If the actual layout determined in the field deviates from the layout, FDH Engineering, Inc. should be contacted to perform a revised analysis.*

Table 1 - Appurtenance Loading

Existing Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
360	(1) Andrew 600200-4 Omni	(1) 1-1/4"	Marcus	350	(1) Star Mount w/ (9) Standoffs
	(1) RFS CAT #200 Omni	(1) 1/2"	---		
	(1) Celwave CAT #1110-0	(1) 7/8"	LoJack		
350	(1) Decibel DB809DKOmni	---	---	350	
338.5	(1) Andrew 600200-4 Omni	(1) 1-1/4"	---	328.5	(1) 4' Standoff
328	(2) TX RX 101-58-10-0-03	(2) 1-1/4"	Marcus	318	(1) 6' Standoff
222	(6) Andrew HBX-6516DS-VTM w/ Mount Pipe	(12) 1-5/8"	Metro PCS	222	(3) Andrew QT-SF10-B 10.5' T-Frames
	(6) Andrew ATM200-A20 RETs	(1) 3/8"			
212	(3) Argus LLPX310R w/ Mount Pipe	(2) 1/2"	Clearwire	212	(3) 10' T-Frames
	(3) BTSs	(3) 5/8"			
	(1) Andrew VHLP2-11 Dish	(3) 1/4"			
	(1) Andrew VHLP2.5-11 Dish	(3) 5/16"			
201.5	(8) Decibel DB844H90E-XY w/ Mount Pipe	(12) 1-1/4"	Nextel	201.5	(3) 15' T-Frames
	(4) Decibel DB844H65E-XY w/ Mount Pipe				
186	(9) CSS DUO1417-8686-4-0 w/ Mount Pipe	(12) 1-5/8"	AT&T	186	(3) 13.5' T-Frames
	(3) Powerwave 7770.00 w/ Mount Pipe				
	(6) ADC Cleargain CG1900w/850 TMAs				
	(6) Powerwave LGP13519 Diplexers				
172.5	(1) Radiowaves SPD2-5.8NS Dish	(2) 1/2"	Marcus	172.5	(2) Pipe Mounts (5.25' x 4.5")
	(1) Radiowaves SPD3-2.4NS Dish				
158	(1) Celwave 201-7	(1) 5/8"	Wolcott	158	(1) 17" Standoff Mount
---	---	---	---	140	(3) 10' T-Frames
134	(9) Decibel DB980H90T2E-M w/ Mount Pipe	(9) 1-5/8"	Sprint	134	(3) 15' T-Frames
70	(1) Channel Master 1.0M Dish	(1) 1/2"	---	70	(1) Pipe Mount (27" x 2.4")

Proposed Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
186	(6) KMW AM-X-CD-16-65-00T w/ Mount Pipe	(12) 1-5/8" (1) 10mm Fiber (2) 12 gauge DC	AT&T	186	(3) 13.5' T-Frames
	(3) Kathrein 800 10121 w/ Mount Pipe				
	(3) Powerwave 7770.00 w/ Mount Pipe				
	(6) CCI DTMABP7819VG12A TMAs				
	(6) Powerwave LGP13519 Diplexers				
	(6) Ericsson RRUS-11 RRUs				
	(1) Raycap DC6-48-60-18-8F Surge Arrestor				

