STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

September 6, 2011

Douglas L. Culp, Real Estate Consultant
New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: **EM-CING-135-110819** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 555 Main Street, Stamford, Connecticut.

Dear Mr. Culp:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- The tower be strengthened in accordance with recommendations made in the Structural Modification Design prepared by Malouf Engineering dated July 28, 2011 and stamped by Mark Malouf; and
- Prior to antenna installation, a signed letter from a Professional Engineer duly licensed in the State of Connecticut shall be submitted to the Council to certify that the recommended modifications have been completed and the tower and foundation will not exceed 100 percent of the post-construction structural rating.
- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated August 18, 2011. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require

explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

Linda Roberts
Executive Director

LR/CDM/laf

c: The Honorable Michael A. Pavia, Mayor, City of Stamford
Norman Cole, Acting Land Use Bureau Chief, City of Stamford
Christopher B. Fisher, Esq., Cuddy & Feder LLP

EM-CING-135-110819

New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 463-5511
Fax: (860) 513-7190

Douglas L. Culp
Real Estate Consultant

ORIGINAL

HAND DELIVERED

August 18, 2011

Ms. Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing tele-communications facility located at 555 Main Street Stamford, CT (owner AT&T Corp.)

Dear Ms. Roberts:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") and/or Long Term Evolution ("LTE") capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of the municipality in which the affected cell site is located.

UMTS technology offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile ("GSM") communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the Internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

LTE is a new high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will be unaffected.

2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than some enlarged equipment pads as may be noted in the attachments.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

4. Radio frequency power density may increase due to use of one or more GSM channel for UMTS transmissions. Moreover, LTE will utilize additional radio frequencies newly-licensed by the FCC for cellular mobile communications. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, New Cingular Wireless respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 463-5511 with questions concerning this matter. Thank you for your consideration.

Sincerely,

Douglas L. Culp
Real Estate Consultant

Attachments

NEW CINGULAR WIRELESS PCS, LLC
Equipment Modification

555 Main Street Stamford, CT
Site Number CT2118
Exempt Mod

Tower Owner/Manager: Stamford - Central

Equipment configuration: SSLT on Rooftop

Current and/or approved: Six PowerWave P65-16 antennas @ 128 ft
Six PowerWave TMA's @ 128 ft
Twelve runs 1 5/8 inch coax to 128 ft
Equipment Room in Building

Planned Modifications: Retain existing PowerWave Antenna's, TMA's @ 128 ft
Retain all Coax Cabling
Install three KMW 14-65 antennas or equivalent @ 128 ft
Install six remote radio heads Ericsson RRUS-11 @ 128 ft
Install one Raycap Fiber Connector/Surge Arrestor DC6-48-60-18-8F @ 128 ft
Install three fiber and six DC power cables in 2" flex conduit to 128 ft

Power Density:

Worst-case calculations for existing wireless operations at the site, using standard parameters for other carriers, indicate a radio frequency electromagnetic radiation power density, measured at ground level beside the Tower, of approximately 12.9% of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density following proposed modifications would be approximately 13.3 % of the standard.

Existing

Other Users							8.51
AT&T UMTS	235	1900 Band	2	500	0.0065	1.0000	0.65
AT&T UMTS	235	800 Band	1	500	0.0033	0.5867	0.55
AT&T GSM	235	800Band	8	296	0.0154	0.5867	2.63
AT&T GSM	235	1900 Band	2	427	0.0056	1.0000	0.56
Total							**12.9%**

* Data for other users are from Siting Council records.

Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Other Users							8.51
AT&T UMTS	235	800 Band	1	500	0.0033	0.5867	0.55
AT&T UMTS	235	1900 Band	2	500	0.0065	1.0000	0.65
AT&T GSM	235	1900 Band	8	427	0.0222	1.0000	2.22
AT&T GSM	235	880 - 894	2	296	0.0039	0.5867	0.66
AT&T LTE	235	740 - 746	1	500	0.0033	0.4933	0.66
Total							**13.3%**

* Data for other users are from Siting Council records.

Structural information:

The attached structural analysis demonstrates that the monopole and foundation have adequate structural capacity to accommodate the proposed modifications. (Malouf Eng. Intl. dated 7-28-11).

PROJECT INFORMATION

SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS
SITE ADDRESS:	555 MAIN ST. STAMFORD, CT 06901
LATITUDE:	41.053474° N 41° 03' 12.51" N
LONGITUDE:	-73.535663° W -73° 32' 08.39" W
JURISDICTION:	NATIONAL, STATE & LOCAL CODES OR ORDINANCES
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY
NOC#	866-915-5600

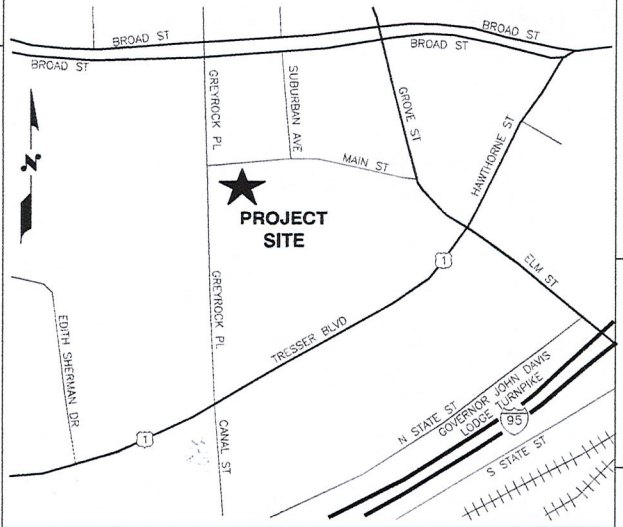
at&t

SITE NUMBER: CT2118
SITE NAME: STAMFORD - CENTRAL

DRAWING INDEX

VICINITY MAP

DIRECTIONS TO SITE:
HEAD NORTHEAST ON ENTERPRISE DR TOWARD CAPITAL BLVD. 0.3 MILES. TURN LEFT AT CAPITAL BLVD. 0.3 MILES. TURN LEFT AT WEST ST. 0.3 MILES. TURN LEFT TO MERGE ONTO I-91 S TOWARD NEW HAVEN. 9.6 MILES. TAKE EXIT 17 FOR CT-15 S/W CROSS PKWY. 0.4 MILES. MERGE ONTO CT-15 S. 29.8 MILES. TAKE EXIT 52 FOR STATE ROUTE 108 S/STATE ROUTE 8 S TOWARD BRIDGEPORT. 0.7 MILES. FOLLOW SIGNS FOR CT-8 S/BRIDGEPORT AND MERGE ONTO CT-8 S/STATE ROUTE 8 S. 5.3 MILES. KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR I-95 S/N.Y. CITY AND MERGE ONTO I-95 S. 20.3 MILES. TAKE EXIT 8 FOR ELM ST. 0.5 MILES. TURN RIGHT AT ELM ST. 0.1 MILES. CONTINUE ONTO GROVE ST. 262 FT. SLIGHT LEFT AT MAIN ST. 0.1 MILES.



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.

CALL
BEFORE YOU DIG
CALL TOLL FREE 800-922-4455

UNDERGROUND SERVICE ALERT

Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 2-101
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

SAI communications
22 KEEWAYDIN DRIVE
SALEM, NH 03079

SITE NUMBER: CT2118
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FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

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SCALE: AS SHOWN | DESIGNED BY: DC | DRAWN BY: JG

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

AT&T
TITLE SHEET (LTE)

JOB NUMBER	DRAWING NUMBER	REV
2118.01	T-1	2

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 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 UMTS 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 TRANSCEIVER 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		
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED	TYP	TYPICAL

Hudson Design Groupllc
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BUILDING 20 NORTH, SUITE 2-101
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

SAI communications
22 KEEWAYDIN DRIVE
SALEM, NH 03079

SITE NUMBER: CT2118
SITE NAME: STAMFORD - CENTRAL
555 MAIN ST.
STAMFORD, CT 06901
FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

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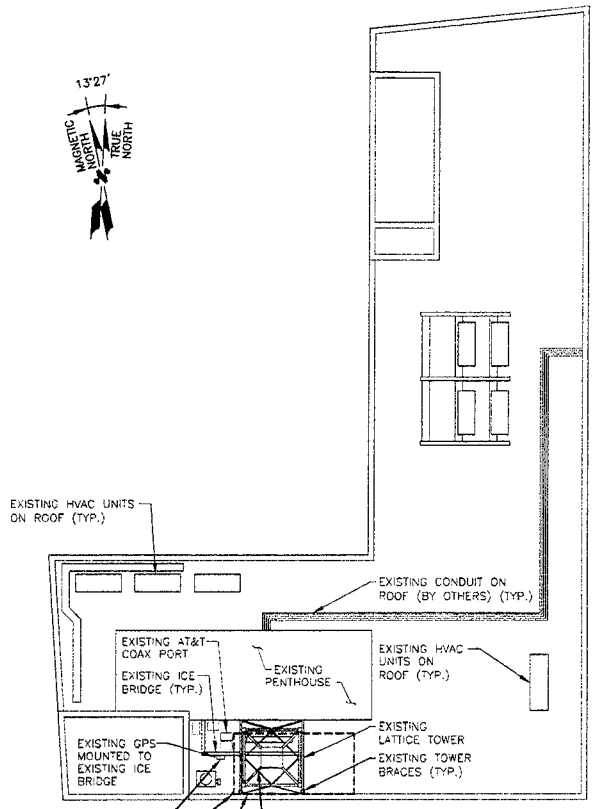
SCALE: AS SHOWN | DESIGNED BY: DC | DRAWN BY: JG

AT&T

GENERAL NOTES (LTE)

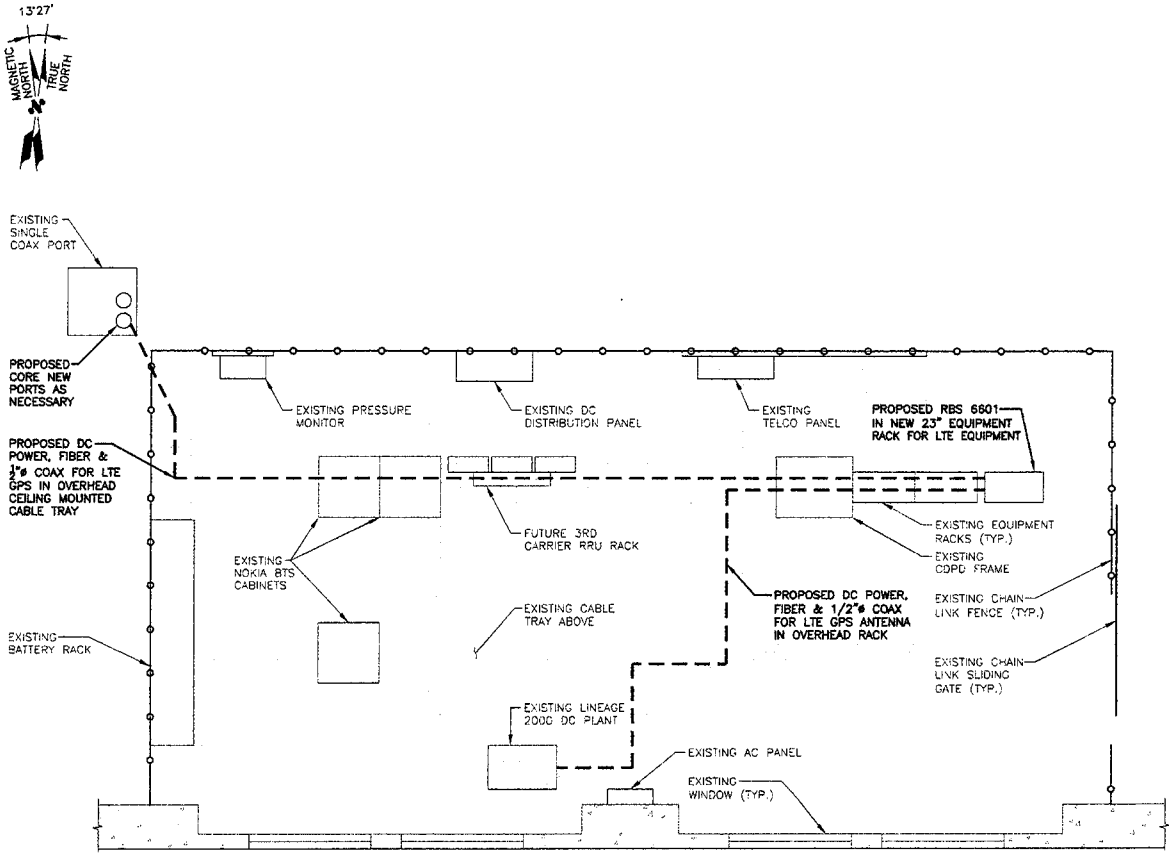
JOB NUMBER	DRAWING NUMBER	REV
2118.01	GN-1	2



ROOF PLAN

SCALE: 1/16"=1'-0"

0 8'-0" 16'-0" 32'-0" 48'-0"



EQUIPMENT ROOM PLAN

SCALE: 1/2"=1'-0"

0 1'-0" 2'-0" 4'-0" 6'-0"

Hudson Design Group llc
1400 OSGOOD STREET
BUILDING 20 NORTH, SUITE 2-101
N. ANDOVER, MA 01845
TEL: (978) 557-5553
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SCALE: AS SHOWN | DESIGNED BY: DC | DRAWN BY: JG

AT&T

ROOF & EQUIPMENT PLAN (LTE)

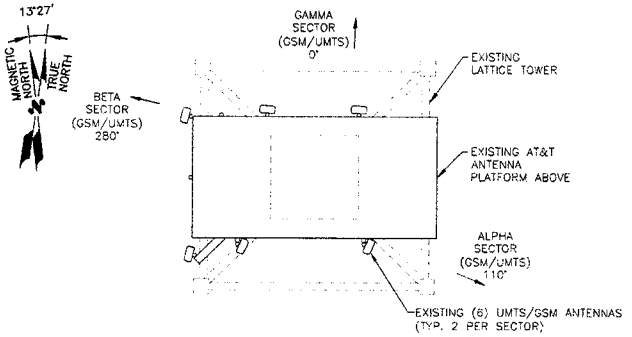
JOB NUMBER	DRAWING NUMBER	REV
2118.01	A-1	2

NOTE:

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

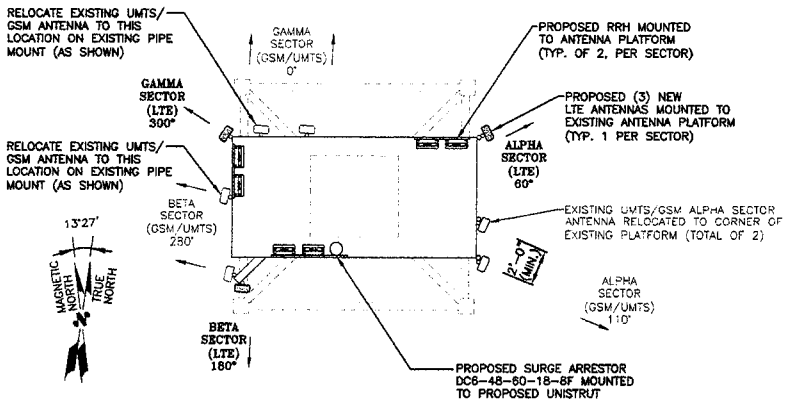
*NOTE:

REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA CONFIGURATION



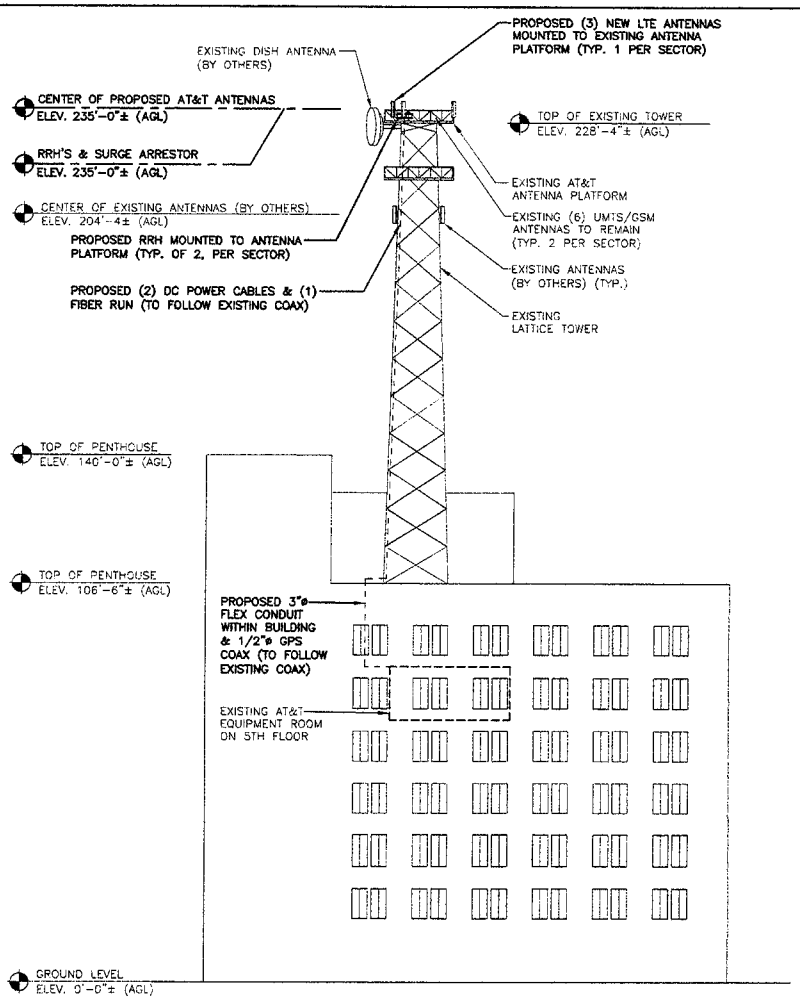
EXISTING GSM/UMTS ANTENNA PLAN

SCALE: N.T.S.



PROPOSED LTE ANTENNA PLAN

SCALE: N.T.S.



SOUTH ELEVATION

SCALE: 1/16"=1'-0"

0 8'-0" 16'-0" 32'-0" 48'-0"

Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 2-N01
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

SAI communications
22 KEEWAYDIN DRIVE
SALEM, NH 03079

SITE NUMBER: CT2118
SITE NAME: STAMFORD - CENTRAL
555 MAIN ST.
STAMFORD, CT 06901
FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
2	05/27/11	CONSTRUCTION REVISED	JG	DC	DPH
1	03/15/11	ISSUED FOR CONSTRUCTION	JG	DC	DPH
0	03/02/11	ISSUED FOR REVIEW	JG	DC	DPH

SCALE: AS SHOWN | DESIGNED BY: DC | DRAWN BY: JG

AT&T

ANTENNA LAYOUT AND ELEVATION (LTE)

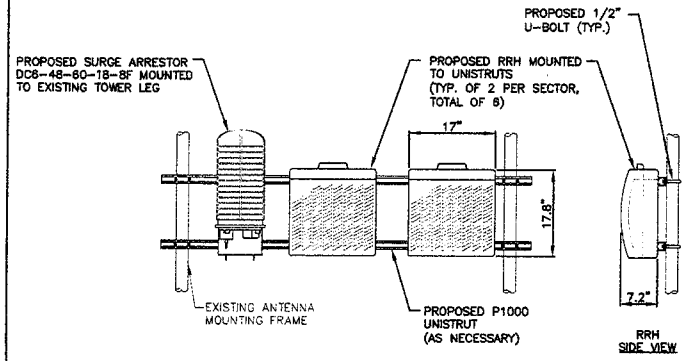
JOB NUMBER	DRAWING NUMBER	REV
2118.01	A-2	2

NOTE:

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

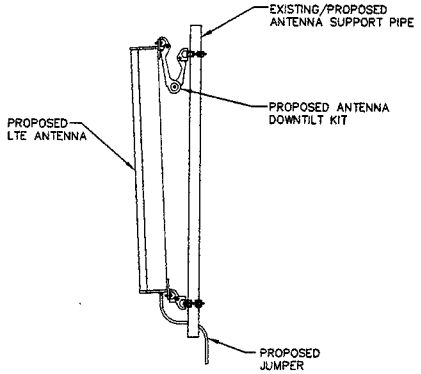
*NOTE:

REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA CONFIGURATION



PROPOSED RRH & SURGE ARRESTOR MOUNTING DETAIL

SCALE: N.T.S.

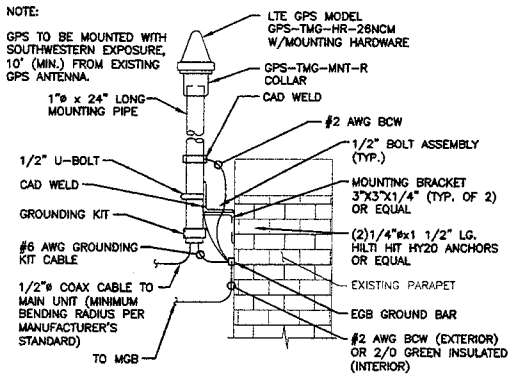


NOTES:

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

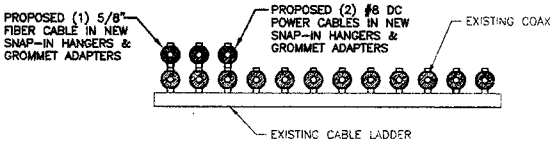
PROPOSED LTE ANTENNA DETAIL

SCALE: N.T.S.



GPS MOUNTED TO WALL

SCALE: N.T.S.



CABLE MOUNTING DETAIL

SCALE: N.T.S.

Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 2-101
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 304-9586

SAI communications
22 KEEWAYDIN DRIVE
SALEM, NH 03079

SITE NUMBER: CT2118
SITE NAME: STAMFORD - CENTRAL
555 MAIN ST.
STAMFORD, CT 06901
FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

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2	05/27/11	CONSTRUCTION REVISED	JG	DC	DPH
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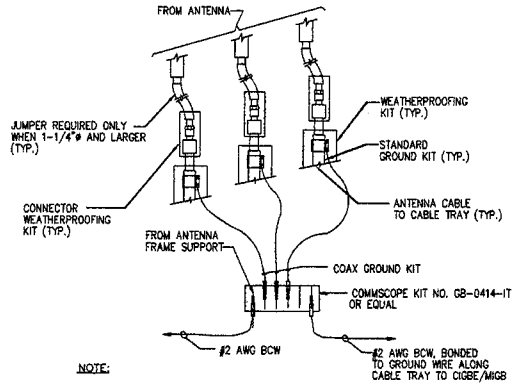
SCALE: AS SHOWN | DESIGNED BY: DC | DRAWN BY: JG

AT&T

DETAILS (LTE)

JOB NUMBER	DRAWING NUMBER	REV
2118.01	A-3	2

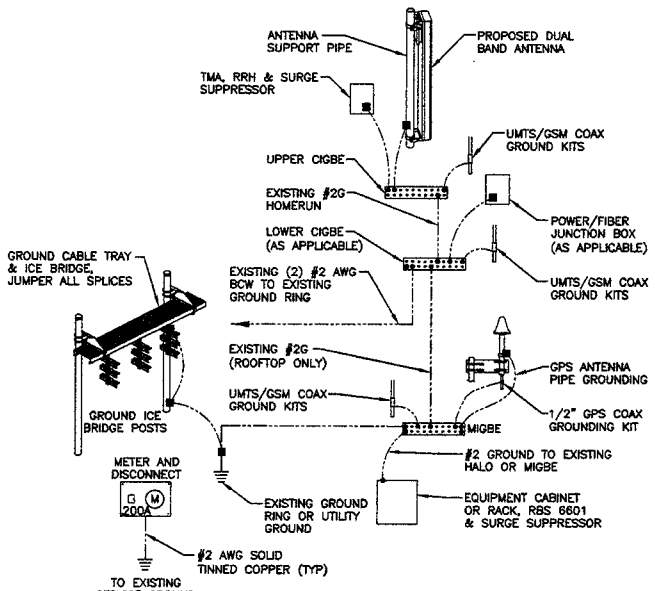


NOTE:

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

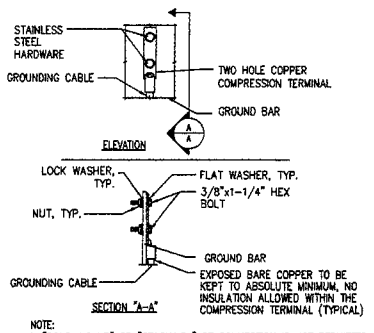
GROUND WIRE TO GROUND BAR CONNECTION DETAIL

1 — N.T.S.



GROUNDING RISER DIAGRAM

— N.T.S.



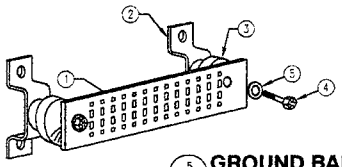
NOTE:

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.

WIRELESS SOLUTIONS INC.			
NO.	REQ.	PART NO.	DESCRIPTION
1	1	HLGB-0420-1S	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.

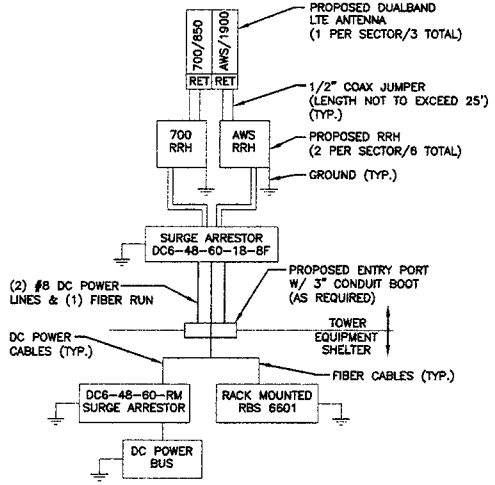
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

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)



NOTES:

1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS.

LTE PLUMBING DIAGRAM

3 — N.T.S.

Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 2-101
N. ANDOVER, MA 01845
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SCALE: AS SHOWN | DESIGNED BY: DC | DRAWN BY: JG

AT&T

PLUMBING DIAGRAM & DETAILS (LTE)

JOB NUMBER	DRAWING NUMBER	REV
2118.01	G-1	2

TECHNICAL SPECIFICATION NOTES

GENERAL

1. STRUCTURAL MODIFICATIONS HAVE BEEN DESIGNED IN CONFORMANCE WITH ANSI/TIA/222-F STANDARD SPECIFICATIONS FOR LOADING SPECIFIED ON SHEET S01.
2. ALL DIMENSIONS AND DETAILS SHOWN HAVE BEEN OBTAINED FROM LIMITED FIELD MAPPING BY MEI (SUB: HTS) WITH NO ORIGINAL DESIGN DRAWINGS AVAILABLE. THEREFORE ACTUAL SITE DIMENSIONS SHOULD BE VERIFIED PRIOR TO FABRICATION OF ANY MATERIAL OR FIELD PROVISION FOR ADAPTATION SHOULD BE MADE.
3. THESE DRAWINGS INDICATE THE MAJOR OPERATIONS TO BE PERFORMED, BUT DO NOT SHOW EVERY FIELD CONDITION THAT MAY BE ENCOUNTERED. THEREFORE, PRIOR TO BEGINNING OF WORK, THE CONTRACTOR SHOULD SURVEY THE JOB SITE THOROUGHLY TO MINIMIZE FUTURE FIELD PROBLEMS. BID PRICE TO INCLUDE ALL RELATED COSTS TO FAMILIARIZE WITH ACTUAL SITE CONDITIONS AND FIELD DETERMINATIONS/VERIFICATION OF NOTED DIMENSIONS. MATERIAL QUANTITIES AND LENGTH ARE FOR BIDDING PURPOSE - CONTRACTOR TO BE RESPONSIBLE FOR PROPER FIT AND CLEARANCES.
4. ALL WORK SHALL BE PERFORMED AND INSTALLED BY A TOWER CONTRACTOR WITH MIN. 5 YEARS EXPERIENCE IN SIMILAR WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION AND INDUSTRY PRACTICE.
5. ALL PERMITS, LICENSES, APPROVALS, AND OTHER REQUIREMENTS FOR CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AMPLE NOTICE TO BUILDING INSPECTION DEPARTMENT TO SCHEDULE ANY REQUIRED INSPECTIONS.
6. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
7. CONTRACTOR SHALL SUBMIT TO ENGINEER ANY INTENT TO DEVIATE FROM PLANS AND DETAILS FOR APPROVAL PRIOR TO START OF ANY WORK. CONTACT THE ENGINEER OF RECORD CONCERNING ANY CHANGES, DISCREPANCIES &/OR MODIFICATIONS THAT MAY BE REQUIRED DUE TO THE EXISTING CONDITIONS AND SHALL NEED TO BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION
8. PHOTOGRAPHS SHALL BE TAKEN OF OVERALL SITE COMPOUND AND STRUCTURE PRIOR TO THE CONSTRUCTION, DURING CONSTRUCTION AND AFTER CONSTRUCTION INCLUDING BUT NOT LIMITED TO ALL REINFORCED AREAS. A CLOSE-OUT REPORT WITH PHOTOS IS TO BE SUBMITTED TO THE ENGINEER OF RECORD WITHIN REASONABLE TIME AFTER COMPLETION OF WORK.
9. SCOPE OF MODIFICATIONS LISTED ARE STRUCTURAL RELATED MODIFICATIONS BASED ON PRIOR ANALYSIS RESULTS. EXISTING STRUCTURE IS ASSUMED TO BE IN GOOD CONDITION AND FREE FROM STRUCTURAL DEFECTS. ALL MAINTENANCE TYPE WORK IS ASSUMED COMPLETED.
10. REFER TO OWNER SPECIFICATIONS FOR NEW MEMBERS PAINT REQUIREMENTS IF ANY, OTHERWISE PAINT NEW STEEL MEMBERS WITH A FINISH COAT OF ACRYLIC PAINT TO MATCH EXISTING PAINT AT THAT ELEVATION & IN ACCORDANCE WITH FAA ADVISORY CIRCULAR AC 70/7460-JK.

FIELD INSTALLATION

11. ALL INSTALLATION PROCEDURES, SAFEGUARDS AND MEANS AND METHODS OF CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA REQUIREMENTS AND NATE GUIDELINES. ALL ERECTION STRESSES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REVIEWED/PERFORMED BY A COMPETENT PROFESSIONAL EXPERIENCED IN SIMILAR WORK.
12. MINIMUM RECOMMENDED WEATHER CONDITION THAT SHOULD BE OBSERVED TO INSURE A SAFE WORKING CONDITION SHALL BE: WIND SPEED NOT TO EXCEED 10-15 MPH AT GROUND LEVEL, NO THUNDERSTORMS FORECASTED, AND WITH TOWER STEEL TEMPERATURE BETWEEN 20 F & 95 F. FOLLOW ALL APPLICABLE OSHA SAFETY GUIDELINES.
13. TOWER SHALL BE PROPERLY BRACED AND CARE SHALL BE TAKEN IN THE REMOVAL AND REPLACEMENT OF ANY TOWER MEMBER IN ACCORDANCE WITH RECOGNIZED INDUSTRY STANDARDS AND PROCEDURES.
14. ALL PRECAUTIONS AND EFFORTS SHALL BE TAKEN TO INSURE THE TOWER STABILITY DURING THE MODIFICATIONS WORK. BRACING FRAMES WITH CAPACITY MATCHING MEMBERS BEING WORKED ON SHALL BE REQUIRED.
15. ANY STRUCTURAL MEMBER THAT HAS DAMAGED GALVANIZED SURFACES SHALL BE CLEANED AND TOUCHED UP WITH TWO COATS OF ZINC-RICH PAINT (ZRC PREFERRED).
16. IN AREAS TO BE MODIFIED, ANY MOUNTS, BRACKETS, CLAMPS, TRANS. LINES AND/OR MISCELLANEOUS HARDWARE INTERFERING WITH THE INSTALLATION OF THE MODIFICATIONS SHALL BE RE-WORKED OR TEMPORARILY MOVED AND THEN REPLACED AFTER THE COMPLETION OF THE WORK. CONTACT OWNER TO COORDINATE THIS ACTION AS REQUIRED.
17. FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES. ALL BOLTS AT EVERY CONNECTION SHALL BE INSTALLED SNUG FIT UNTIL THE SECTION IS FULLY COMPACTED, AND THEN TIGHTENED ADDITIONALLY IN ACCORDANCE WITH THE AISC "TURN-OF-THE-NUT" METHOD. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.
18. BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS SHALL BE TENSIONED 1/3 TURN BEYOND SNUG FIT. BOLT LENGTHS OVER 4 DIAMETERS SHALL BE 1/2 TURN BEYOND SNUG TIGHT.
19. UPON COMPLETION OF ALL WORK, THE SITE SHALL BE CLEANED OF ALL DEBRIS AS REQUIRED. ANY SURPLUS MATERIALS NOT REMOVED FROM THE SITE SHALL BE NEATLY STORED IN AN AREA DESIGNATED BY THE OWNER REPRESENTATIVE.

STEEL / FABRICATION

20. ALL STEEL FABRICATION AND INSTALLATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL AND SPECIFICATIONS "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
21. DRAWINGS SHOW RELATED DETAILS BUT ARE NOT SHOP DRAWINGS. SHOP DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH AISC DETAILING REQUIREMENTS. DIMENSIONAL TOLERANCES SHALL BE IN ACCORDANCE WITH ASTM A7 REQUIREMENTS.
22. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (A.W.S.) STANDARDS AND SPECIFICATIONS, ANSI/AWS D1.1-latest edition.
23. ALL ELECTRODES SHALL BE LOW HYDROGEN, MATCHING FILLER METAL, IN ACCORDANCE WITH AWS D1.1, UNLESS NOTED OTHERWISE.
24. NEW STEEL ANGLE, CHANNEL MEMBERS UNLESS NOTED OTHERWISE SHALL CONFORM TO ASTM A-36 (36 KSI MIN. YIELD STRENGTH) STEEL SPECIFICATIONS.
25. THE FINISHED DIAMETER OF BOLT HOLES SHALL NOT BE MORE THAN 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER UNLESS OTHERWISE NOTED.
26. MATERIAL MAY BE CUT BY SHEARING, SAWING, OR CUTTING WITH A ROUTER OR GAS CUT. MATERIAL GREATER THAN 1/2" THICKNESS SHALL NOT BE SHEARED.
27. CUT EDGES SHALL BE TRUE AND SMOOTH, AND FREE FROM EXCESSIVE BURRS AND RAGGED BREAKS. SHEARED EDGES OF THICK PLATES SHALL BE PLANED TO A DEPTH OF 1/4". RE-ENTRANT CUTS SHALL BE AVOIDED. IF USED, THEY SHALL BE FILLETED BY DRILLING PRIOR TO CUTTING.
28. DIMENSIONAL TOLERANCES, AS INDICATED IN THE AISC CODE OF STANDARD PRACTICE SHALL BE CAREFULLY FOLLOWED DURING FABRICATION.
29. PRIOR TO GALVANIZING, ALL FABRICATED STEEL SHALL BE THOROUGHLY SHOP INSPECTED AND QUANTITIES COUNTED ACCORDING TO THE BEST QUALITY CONTROL AND INSPECTION METHODS.
30. ALL BOLTS, WASHERS AND LOCKNUTS SHALL BE NEW DOMESTIC HIGH STRENGTH GALVANIZED BOLTS TYPE 'X' (THREADS EXCLUDED) AND SHALL CONFORM TO ASTM A325 SPECIFICATIONS UNLESS NOTED OTHERWISE.
31. ANY BOLT REMOVED FROM EXISTING TOWER STRUCTURE SHALL BE REPLACED WITH A NEW DOMESTIC ASTM A325 HIGH STRENGTH BOLT OF EQUAL DIAMETER SIZE UNLESS NOTED OTHERWISE.
32. ALL BOLTS SHALL BE TIGHTENED USING TURN-OF-THE-NUT METHOD.
33. ALL BOLT HOLES EDGE DISTANCES SHALL BE 1 1/2" UNLESS OTHERWISE NOTED.
34. ALL STEEL SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 SPECIFICATIONS AFTER FABRICATION.
35. ALL STEEL HARDWARE SHALL BE HOT DIPPED GALVANIZED PER ASTM A153.
36. FIELD PUNCH / DRILL HOLES AS REQUIRED FOR ACCURATE FIT OF MODIFICATION MEMBER.
37. AFTER ANY FIELD HOLE PUNCHING/DRILLING, OR CUTTING HAS BEEN COMPLETED, OR FOR ANY DAMAGED STRUCTURAL MEMBER, TOUCH UP ALL BARE MATERIAL AND WELDED AREAS WITH TWO COATS OF ZRC OR SIMILAR MATERIAL TO RESTORE THE GALVANIZED PROTECTION ON THE MEMBERS.

at&t

125' S.S. TOWER
STAMFORD - CENTRAL
#CT2118

555 MAIN ST., STAMFORD, CT 06901
LAT: 41-03-12.51 N - LON: 73-32-8.39 W

OWNER: SOUTHERN NEW ENGLAND TELEPHONE CO.
STAMFORD, CT

DRAWING INDEX

STATE OF CONNECTICUT — MARK MALOUF — No. 17765 — LICENSED PROFESSIONAL ENGINEER — JULY 29, 2011

MALOUF ENGINEERING INTERNATIONAL, INC.
STRUCTURAL CONSULTANTS
17950 PRESTON ROAD SUITE 720
DALLAS, TEXAS 75252-5635
972-783-2578 (fax: 2583)
www.maloufengineering.com

125' S.S. TOWER
STAMFORD - CENTRAL #CT2118
555 MAIN ST., STAMFORD, CT 06901
LAT: 41-03-12.51 N - LON: 73-32-8.39 W

at&t

NO.	DATE	REVISIONS	DRAWN	ENG'D	APP'D
0	07/29/11	ISSUED FOR CONSTRUCTION	DLN	LVK	AM

HUDSON DESIGN GROUP / AT&T

TITLE SHEET & TECH. SPEC. NOTES

MEI PROJECT ID	SHEET NUMBER	REV.
CT02768S-11V1	T01	0

REFER SHEET T01 FOR TECH. SPEC. NOTES

TOWER HEIGHT & TYPE:	125' SELF-SUPPORTING TOWER
SITE NAME:	STAMFORD - CENTRAL #CT2118
SITE LOCATION:	STAMFORD, CT 06901
TOWER MANUF. / MODEL:	UNKNOWN / UNKNOWN
ORIGINAL DESIGN CRITERIA:	TIA/EIA-222- UNKNOWN
ANALYSIS CRITERIA:	TIA/EIA 222-F - 85/74 MPH + 0/.5" ICE

(2) TOP SMALL BEACONS
ELEV. 138.67' ± A.R.L.

TOP LIGHTNING ROD
ONTO 13' T-BREAM MOUNT
ELEV. 138' ± A.R.L.

EXIST.
(6) P65-15-XLH-RR PANEL ANTENNAS
(6) LGP21401 TMA'S
ONTO TOP SQUARE PLATFORM MOUNT
ELEV. 127.5' ± (AT&T) A.R.L.

PROPOSED
(3) AM-X-CD-14-65-00T-RET W/ PANEL ANTENNAS
(6) ERICSSON RRH
(2) RAYCAP DCS-48-60-18-8F DC SURGE BOX
ELEV. 127.5' ± (AT&T) A.R.L.