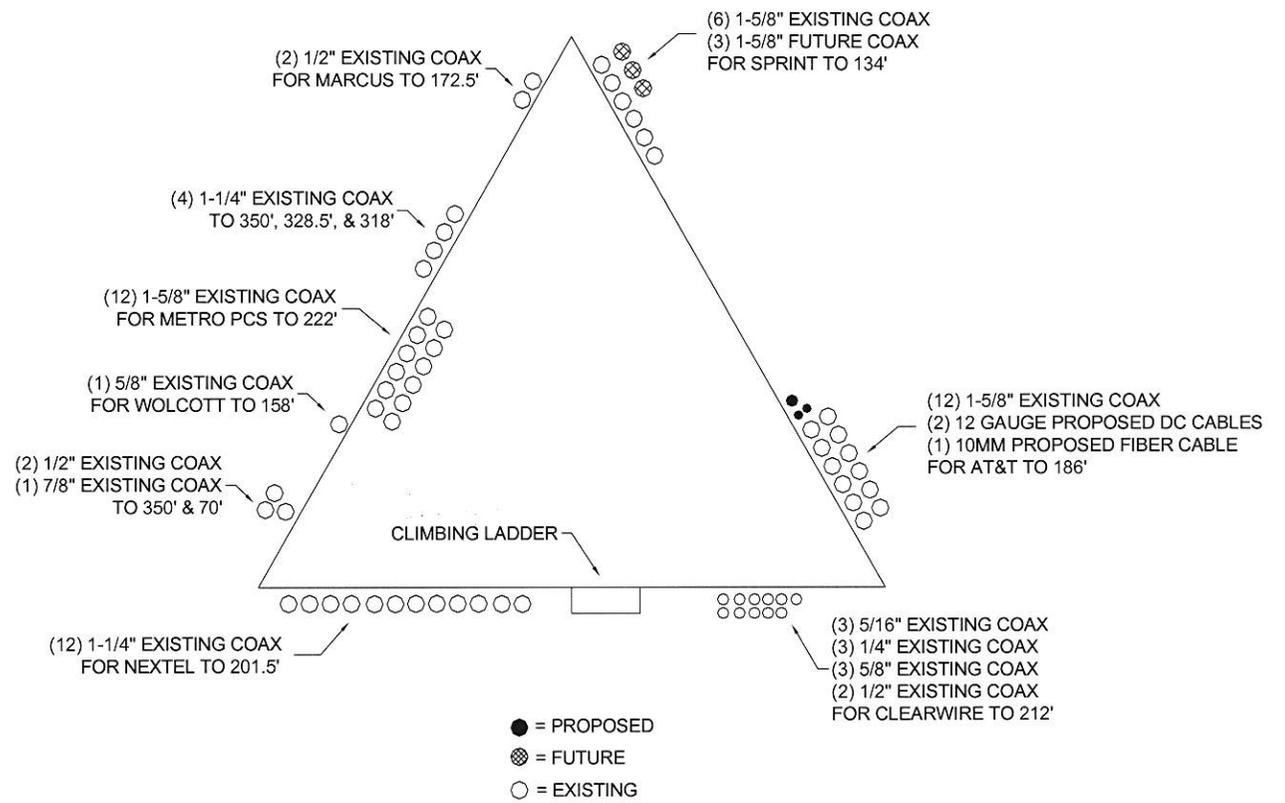


Figure 1 - Coax Layout

RESULTS

The following yield strength of steel for individual members was used for analysis:

Table 2 - Material Strength

Member Type	Yield Strength
Legs	50 ksi
Bracing	36 ksi

Table 3 displays the summary of the ratio (as a percentage) of force in the member to their capacities. Values greater than 100% indicate locations where the maximum force in the member exceeds its capacity. *Note: Capacities up to 100% are considered acceptable.* **Table 4** displays the maximum foundation reactions.

If the assumptions outlined in this report differ from actual field conditions, FDH Engineering, Inc. should be contacted to perform a revised analysis. Furthermore, as no information pertaining to the allowable twist and sway requirements for the existing or proposed appurtenances was provided, deflection and rotation were not taken into consideration when performing this analysis.

See the **Appendix** for detailed modeling information

Table 3 - Summary of Working Percentage of Structural Components

Section No.	Elevation ft	Component Type	Size	% Capacity*	Pass Fail
T1	350 - 340	Leg	2	22.1	Pass
		Diagonal	L2x1 1/2x3/16	26.0 36.0 (b)	Pass
		Top Girt	L2x1 1/2x3/16	7.3 7.4 (b)	Pass
T2	340 - 320	Leg	2	58.4	Pass
		Diagonal	L2x1 1/2x3/16	35.1 50.3 (b)	Pass
T3	320 - 300	Leg	2 1/2	56.4	Pass
		Diagonal	L2x2x3/16	23.6 38.1 (b)	Pass
T4	300 - 280	Leg	3 1/4	43.7	Pass
		Diagonal	L2 1/2x2 1/2x3/16	22.5 33.0 (b)	Pass
T5	280 - 260	Leg	3 1/4	53.4	Pass
		Diagonal	L2 1/2x2 1/2x3/16	33.2 36.5 (b)	Pass
T6	260 - 240	Leg	3 1/2	49.8	Pass
		Diagonal	L3x3x3/16	28.6 42.9 (b)	Pass
T7	240 - 220	Leg	3 1/2	46.7	Pass
		Diagonal	2L2 1/2x2 1/2x3/16x3/8	22.5 28.1 (b)	Pass
		Secondary Horizontal	L2 1/2x2 1/2x3/16	30.5	Pass
T8	220 - 200	Leg	3 3/4	46.4	Pass
		Diagonal	2L2 1/2x2 1/2x3/16x3/8	39.7	Pass
		Secondary Horizontal	L2 1/2x2 1/2x3/16	48.2	Pass
T9	200 - 180	Leg	4	47.5	Pass
		Diagonal	2L3x3x3/16x3/8	37.9 52.2 (b)	Pass
		Secondary Horizontal	L3x3x3/16	42.5	Pass