13' T BEAM MOUNT
(3) UNUSED PIPE MOUNT
ELEV. 127.5' ± A.R.L.

EXIST. 1.5'X2-ELEMENT YAGI AND MOUNT
ELEV. 122.5' ± A.R.L.

EXIST. 1FT HP DISH (WINDSTAR 43029)
AZ. 210° ± ELEV. 114.5'± A.R.L.

EXIST. 10 FT HP DISH
AZ. 210° ± ELEV. 117'± A.R.L.

(2) 4'LX6'W REST PLATFORM
ELEV. 110' ± A.R.L.

EXIST.
(6) APX16PV-16PVL PANEL ANTENNAS
(6) 13"T X 6.5"W X 3.5"D TMA'S
ONTO (3) 10FT SECTOR FRAME MOUNTS
ELEV. 103' ± A.R.L.

EXIST.
(3) APX16DWV-16DWVS PANEL ANTENNAS
(3) 10"T X 9.5"W X 3.5"D TMA'S
ONTO (3) 10FT SECTOR FRAME MOUNTS
ELEV. 96.5' ± A.R.L.

ELEV. 231.5' A.G.L. 5'-7 1/4" — #14
ELEV. 227.3' 5'-7 1/4" — #13
ELEV. 223.2' 5'-7 1/4" — #12
ELEV. 219.0' 5'-7 1/4" — #11
SLOPE CHANGE
ELEV. 214.2' 5'-11 3/8" — #10
ELEV. 204.6' 6'-7 1/2" — #9
ELEV. 195.0' 7'-3 11/16" — #8
ELEV. 185.0' 8'-0 3/16" — #7
ELEV. 175.0' 8'-8 11/16" — #6
ELEV. 165.0' 9'-5 3/16" — #5
ELEV. 155.0' 10'-1 11/16" — #4
ELEV. 145.0' 10'-10" — #3
ELEV. 135.0' 11'-6 3/4" — #2
ELEV. 120.7' 12'-6 3/4" — #1
ELEV. 106.5' A.G.L. 13'-7"

125'-0"

EXISTING MEMBER SCHEDULE

SECTION NUMBERS	LEGS 36 KSI	DIAGONALS 36 KSI	HORIZONTALS 36 KSI	BRACE #1 36 KSI	BRACE #2 36 KSI
#14	L4X4X3/8				
#13		2L2 1/2X2X1/4X3/8	L2 1/2X2 1/2X1/4		
#12					
#11	L5X5X1/2				
#10		L2 1/2X2X1/4			
#9				L2 1/2X3X1/4	
#8	L6X6X5/8		L2 1/2X2 1/2X1/4		
#7		L3X3X1/4			L2 1/2X2X3/16
#6			L2 1/2X2 1/2X1/4		
#5				L2 1/2X2 1/2X1/4	
#4	L6X6X3/4				
#3				L2 1/2X2X1/4	
#2	L6X6X7/8	2L2 1/2X2 1/2X1/4X3/8	L2 1/2X2 1/2X1/4X3/8	L2 1/2X2X3/16	L2 1/2X2X3/16
#1					

NEW MEMBER SCHEDULE

NEW INTERNAL RDP BRACE 36 KSI	SECTION NUMBERS
ADD NEW INTERNAL RDP BRACES REFER 201 (2 SECTIONS - 4 PLCS PER FACE)	#2
	#1

TYPICAL LACING CONFIGURATIONS

INNER BRACING CONFIG. VARIES

13'-7" AT BASE

TOWER SECTION

REFER 301 FOR SCHEMATIC TRANSMISSION LINE LAYOUT.

MODIFICATION LEGEND

RANGE OF INTERNAL REINFORCEMENT

4'X7-ELEMENT YAGI
ONTO 2FT SIDEARM MOUNT
ELEV. 25.5' ± A.R.L.

TOP OF EXIST. ROOFTOP STRUCTURE
ELEV. 106.5' ±

13'-7"

A.R.L. - ABOVE ROOF LINE
= 106.5' A.G.L.

101 **ELEVATION: 125' SELF-SUPPORTING TOWER**
SCALE: 1" = 10'-0"

HUDSON DESIGN GROUP / AT&T

TOWER MODIFICATION SCHEDULE

MEI PROJECT ID	SHEET NUMBER	REV.
CT02768S-11V1	S01	0

STATE OF CONNECTICUT — MARK MALOUF — 21915 — LICENSED PROFESSIONAL ENGINEER — 07/29/2011

ALL SCALES SHOWN ARE BASED ON DRAWING SIZE OF 11" X 17"

NO	DATE	REVISIONS	DRAWN (INCH)	CHKD	APP'D
0	07/29/11	ISSUED FOR CONSTRUCTION	DLH	MM	

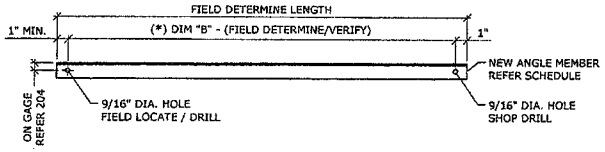
at&t

125' S.S. TOWER
STAMFORD - CENTRAL #CT2118
555 MAIN ST., STAMFORD, CT 06901
LAT: 41-03-12.51 N - LON: 73-32-8.39 W

MALOUF ENGINEERING INTERNATIONAL, INC.
17950 PRESTON ROAD SUITE 720
DALLAS, TEXAS 75252-5635
972-783-2578 (fax: 2583)
www.moloufengineering.com

STRUCTURAL CONSULTANTS

REFER SHEET T01 FOR TECH. SPEC. NOTES

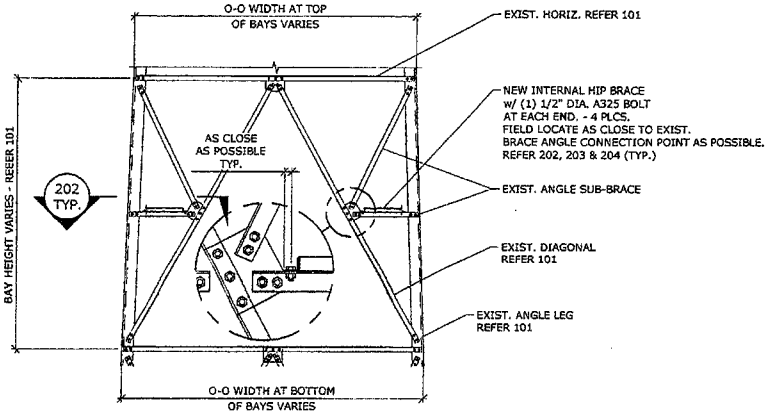


NEW INTERNAL HIP BRACE MEMBER SCHEDULE							
SECTION	BAY	ELEV.	DIM "A" (*)	DIM "B" (*)	INT. BRACE ANGLE SIZE & LENGTH (*)	MK. INT. BR.	QTY
#2	1	127.8'± A.G.L.	2'-5 5/8"±	3'-7 5/16"±	L 2" x 2" x 1/4" x 3'-9 5/16"± LG.	203-21	4
#1	1	113.6'± A.G.L.	2'-8 7/8"±	3'-11 13/16"±	L 2" x 2" x 1/4" x 4'-1 13/16"± LG.	203-11	4

(*) LENGTH APPROX. FOR BIDDING PURPOSES ONLY;
FIELD VERIFY / DETERMINE ACTUAL LENGTH..

203 DETAIL: INTERNAL HIP BRACE

SCALE: 3/4" = 1'-0"



TYPICAL ALL THREE FACES

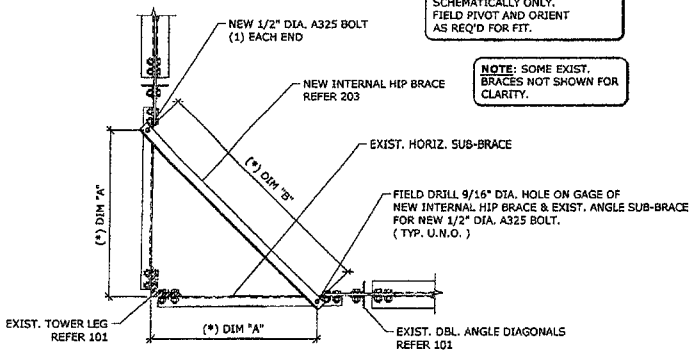
201 ELEVATION: NEW DIAGONAL HIP BRACING

SCALE: NOT TO SCALE

(1 BAY SHOWN
- 2 BAYS TOTAL)

USUAL GAGES FOR ANGLES IN INCHES													
LEG	8	7	6	5	4	3 1/2	3	2 1/2	2	1 3/4	1 1/2	1 3/8	1 1/4	1
g	4 1/2	4 1/2	4	3	2 1/2	2	1 3/4	1 3/8	1 1/8	1	7/8	7/8	3/4	5/8
g1	3	3	2 1/2	2										
g2	3	3	3	1 3/4										

204 TYPICAL ANGLE GAGES



SYM. ABOUT TOWER AXIS

202 SECTION: TYPICAL NEW INTERNAL HIP BRACING

SCALE: NOT TO SCALE

REFER 101 FOR NEW AND EXIST. MEMBER SIZES AND SCHEDULES.

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125' S.S. TOWER
STAMFORD - CENTRAL #CT2118
555 MAIN ST., STAMFORD, CT 06901
LAT: 41-03-12.51 N - LON: 73-32-8.39 W

at&t

NO.	DATE	REVISIONS	DRAWN	ENG'D.	APP'D.
0	07/29/11	ISSUED FOR CONSTRUCTION	DLN	LKN	MAF

STATE OF CONNECTICUT
MARK A. FALCONE
No. 17716
LICENSED
PROFESSIONAL ENGINEER
07/29/2011

HUDSON DESIGN GROUP / AT&T

INTERNAL HIP BRACE DETAILS

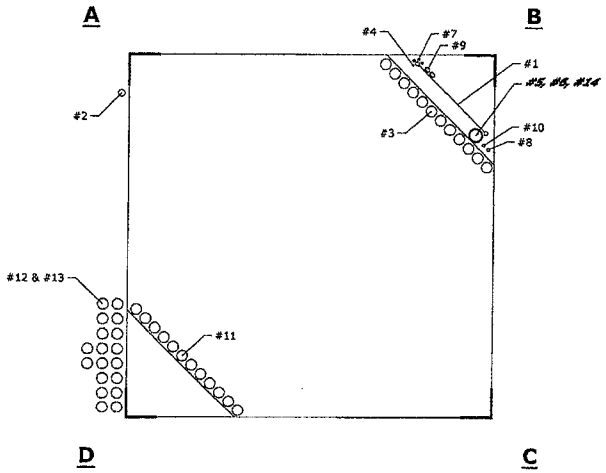
MEI PROJECT ID	SHEET NUMBER	REV.
CT02768S-11V1	S02	0

REFER SHEET T01 FOR TECH. SPEC. NOTES

No.	QTY.	DESCRIPTION	ELEV.	TENANT
1	1	Climbing Ladder	125'	E
2	1	1 1/4" Rigid Conduit	125'	E
3	12	1 5/8	125'	AT&T / E
4	1	0.30	125'	AT&T / E
5	6	5/8" OD POWER CABLES	125'	AT&T / P
6	3	10mm FIBER CABLE	125'	AT&T / P
7	3	3/8	115'	E
8	1	1/2	122.5'	E
9	2	EW90	117'	E
10	1	1/2	25.5'	E
11	12	1 5/8	103'	E
12	12	1 5/8	103'	E
13	6	1 5/8	96.5'	E
14	1	2" FLEX CONDUIT	125'	AT&T / P

LEGEND:

E = EXISTING #X
P = PROPOSED #X
F = FUTURE #X
R = REMOVE #X
TO RELOCATE



301 PLAN: SCHEMATIC Tx-LINE LAYOUT

SCALE: NOT TO SCALE

NOTE:
1. Tx LINE LAYOUT IS SCHEMATIC ONLY, BASED UPON MEI MAPPING DATED 6/1/2011 .
2. NEW BRACKET SUPPORT SPECIFICATION BY OTHERS.
3. REWORK EXISTING Tx LINES AND SUPPORTS AS REQ'D. FOR INSTALLATION OF NEW TxLINES.
4. ELEVATIONS SHOWN ARE ABOVE ROOF LINE.

REFER 101 FOR NEW AND EXISTING MEMBER SIZES AND SCHEDULES.

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125' S.S. TOWER
STAMFORD - CENTRAL #CT2118
555 MAIN ST., STAMFORD, CT 06901
LAT: 41-03-12.51 N - LON: 73-32-8.39 W

at&t

NO.	DATE	REVISIONS	DRAWN	ENG'D	APP'D
0	07/29/11	ISSUED FOR CONSTRUCTION	DLN	LKN	MM

STATE OF CONNECTICUT
E. MARK MALOUF
No. 17715
LICENSED
PROFESSIONAL ENGINEER
JUL 29, 2011

HUDSON DESIGN GROUP / AT&T

SCHEMATIC TxLINE LAYOUT

MEI PROJECT ID	SHEET NUMBER	REV.
CT02768S-11V1	S03	0

MALOUF ENGINEERING INTL., INC.