Section No.	Elevation ft	Component Type	Size	% Capacity*	Pass Fail
T10	180 - 160	Leg	4 1/4	49.0	Pass
		Diagonal	2L3x3x3/16x3/8	50.0 60.2 (b)	Pass
		Secondary Horizontal	L3x3x3/16	63.4	Pass
T11	160 - 140	Leg	4 1/4	57.1	Pass
		Diagonal	2L3x3x3/16x3/8	62.3 64.2 (b)	Pass
		Secondary Horizontal	L3 1/2x3 1/2x1/4	42.9 50.3 (b)	Pass
T12	140 - 120	Leg	4 1/2	100.4	Pass
		Diagonal	2L3x3x1/4x3/8	60.6 68.0 (b)	Pass
		Horizontal	2L2 1/2x2 1/2x3/16x3/8	40.0	Pass
		Redund Horz 1 Bracing	L2x2x3/16	97.4	Pass
		Redund Diag 1 Bracing	L2 1/2x2 1/2x3/16	61.3	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	0.5	Pass
T13	120 - 100	Leg	4 3/4	93.4	Pass
		Diagonal	2L3x3x1/4x3/8	65.9 69.2 (b)	Pass
		Horizontal	2L2 1/2x2 1/2x3/16x3/8	54.1	Pass
		Redund Diag 1 Bracing	L2 1/2x2 1/2x3/16	74.8	Pass
		Inner Bracing	L4x4x1/4	0.5	Pass
T14	100 - 80	Leg	4 3/4	61.8	Pass
		Diagonal	2L3x3x1/4x3/8	74.3	Pass
		Horizontal	2L2 1/2x2 1/2x3/16x3/8	70.6	Pass
		Redund Horz 1 Bracing	L2x2x3/8	92.7	Pass
		Redund Diag 1 Bracing	L2 1/2x2 1/2x3/16	89.4	Pass
		Inner Bracing	L4x4x1/4	0.6	Pass
T15	80 - 60	Leg	5	96.2	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	53.2 59.7 (b)	Pass
		Horizontal	2L3x3x3/16x3/8	51.2	Pass
		Redund Diag 1 Bracing	L3x3x3/16	60.6	Pass
		Inner Bracing	2L3x3x3/16x3/8	0.6	Pass
T16	60 - 40	Leg	5 1/4	89.5	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	59.9 60.9 (b)	Pass
		Horizontal	2L3x3x3/16x3/8	64.1	Pass
		Redund Diag 1 Bracing	L3x3x3/16	71.1	Pass
		Inner Bracing	2L3x3x3/16x3/8	0.7	Pass
T17	40 - 20	Leg	5 1/4	97.3	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	65.8	Pass
		Horizontal	2L3 1/2x3 1/2x1/4x3/8	37.9	Pass
		Redund Diag 1 Bracing	L3x3x3/16	83.3	Pass
		Inner Bracing	2L3 1/2x3 1/2x1/4x3/8	0.6	Pass
T18	20 - 0	Leg	5 1/2	90.6	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	72.4	Pass
		Horizontal	2L3 1/2x3 1/2x1/4x3/8	46.0	Pass
		Redund Diag 1 Bracing	L3x3x3/16	96.3	Pass
		Inner Bracing	2L3 1/2x3 1/2x1/4x3/8	0.7	Pass

*Capacities include 1/3 allowable stress increase for wind.

Table 4 - Maximum Base Reactions

Load Type	Direction	Current Analysis (TIA/EIA-222-F)	Original Design (EIA/TIA-222-E)
Individual Foundation	Horizontal	56 k	---
	Uplift	397 k	631 k
	Compression	519 k	751 k
Overturing Moment	---	14,897 k-ft	---

GENERAL COMMENTS

This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading information) modeled. If there are substantial modifications to be made or the assumptions made in this analysis are not accurate, FDH Engineering, Inc. should be notified immediately to perform a revised analysis.

LIMITATIONS

All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of this report. All opinions and conclusions are subject to revision based upon receipt of new or additional/updated information. All services are provided exercising a level of care and diligence equivalent to the standard and care of our profession. No other warranty or guarantee, expressed or implied, is offered. Our services are confidential in nature and we will not release this report to any other party without the client's consent. The use of this engineering work is limited to the express purpose for which it was commissioned and it may not be reused, copied, or distributed for any other purpose without the written consent of FDH Engineering, Inc.

APPENDIX