STRUCTURAL CONSULTANTS

July 28, 2011

Mr. Derek Creaser
Hudson Design Group
North Andover, MA 01805

SUBJECT	**STRUCTURAL MODIFICATION DESIGN**			
Structure/Make/Model:	125 ft Self-Supporting Tower on 106.5ft Rooftop		Not Known / Not Known	
Client/Site Name/#:	**Hudson D.G / AT&T**		**Stamford - Central #CT2118**	
Owner/Site Name/#:	Southern New England Telephone Co.			
MEI Project ID:	**CT02768S-11V1**			
Location:	555 Main St Stamford, CT 06901		Fairfield County FCC #1046319	
	LAT	41-03-12.51 N	LON	73-32-8.39 W

Malouf Engineering Int'l (MEI), as requested, has performed a structural reanalysis and modification of the above mentioned structure in order to structurally support the changed condition as noted below.

The structural modification design used the following criteria:

CODE / STANDARD	2006 Int'l Building Code / ANSI/TIA-222-F-96 Standard	
LOADING CASES	*Full Wind*:	85 Mph (fastest-mile) –with No Radial Ice [equiv. to 105 Mph 3-sec]
	Iced Case:	73.61 Mph (fastest-mile) + 0.5" Radial Ice
	Service:	50 Mph

Proposed Changed Condition Appurtenances

Elev (ft)*	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
127.5	AT&T	3	AM-X-CD-14-65-00T-RET Panel Antennas	[Existing Platform]	1	2" Flex Conduit [Inside: (6) DC Power Cables & (3) Fiber Cables]
		6	ERICSSON RRH's			
		1	Raycap DC6-48-60-18-8F DC Surge Box			

Current and Reserved/Future Appurtenances

Elev (ft)*	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
138.67		2	Top Small Beacons	13ft T Beam Mount	1	1-1/4" R.C.
138		1	Top Lightning Rod			
127.5	AT&T	6	P65-15-XLH-RR Panel Antennas	Top Square Platform Mount	1	0.30"
		6	LGP21401 TMA's		12	1-5/8"-(FZ)
				(2) Unused Pipe Mounts		
				Unused I-Beam Mount		
122.5		1	1.5'x2-Elem. Yagi Antenna	Mount	1	1/2"-(FZ)
117		1	10ft Dia. HP Dish	Dish Pipe Mount	2	EW90-(FZ)
115					2	3/8" [Dead]
114.5		1	1ft Dia. HP Dish (WINDSTAR 43029)	Dish Pipe Mount	1	3/8"-(FZ)
110		2	4'Lx6'W Rest Platforms	Face Mounted		
103	AT&T	6	APX16PV-16PVL Panel Antennas	(3) 10ft Sector Frame Mounts	12	1-5/8"-(FZ)
		6	13"T x 6.5"W x 3.5"D TMA's		12	1-5/8"-(FZ)
96.5	AT&T	3	APX16DWV-16DWVS Panel Ants.	(3) 10ft Sector Frame Mounts	6	1-5/8"-(FZ)
		3	10"T x 9.5"W x 3.5"D TMA's			
25.5	AT&T	1	4'x7-Elem. Yagi Antenna	2ft Sidearm Mount	1	1/2"-(FZ)

**Existing 125ft Self-Supporting tower is located on top of an 106.5ft height building. All elevations listed here are above tower steel base (Add 106.5ft to get AGL height).*
(I) = internal; (E) = External; (FZ) = Within Face Zone & (OFZ) = Outside Face Zone - as per TIA-222

The subject structure is modified for the addition of the noted proposed changed condition. The design is based on a rigorous structural analysis performed by MEI relying on data records furnished. A computer stress analysis of the structure with the suggested strengthening elements was performed in accordance with the IBC / TIA-222 Standard provisions and with the agreed scope of work terms. This existing structure is assumed, for the purpose of this work, to have been properly maintained and to be in good condition with no structural defects and with no deterioration to its member capacities ('as-new' condition).

This modification letter should be read along with the original analysis report, project #CT02768S-11V0 and all assumptions/disclaimer noted in the report are valid.

The structure will require structural strengthening as follows: (Refer to the drawings for details.)

STRUCTURAL STRENGTHENING REQUIRED	
1	Add new Internal Hip Bracing angle members bolted onto existing members from Elevations: 0' - 28.5' (2 sections total). Lengths to be field determined.
2	Perform Maintenance work as required & applicable to bring the structure into good operational condition.
3	*Field determination/verification or provision for field adaptation before any fabrication and installation is strongly recommended.*

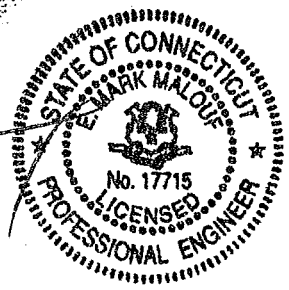
Prior to implementation of the changed conditions and modifications, **the data designated on the design documents requiring field determination and verification shall be validated**. Rigging and temporary supports required for the erection/modification shall be determined, documented, furnished and installed by the erector/contractor accounting for the loads imposed on the structure due to the proposed construction method.

Based on the stress analysis results, **the subject structure, after proper installation of the noted structural strengthening, is rated at 97.5%** of its support capacity (controlling component: Bracings) with the proposed changed condition considered. *Please note that evaluation of the base support of the tower is by others.*

MEI appreciates the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or any projects please contact us.

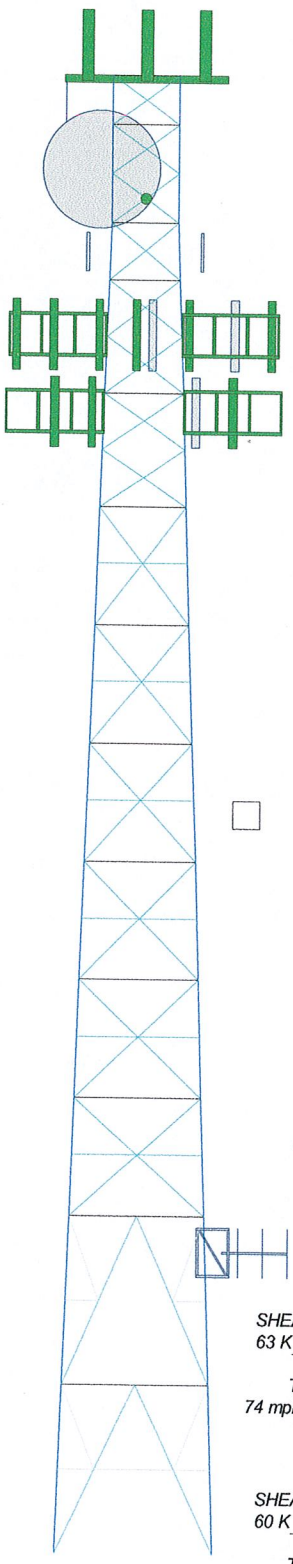
Respectfully submitted,

MALOUF ENGINEERING INT'L, INC.



E. Mark Malouf, PE
Connecticut #17715
972-783-2578 ext. 106
mmalouf@maloufengineering.com
(LKN)

Attachments: Modification Drawings
Stress Analysis Printout



Section	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	L6x6x7/8		L6x6x3/4			L6x6x5/8				L5x5x1/2			L4x4x3/8	
Leg Grade	A36													
Diagonals	2L2 1/2x2 1/2x1/4x3/8				L3x3x1/4					L2 1/2x2x1/4			2L2 1/2x2x1/4x3/8	
Diagonal Grade	A36													
Top Girts	2L2 1/2x2 1/2x1/4x3/8				L2 1/2x2 1/2x1/4					L2 1/2x2x1/4	C7x9.8	N.A.	B	A
Sec. Horizontals	N.A.		L2 1/2x2x1/4		L2 1/2x2 1/2x1/4	L2 1/2x2x3/16		L2 1/2x2x1/4		N.A.				
Red. Horizontals	L2 1/2x2x3/16							N.A.						
Red. Diagonals	L2 1/2x2x3/16							N.A.						
Red. Sub-Horizs	2L2 1/2x2 1/2x1/4x3/8							N.A.						
Red. Hips	L2x2x1/4							N.A.						
Inner Bracing	L3x3x3/16		L2x2 1/2x3/16					L2 1/2x2 1/2x3/16		N.A.				
Face Width (ft)	13.5833	12.5726	10.8526	10.1434	9.43414	8.7249	8.0156	7.3063	6.62545	5.94459	5.60417			
# Panels @ (ft)	1 @ 14.2499		1 @ 14.25		6 @ 10					5 @ 4.8		3 @ 4.1667		
Weight (K)	24.5	4.0	3.7	2.2	2.1	1.9	1.8	1.8	1.2	1.2	0.7	0.6	0.6	0.8

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(2) TOP SMALL BEACONS (E)	245.17	1FT HP DISH (WINDSTAR 43029) (E)	221
TOP LIGHTNING ROD (E)	244.5	4'Lx6'W REST PLATFORM (E)	216.5
(2) P65-15-XLH-RR w/ Pipe Mount (ATI / E)	234	4'Lx6'W REST PLATFORM (E)	216.5
(2) LGP21401 TMA'S (ATI / E)	234	10FT SECTOR FRAME MOUNT (ATI / E)	209.5
AM-X-CD-14-65-00T-RET w/ PIPE MOUNT (ATI / P)	234	(2) APX16PV-16PVL w / Pipe Mount (ATI / E)	209.5
(2) ERICSSON RRH (ATI / P)	234	(2) 13"T x 6.5"W x 3.5"D TMA's (ATI / E)	209.5
(2) P65-15-XLH-RR w/ Pipe Mount (ATI / E)	234	10FT SECTOR FRAME MOUNT (ATI / E)	209.5
(2) LGP21401 TMA'S (ATI / E)	234	(2) APX16PV-16PVL w / Pipe Mount (ATI / E)	209.5
AM-X-CD-14-65-00T-RET w/ PIPE MOUNT (ATI / P)	234	(2) 13"T x 6.5"W x 3.5"D TMA's (ATI / E)	209.5
(2) ERICSSON RRH (ATI / P)	234	10FT SECTOR FRAME MOUNT (ATI / E)	209.5
RAYCAP DC6-48-60-18-8F DC SURGE BOX (ATI / P)	234	(2) APX16PV-16PVL w / Pipe Mount (ATI / E)	209.5
P65-15-XLH-RR w/ Pipe Mount (ATI / E)	234	(2) 13"T x 6.5"W x 3.5"D TMA's (ATI / E)	209.5
P65-15-XLH-RR w/ Pipe Mount (ATI / E)	234	10FT SECTOR FRAME MOUNT (ATI / E)	203
LGP21401 TMA'S (ATI / E)	234	APX16DWV-16DWVS (ATI / E)	203
LGP21401 TMA'S (ATI / E)	234	10"T x 9.5"W x 3.5"D TMA's (ATI / E)	203
AM-X-CD-14-65-00T-RET w/ PIPE MOUNT (ATI / P)	234	10FT SECTOR FRAME MOUNT (ATI / E)	203
(2) ERICSSON RRH (ATI / P)	234	APX16DWV-16DWVS (ATI / E)	203
13' T BEAM MOUNT (E)	231.5	10"T x 9.5"W x 3.5"D TMA's (ATI / E)	203
UNUSED PIPE MOUNT (E)	231.5	10FT SECTOR FRAME MOUNT (ATI / E)	203
UNUSED PIPE MOUNT (E)	231.5	APX16DWV-16DWVS (ATI / E)	203
UNUSED I-BEAM MOUNT (E)	231.5	10"T x 9.5"W x 3.5"D TMA's (ATI / E)	203
TOP SQUARE PLATFORM MOUNT (E)	231.5	4'x7-ELEMENT YAGI (ATI / E)	132
1.5'x2-ELEMENT YAGI AND MOUNT (E)	229	2FT SIDEARM MOUNT (ATI / E)	132
PIPE DISH MOUNT (E)	223.5		
10 FT HP DISH (E)	223.5		
PIPE DISH MOUNT (E)	221		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	C8x11.5	B	L2 1/2x2 1/2x1/4

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A36	36 ksi	58 ksi			

TOWER DESIGN NOTES

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 97.5%

MAX. CORNER REACTIONS AT BASE:
DOWN: 257 K
UPLIFT: -223 K
SHEAR: 28 K

AXIAL 72 K
SHEAR 63 K *MOMENT 4584 kip-ft*
TORQUE 18 kip-ft
74 mph WIND - 0.5000 in ICE

AXIAL 46 K
SHEAR 60 K *MOMENT 4503 kip-ft*
TORQUE 21 kip-ft
REACTIONS - 85 mph WIND

MALOUF ENGINEERING INTL, INC. STRUCTURAL CONSULTANTS
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Malouf Engineering Int'l, Inc.
17950 Preston Road, Suite #720
Dallas, TX 75252
Phone: (972) 783-2578
FAX: (972) 783-2583

Job: *125 FT SST, STAMFORD CENTRAL SITE #CT2118*			
Project: *CT02768S-11V1 (MODIFICATION ANALYSIS)*			
Client: HUDSON DESIGN GROUP / AT&T	Drawn by: LKN	App'd:	
Code: TIA/EIA-222-F	Date: 07/28/11	Scale: NTS	
Path: D:\ME\Projects\11 DATA\SS\CT02768S-11V1\CT02768S-11V1.eri		Dwg No. E-1	

Tower Input Data

The main tower is a 4x free standing tower with an overall height of 231.50 ft above the ground line.
The base of the tower is set at an elevation of 106.50 ft above the ground line.
The face width of the tower is 5.60 ft at the top and 13.58 ft at the base.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in Fairfield County, Connecticut.
Basic wind speed of 85 mph.
Nominal ice thickness of 0.5000 in.
Ice density of 56 pcf.
A wind speed of 74 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 50 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.333.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Treat Feedline Bundles As Cylinder
Consider Moments - Horizontals	Assume Legs Pinned	√ Use ASCE 10 X-Brace Ly Rules
Consider Moments - Diagonals	√ Assume Rigid Index Plate	√ Calculate Redundant Bracing Forces
Use Moment Magnification	√ Use Clear Spans For Wind Area	Ignore Redundant Members in FEA
√ Use Code Stress Ratios	√ Use Clear Spans For KL/r	SR Leg Bolts Resist Compression
√ Use Code Safety Factors - Guys	√ Retension Guys To Initial Tension	√ All Leg Panels Have Same Allowable
Escalate Ice	Bypass Mast Stability Checks	Offset Girt At Foundation
Always Use Max Kz	√ Use Azimuth Dish Coefficients	Consider Feedline Torque
Use Special Wind Profile	√ Project Wind Area of Appurt.	Include Angle Block Shear Check
√ Include Bolts In Member Capacity	√ Autocalc Torque Arm Areas	Poles
Leg Bolts Are At Top Of Section	SR Members Have Cut Ends	√ Include Shear-Torsion Interaction
√ Secondary Horizontal Braces Leg	√ Sort Capacity Reports By Component	Always Use Sub-Critical Flow
√ Use Diamond Inner Bracing (4 Sided)	√ Triangulate Diamond Inner Bracing	Use Top Mounted Sockets
Add IBC .6D+W Combination		

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	*Face or Leg*	*Allow Shield*	*Component Type*	*Placement* *ft*	*Total Number*	*Number Per Row*	*Clear Spacing* *in*	*Width or Diameter* *in*	*Perimeter* *in*	*Weight* *plf*
Safety Line 3/8 (E)	B	No	Ar (Leg)	231.50 - 106.50	1	1	0.3750	0.3750		0.22
Climbing Ladder (E)	B	No	Ar (Leg)	231.50 - 106.50	1	1	0.2500	1.5000		7.90
1 1/4" Rigid Conduit (E)	A	Yes	Ar (CfAe)	231.50 - 106.50	1	1	0.7500	1.2500		0.70
1 5/8 (AT&T / E)	B	No	Ar (Leg)	231.50 - 106.50	12	12	0.7500	1.9800		1.04
0.30 (AT&T / E)	B	No	Ar (Leg)	231.50 - 106.50	1	1	0.3000	0.3000		0.06
5/8" OD POWER CABLES (INSIDE CONDUIT) (AT&T / P)	B	No	Ar (Leg)	231.50 - 106.50	6	6	0.8800	0.0000		0.40
10mm FIBER CABLE	B	No	Ar (Leg)	231.50 - 106.50	2	2	0.4400	0.0000		0.08

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
(INSIDE CONDUIT) (AT&T / P)										
2" FLEX Conduit (AT&T / P)	B	No	Ar (Leg)	231.50 - 106.50	1	1	1.0000	2.3750		0.71
3/8 (E)	B	No	Ar (Leg)	221.50 - 106.50	3	2	0.4400	0.4400		0.08
1/2 (E)	B	No	Ar (Leg)	229.00 - 106.50	1	1	0.5800	0.5800		0.25
EW90 (E)	B	No	Ar (Leg)	223.50 - 106.50	2	2	0.7500	0.9869		0.32
1/2 (E)	B	No	Ar (Leg)	132.00 - 106.50	1	1	0.5800	0.5800		0.25
1 5/8 (E)	D	No	Ar (Leg)	209.50 - 106.50	12	10	0.7500	1.9800		1.04
1 5/8 (E)	A	Yes	Ar (CfAe)	209.50 - 106.50	12	6	0.7500	1.9800		1.04
1 5/8 (E)	A	Yes	Ar (CfAe)	203.00 - 106.50	6	2	0.7500	1.9800		1.04
W/G LADDER "A" (E)	B	No	Ar (Leg)	212.50 - 106.50	1	1	1.5000	4.0000		8.40
W/G LADDER "B" (E)	D	No	Ar (Leg)	206.50 - 106.50	1	1	1.5000	4.0000		8.40
W/G LADDER "C" (E)	A	Yes	Ar (CfAe)	200.50 - 106.50	1	1	1.5000	4.0000		8.40

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
MISCELLANEOUS (E)	A	No	CaAa (In Face)	231.50 - 106.50	2	No Ice	0.09	0.40
						1/2" Ice	0.19	1.24
MISCELLANEOUS WEIGHT (E)	A	No	CaAa (In Face)	231.50 - 106.50	1	No Ice	0.00	0.40
						1/2" Ice	0.00	1.24

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Azimuth Adjustment ° / Vert ft	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) TOP SMALL BEACONS (E)	B	From Face	0.00 0.0000 0.00	245.17	No Ice	1.20	1.20	0.06
					1/2" Ice	1.80	1.80	0.09
TOP LIGHTNING ROD (E)	B	From Face	0.00 0.0000 0.00	244.50	No Ice	1.50	1.50	0.05
					1/2" Ice	2.25	2.25	0.07
13' T BEAM MOUNT (E)	B	From Face	1.50 0.00 0.0000 0.00	231.50	No Ice	10.50	10.50	0.10
					1/2" Ice	14.00	14.00	0.15
(2) P65-15-XLH-RR w/ Pipe Mount (AT&T / E)	B	From Face	6.50 4.00 0.0000 0.00	234.00	No Ice	6.60	4.74	0.07
					1/2" Ice	7.30	5.80	0.12

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) LGP21401 TMA'S (AT&T / E)	B	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	1.26 1.42	0.38 0.49	0.02 0.03
AM-X-CD-14-65-00T-RET w/ PIPE MOUNT (AT&T / P)	B	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	6.08 6.78	4.49 5.53	0.06 0.11
(2) ERICSSON RRH (AT&T / P)	B	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	1.91 2.10	1.47 1.65	0.04 0.06
(2) P65-15-XLH-RR w/ Pipe Mount (AT&T / E)	D	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	6.60 7.30	4.74 5.80	0.07 0.12
(2) LGP21401 TMA'S (AT&T / E)	D	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	1.26 1.42	0.38 0.49	0.02 0.03
AM-X-CD-14-65-00T-RET w/ PIPE MOUNT (AT&T / P)	D	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	6.08 6.78	4.49 5.53	0.06 0.11
(2) ERICSSON RRH (AT&T / P)	D	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	1.91 2.10	1.47 1.65	0.04 0.06
RAYCAP DC6-48-60-18-8F DC SURGE BOX (AT&T / P)	D	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	4.32 4.60	2.10 2.32	0.03 0.06
P65-15-XLH-RR w/ Pipe Mount (AT&T / E)	A	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	6.60 7.30	4.74 5.80	0.07 0.12
P65-15-XLH-RR w/ Pipe Mount (AT&T / E)	D	From Leg	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	6.60 7.30	4.74 5.80	0.07 0.12
LGP21401 TMA'S (AT&T / E)	A	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	1.26 1.42	0.38 0.49	0.02 0.03
LGP21401 TMA'S (AT&T / E)	D	From Leg	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	1.26 1.42	0.38 0.49	0.02 0.03
AM-X-CD-14-65-00T-RET w/ PIPE MOUNT (AT&T / P)	A	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	6.08 6.78	4.49 5.53	0.06 0.11
(2) ERICSSON RRH (AT&T / P)	A	From Face	4.00 0.00 0.00	0.0000	234.00	No Ice 1/2" Ice	1.91 2.10	1.47 1.65	0.04 0.06
UNUSED PIPE MOUNT (E)	B	From Face	4.00 0.00 0.00	0.0000	231.50	No Ice 1/2" Ice	3.50 5.00	3.50 5.00	0.10 0.15
UNUSED PIPE MOUNT (E)	D	From Face	4.00 0.00 0.00	0.0000	231.50	No Ice 1/2" Ice	3.50 5.00	3.50 5.00	0.10 0.15
UNUSED I-BEAM MOUNT (E)	A	From Face	4.00 0.00 0.00	0.0000	231.50	No Ice 1/2" Ice	2.50 4.00	2.50 4.00	0.10 0.15
1.5'x2-ELEMENT YAGI AND MOUNT (E)	A	From Face	4.00 0.00 0.00	0.0000	229.00	No Ice 1/2" Ice	3.00 4.50	3.00 4.50	0.07 0.13
TOP SQUARE PLATFORM MOUNT (E)	A	None		0.0000	231.50	No Ice 1/2" Ice	72.25 90.00	72.25 90.00	5.50 7.50

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
PIPE DISH MOUNT (E)	A	From Face	0.50 0.00 0.00	-60.0000	223.50	No Ice 1/2" Ice	2.00 3.00	8.00 12.00	0.15 0.23
PIPE DISH MOUNT (E)	D	From Face	0.50 0.00 0.00	30.0000	221.00	No Ice 1/2" Ice	2.40 3.60	3.00 4.50	0.07 0.10
4'Lx6'W REST PLATFORM (E)	A	From Face	2.00 0.00 0.00	0.0000	216.50	No Ice 1/2" Ice	15.00 22.50	15.00 22.50	0.75 1.25
4'Lx6'W REST PLATFORM (E)	C	From Face	2.00 0.00 0.00	0.0000	216.50	No Ice 1/2" Ice	15.00 22.50	15.00 22.50	0.75 1.25
(2) APX16PV-16PVL w / Pipe Mount (AT&T / E)	A	From Leg	1.50 0.00 0.00	0.0000	209.50	No Ice 1/2" Ice	7.07 7.64	4.27 5.10	0.06 0.11
(2) 13"T x 6.5"W x 3.5"D TMA's (AT&T / E)	A	From Leg	1.50 0.00 0.00	0.0000	209.50	No Ice 1/2" Ice	0.82 0.95	0.44 0.55	0.03 0.03
10FT SECTOR FRAME MOUNT (AT&T / E)	A	From Leg	0.75 0.00 0.00	0.0000	209.50	No Ice 1/2" Ice	16.00 20.00	6.00 9.00	0.40 0.60
(2) APX16PV-16PVL w / Pipe Mount (AT&T / E)	B	From Leg	1.50 0.00 0.00	0.0000	209.50	No Ice 1/2" Ice	7.07 7.64	4.27 5.10	0.06 0.11
(2) 13"T x 6.5"W x 3.5"D TMA's (AT&T / E)	B	From Leg	1.50 0.00 0.00	0.0000	209.50	No Ice 1/2" Ice	0.82 0.95	0.44 0.55	0.03 0.03
10FT SECTOR FRAME MOUNT (AT&T / E)	B	From Leg	0.75 0.00 0.00	0.0000	209.50	No Ice 1/2" Ice	16.00 20.00	6.00 9.00	0.40 0.60
(2) APX16PV-16PVL w / Pipe Mount (AT&T / E)	D	From Leg	1.50 0.00 0.00	0.0000	209.50	No Ice 1/2" Ice	7.07 7.64	4.27 5.10	0.06 0.11
(2) 13"T x 6.5"W x 3.5"D TMA's (AT&T / E)	D	From Leg	1.50 0.00 0.00	0.0000	209.50	No Ice 1/2" Ice	0.82 0.95	0.44 0.55	0.03 0.03
10FT SECTOR FRAME MOUNT (AT&T / E)	D	From Leg	0.75 0.00 0.00	0.0000	209.50	No Ice 1/2" Ice	16.00 20.00	6.00 9.00	0.40 0.60
APX16DWV-16DWVS (AT&T / E)	A	From Leg	1.50 0.00 0.00	0.0000	203.00	No Ice 1/2" Ice	6.70 7.13	2.00 2.33	0.02 0.05
10"T x 9.5"W x 3.5"D TMA's (AT&T / E)	A	From Leg	1.50 0.00 0.00	0.0000	203.00	No Ice 1/2" Ice	0.92 1.05	0.34 0.43	0.02 0.03
10FT SECTOR FRAME MOUNT (AT&T / E)	A	From Leg	0.75 0.00 0.00	0.0000	203.00	No Ice 1/2" Ice	16.00 20.00	6.00 9.00	0.40 0.60
APX16DWV-16DWVS (AT&T / E)	B	From Leg	1.50 0.00 0.00	0.0000	203.00	No Ice 1/2" Ice	6.70 7.13	2.00 2.33	0.02 0.05
10"T x 9.5"W x 3.5"D TMA's (AT&T / E)	B	From Leg	1.50 0.00 0.00	0.0000	203.00	No Ice 1/2" Ice	0.92 1.05	0.34 0.43	0.02 0.03
10FT SECTOR FRAME MOUNT (AT&T / E)	B	From Leg	0.75 0.00 0.00	0.0000	203.00	No Ice 1/2" Ice	16.00 20.00	6.00 9.00	0.40 0.60

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
APX16DWV-16DWVS (AT&T / E)	D	From Leg	1.50 0.00 0.00	0.0000	203.00	No Ice 1/2" Ice	6.70 7.13	2.00 2.33	0.02 0.05
10"T x 9.5"W x 3.5"D TMA's (AT&T / E)	D	From Leg	1.50 0.00 0.00	0.0000	203.00	No Ice 1/2" Ice	0.92 1.05	0.34 0.43	0.02 0.03
10FT SECTOR FRAME MOUNT (AT&T / E)	D	From Leg	0.75 0.00 0.00	0.0000	203.00	No Ice 1/2" Ice	16.00 20.00	6.00 9.00	0.40 0.60
4'x7-ELEMENT YAGI (AT&T / E)	B	From Leg	2.00 0.00 0.00	0.0000	132.00	No Ice 1/2" Ice	2.00 3.00	2.00 3.00	0.03 0.04
2FT SIDEARM MOUNT (AT&T / E)	B	From Leg	1.00 0.00 0.00	0.0000	132.00	No Ice 1/2" Ice	3.00 4.50	4.50 6.00	0.10 0.15

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
10 FT HP DISH (E)	A	Paraboloid w/Shroud (HP)	From Face	1.00 0.00 0.00	-60.0000	0.4828	223.50	10.00	No Ice 1/2" Ice	78.50 79.81	0.40 0.81
1FT HP DISH (WINDSTAR 43029) (E)	D	Paraboloid w/Shroud (HP)	From Face	1.00 0.00 0.00	30.0000		221.00	1.00	No Ice 1/2" Ice	0.79 0.90	0.03 0.04

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg D	Max. Vert	16	253.52	19.32	-19.86
	Max. H_x	16	253.52	19.32	-19.86
	Max. H_z	12	-220.60	-18.39	18.96
	Min. Vert	3	-223.00	-17.47	18.15
	Min. H_x	12	-220.60	-18.39	18.96
	Min. H_z	16	253.52	19.32	-19.86
Leg C	Max. Vert	14	244.52	-19.27	-18.78
	Max. H_x	18	-209.64	18.12	17.73
	Max. H_z	18	-209.64	18.12	17.73
	Min. Vert	18	-209.64	18.12	17.73
	Min. H_x	14	244.52	-19.27	-18.78
	Min. H_z	14	244.52	-19.27	-18.78
Leg B	Max. Vert	12	256.58	-20.18	19.42
	Max. H_x	16	-217.53	18.72	-18.21
	Max. H_z	12	256.58	-20.18	19.42
	Min. Vert	7	-218.58	17.82	-17.21
	Min. H_x	12	256.58	-20.18	19.42
	Min. H_z	16	-217.53	18.72	-18.21

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg A	Max. Vert	18	245.65	18.91	19.20
	Max. H_x	18	245.65	18.91	19.20
	Max. H_z	18	245.65	18.91	19.20
	Min. Vert	14	-208.51	-17.73	-18.06
	Min. H_x	14	-208.51	-17.73	-18.06
	Min. H_z	14	-208.51	-17.73	-18.06

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	231.5 - 227.333	2.564	20	0.1615	0.0255
T2	227.333 - 223.167	2.424	20	0.1606	0.0252
T3	223.167 - 219	2.285	20	0.1587	0.0249
T4	219 - 214.2	2.147	20	0.1559	0.0239
T5	214.2 - 204.6	1.987	20	0.1531	0.0218
T6	204.6 - 195	1.677	20	0.1439	0.0180
T7	195 - 185	1.387	20	0.1302	0.0145
T8	185 - 175	1.106	20	0.1191	0.0116
T9	175 - 165	0.851	20	0.1055	0.0094
T10	165 - 155	0.628	20	0.0900	0.0076
T11	155 - 145	0.438	20	0.0729	0.0061
T12	145 - 135	0.282	20	0.0572	0.0049
T13	135 - 120.75	0.160	20	0.0408	0.0039
T14	120.75 - 106.5	0.048	20	0.0202	0.0017

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
245.17	(2) TOP SMALL BEACONS	20	2.564	0.1615	0.0255	160704
244.50	TOP LIGHTNING ROD	20	2.564	0.1615	0.0255	160704
234.00	(2) P65-15-XLH-RR w/ Pipe Mount	20	2.564	0.1615	0.0255	160704
231.50	13' T BEAM MOUNT	20	2.564	0.1615	0.0255	160704
229.00	1.5'x2-ELEMENT YAGI AND MOUNT	20	2.480	0.1611	0.0253	160704
223.50	10 FT HP DISH	20	2.296	0.1589 (3 dB) 0.2957	0.0249 (3 dB) 0.2957	129457
221.00	1FT HP DISH (WINDSTAR 43029)	20	2.213	0.1573	0.0245	242194
216.50	4'Lx6'W REST PLATFORM	20	2.064	0.1544	0.0229	214943
209.50	(2) APX16PV-16PVL w / Pipe Mount	20	1.833	0.1494	0.0198	60276
203.00	APX16DWV-16DWVS	20	1.627	0.1417	0.0174	51283
132.00	4'x7-ELEMENT YAGI	20	0.130	0.0362	0.0035	32203

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T1	231.5 - 227.333	Leg	L4x4x3/8	1	-4.90	65.17	7.5	Pass
T2	227.333 -	Leg	L4x4x3/8	17	-11.21	65.17	17.2	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P_{allow} K	% Capacity	Pass Fail
	223.167							
T3	223.167 - 219	Leg	L4x4x3/8	33	-15.71	65.17	24.1	Pass
T4	219 - 214.2	Leg	L5x5x1/2	45	-22.31	111.17	20.1	Pass
T5	214.2 - 204.6	Leg	L5x5x1/2	63	-40.46	111.17	36.4	Pass
T6	204.6 - 195	Leg	L5x5x1/2	87	-61.57	111.17	55.4	Pass
T7	195 - 185	Leg	L6x6x5/8	111	-72.06	171.15	42.1	Pass
T8	185 - 175	Leg	L6x6x5/8	136	-93.34	171.32	54.5	Pass
T9	175 - 165	Leg	L6x6x5/8	161	-114.29	171.47	66.7	Pass
T10	165 - 155	Leg	L6x6x5/8	186	-136.09	171.59	79.3	Pass
T11	155 - 145	Leg	L6x6x3/4	211	-159.71	203.36	78.5	Pass
T12	145 - 135	Leg	L6x6x3/4	236	-179.96	203.47	88.4	Pass
T13	135 - 120.75	Leg	L6x6x7/8	261	-196.84	208.79	94.3	Pass
T14	120.75 - 106.5	Leg	L6x6x7/8	302	-210.89	223.31	94.4	Pass
T1	231.5 - 227.333	Diagonal	2L2 1/2x2x1/4x3/8	16	-3.13	47.49	6.6	Pass
T2	227.333 - 223.167	Diagonal	2L2 1/2x2x1/4x3/8	31	-3.00	47.49	9.0 (b) 6.3	Pass
T3	223.167 - 219	Diagonal	2L2 1/2x2x1/4x3/8	43	-5.15	47.49	8.8 (b) 10.9	Pass
T4	219 - 214.2	Diagonal	L2 1/2x2x1/4	59	-5.35	16.48	14.8 (b) 32.5	Pass
T5	214.2 - 204.6	Diagonal	L2 1/2x2x1/4	75	-6.28	15.30	41.0	Pass
T6	204.6 - 195	Diagonal	L2 1/2x2x1/4	99	-7.06	14.00	50.4	Pass
T7	195 - 185	Diagonal	L3x3x1/4	126	-11.35	18.38	61.7	Pass
T8	185 - 175	Diagonal	L3x3x1/4	151	-11.73	17.49	67.0	Pass
T9	175 - 165	Diagonal	L3x3x1/4	176	-12.22	16.59	73.6	Pass
T10	165 - 155	Diagonal	L3x3x1/4	201	-12.76	15.72	81.2	Pass
T11	155 - 145	Diagonal	L3x3x1/4	226	-11.95	14.88	80.3	Pass
T12	145 - 135	Diagonal	L3x3x1/4	251	-13.50	14.07	95.9	Pass
T13	135 - 120.75	Diagonal	2L2 1/2x2 1/2x1/4x3/8	292	-20.56	33.50	61.4	Pass
T14	120.75 - 106.5	Diagonal	2L2 1/2x2 1/2x1/4x3/8	328	-26.03	42.58	61.1	Pass
T7	195 - 185	Secondary Horizontal	L2 1/2x2x1/4	131	-1.08	5.61	74.8 (b) 19.3	Pass
T8	185 - 175	Secondary Horizontal	L2 1/2x2x1/4	156	-1.40	4.77	29.4	Pass
T9	175 - 165	Secondary Horizontal	L2 1/2x2x3/16	181	-1.72	3.18	53.9	Pass
T10	165 - 155	Secondary Horizontal	L2 1/2x2 1/2x1/4	206	-2.04	5.43	37.6	Pass
T11	155 - 145	Secondary Horizontal	L2 1/2x2x1/4	231	-2.40	3.16	75.8	Pass
T12	145 - 135	Secondary Horizontal	L2 1/2x2x1/4	256	-2.70	2.81	96.0	Pass
T1	231.5 - 227.333	Top Girt	C8x11.5	8	0.91	97.32	0.9	Pass
T2	227.333 - 223.167	Top Girt	L2 1/2x2 1/2x1/4	24	0.55	21.12	3.7 (b) 2.6	Pass
T4	219 - 214.2	Top Girt	C7x9.8	49	-0.64	44.01	1.5	Pass
T5	214.2 - 204.6	Top Girt	L2 1/2x2x1/4	65	-0.60	11.74	3.0 (b) 5.1	Pass
T6	204.6 - 195	Top Girt	L2 1/2x2 1/2x1/4	89	-0.59	13.53	4.4	Pass
T7	195 - 185	Top Girt	L2 1/2x2 1/2x1/4	115	3.11	28.16	11.0	Pass
T8	185 - 175	Top Girt	L2 1/2x2 1/2x1/4	140	5.99	28.16	12.6 (b) 21.3	Pass
T9	175 - 165	Top Girt	L2 1/2x2 1/2x1/4	165	6.68	28.16	24.2 (b) 23.7	Pass
T10	165 - 155	Top Girt	L2 1/2x2 1/2x1/4	190	7.52	28.16	27.0 (b) 26.7	Pass
T11	155 - 145	Top Girt	L2 1/2x2 1/2x1/4	215	7.11	28.16	30.4 (b) 25.3	Pass
T12	145 - 135	Top Girt	L2 1/2x2 1/2x1/4	238	-5.78	20.88	28.8 (b) 27.7	Pass
T13	135 - 120.75	Top Girt	2L2 1/2x2 1/2x1/4x3/8	266	-8.80	40.65	31.4 (b) 21.6	Pass
T14	120.75 - 106.5	Top Girt	2L2 1/2x2 1/2x1/4x3/8	307	-10.63	35.02	27.5 (b) 30.4 30.6 (b)	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T13	135 - 120.75	Redund Horz 1 Bracing	L2 1/2x2x3/16	286	-2.95	14.39	20.5	Pass
T14	120.75 - 106.5	Redund Horz 1 Bracing	L2 1/2x2x3/16	329	-3.17	12.53	25.3	Pass
T13	135 - 120.75	Redund Diag 1 Bracing	L2 1/2x2x3/16	283	-3.88	4.30	90.3	Pass
T14	120.75 - 106.5	Redund Diag 1 Bracing	L2 1/2x2x3/16	333	-12.35	12.67	97.5	Pass
T13	135 - 120.75	Redund Hip 1 Bracing	L2x2x1/4	299	-0.14	11.86	1.2	Pass
T14	120.75 - 106.5	Redund Hip 1 Bracing	L2x2x1/4	344	-0.08	10.03	0.8	Pass
T14	120.75 - 106.5	Redund Sub Horz Bracing	2L2 1/2x2 1/2x1/4x3/8	334	-10.01	35.74	28.0	Pass
T7	195 - 185	Inner Bracing	L2 1/2x2 1/2x3/16	121	-0.04	5.72	0.6	Pass
T8	185 - 175	Inner Bracing	L2 1/2x2 1/2x3/16	146	-0.07	4.76	1.4	Pass
T9	175 - 165	Inner Bracing	L2 1/2x2 1/2x3/16	171	-0.08	4.01	1.9	Pass
T10	165 - 155	Inner Bracing	L2 1/2x2 1/2x3/16	196	-0.09	3.43	2.5	Pass
T11	155 - 145	Inner Bracing	L2x2 1/2x3/16	221	-0.08	1.98	4.0	Pass
T12	145 - 135	Inner Bracing	L2x2 1/2x3/16	246	-0.09	1.73	5.0	Pass
T13	135 - 120.75	Inner Bracing	L3x3x3/16	271	-0.13	4.00	3.2	Pass
T14	120.75 - 106.5	Inner Bracing	L3x3x3/16	312	-0.16	3.39	4.6	Pass
							Summary	
						Leg (T14)	94.4	Pass
						Diagonal (T12)	95.9	Pass
						Secondary Horizontal (T12)	96.0	Pass
						Top Girt (T12)	31.4	Pass
						Redund Horz 1 Bracing (T14)	25.3	Pass
						Redund Diag 1 Bracing (T14)	97.5	Pass
						Redund Hip 1 Bracing (T13)	1.2	Pass
						Redund Sub Horz Bracing (T14)	28.0	Pass
						Inner Bracing (T12)	5.0	Pass
						Bolt Checks	74.8	Pass
						RATING =	**97.5**	**Pass**

Simply Intelligent

KMW Communications
Base Station Antennas
For Mobile Communications

AM-X-CD-14-65-00T-RET (4' 65° Dual Broadband Antenna)

Dual Band Electrical DownTilt Antenna

698 ~ 894MHz, X-pol., H65° / V17.0°
1710 ~ 2170MHz, X-pol., H65° / V8.5°

Electrical Specification

Frequency Range		698~894MHz	1710~2170MHz
Impedance		50Ω	
Polarization		Dual, Slant ±45°	
Gain		14.0dBi / 11.85dBd @ 698-806MHz 14.8dBi / 12.65dBd @ 824-894MHz	16.1dBi / 13.95dBd @1710-1755MHz 16.3dBi / 14.15dBd @1850-1900MHz 16.0dBi / 13.85dBd @2110-2155MHz
Beamwidth	Horizontal	67° @ 698-806MHz 65° @ 824-894MHz	60° @ 1710-1755MHz 61° @ 1850-1900MHz 64° @ 2110-2155MHz
	Vertical	17.5 @ 698-806MHz 16.5° @ 824-894MHz	8.8° @ 1710-1755MHz 8.5° @ 1850-1900MHz 8.0° @ 2110-2155MHz
VSWR		≤1.5:1	
Front-to-Back Ratio		≥28 dB	
Electrical Downtilt Range		2° ~ 16°	0° ~ 10°
Isolation Between Ports		≥30 dB	
Isolation Between Ports of Different Frequency Elements		≥35 dB	
Cross Pole Discrimination		10.0 dB @ ±60° 15.0 dBi @ 0°	
First Upper Side Lobe Suppression		16dB	
Side Lobe Suppression		> 16dB @ 0-6° Tilt > 18dB @ 7-12° Tilt (Up to 15° from Boresight)	> 16dB @ 0-6° Tilt > 18dB @ 7-10° Tilt (Up to 15° from Boresight)
Passive Intermodulation		≤ -150 dBc @ 2x20w	
Input Maximum CW Power		500 W	300 W
Environmental Compliance		IP65 for Radome IP67 for Connectors	
RET Motor Configuration		Field Replaceable RET Electronic Control Module / RET Motor is internal to antenna & not field replaceable	
Compliant with AISG 1.1 and 2.0		AISG 1.1 and 2.0	

Mechanical Specification

Dimension (W×D×H)	11.8×5.9×48 inches (300×150×1219mm)
Weight (Without clamp)	16.5 kg (36.4 lbs)
Connector	4 x 7/16 DIN(F), Long Neck
Max Wind Speed	150mph
Wind Load (@150 mph)	1260 N

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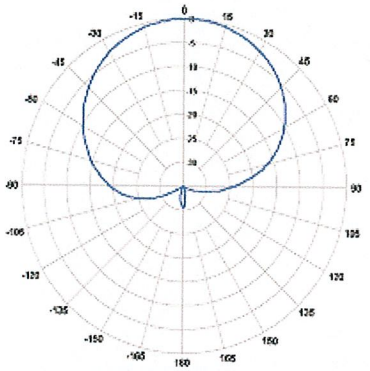
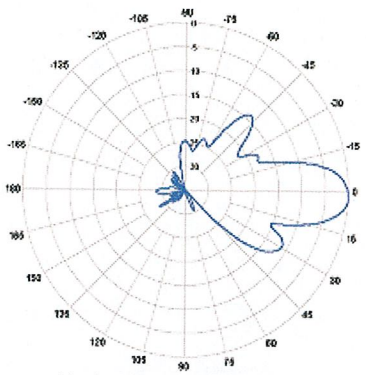
AM-X-CD-14-65-00T-RET (4' 65° Dual Broadband Antenna)

KMW Communications
Base Station Antennas
For Mobile Communications

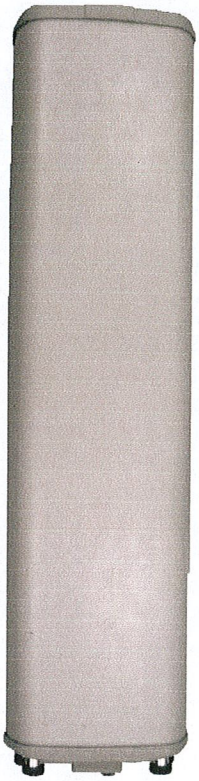


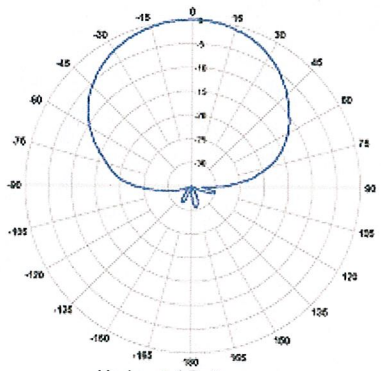
Horizontal Pattern



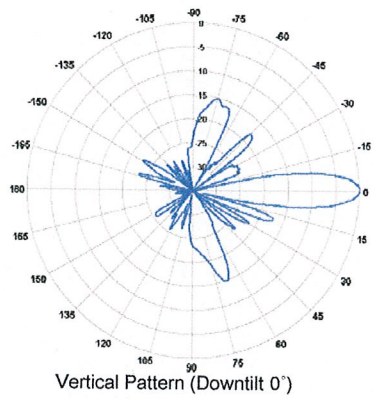
Vertical Pattern (Downtilt 2°)

700MHz band Pattern



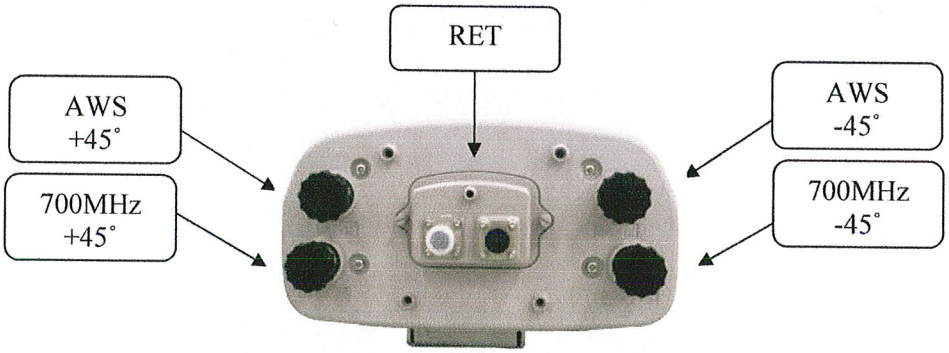


Horizontal Pattern



Vertical Pattern (Downtilt 0°)

AWS band Pattern



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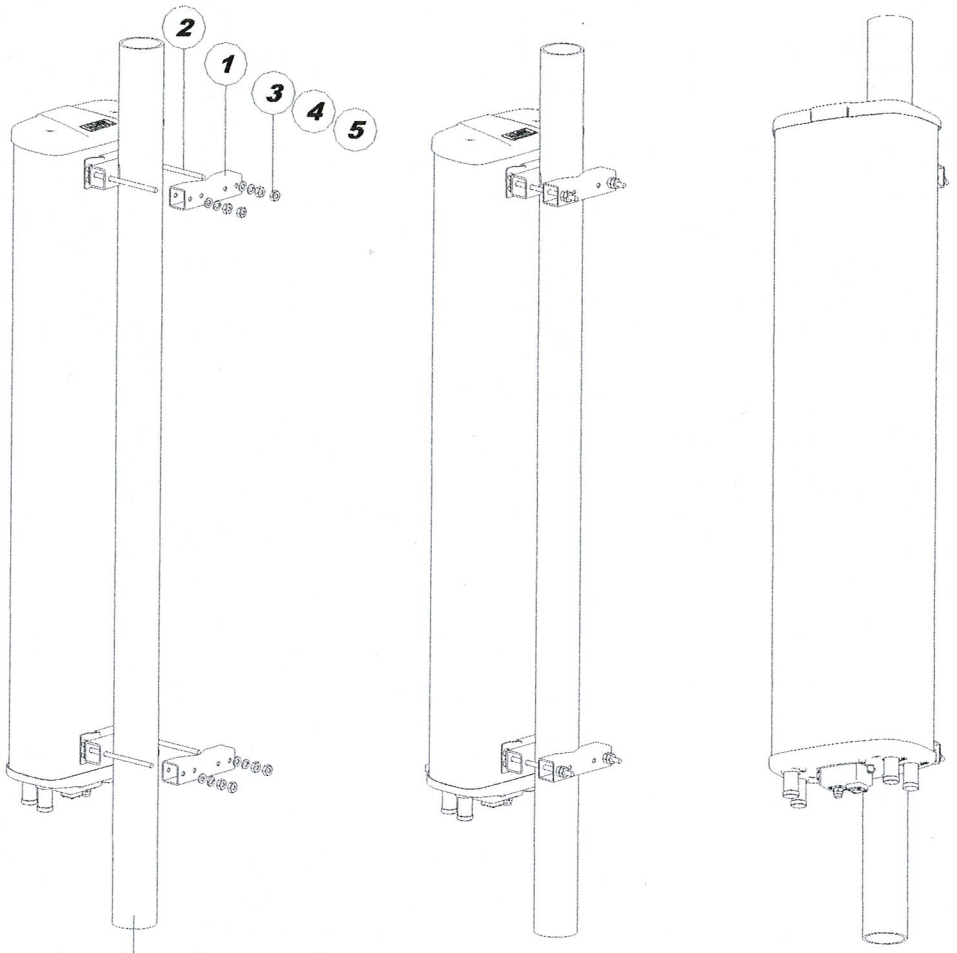
KMW Communications
Base Station Antennas
For Mobile Communications

AM-X-CD-14-65-00T-RET (4' 65° Dual Broadband Antenna)

Antenna Drawings and Installation Diagram



MOUNT POLE
Ø1.97 ~ 3.15inch OD.
(50 ~ 80mm OD.)

STANDARD MOUNTING KITS

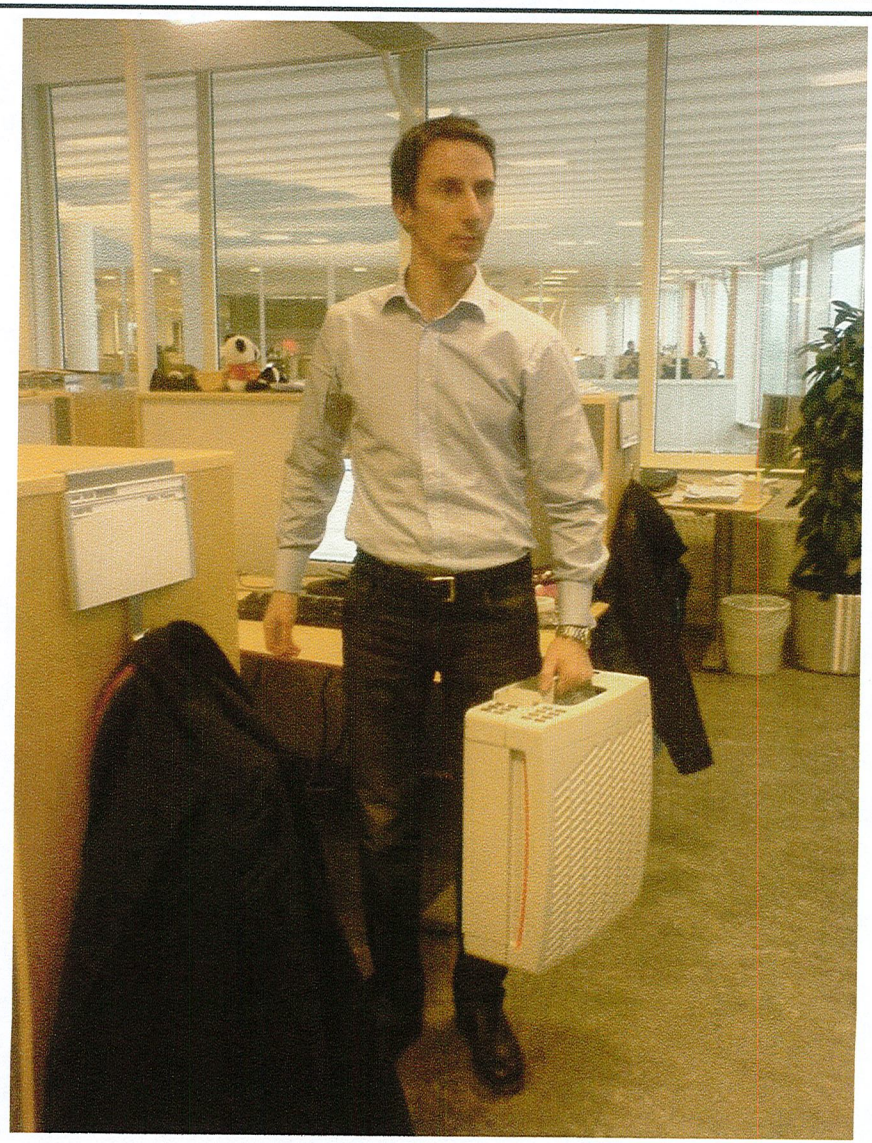
No.	PART NAME	Q'TY	Recommending Torque
1	FIXED CLAMP	4	
2	Hex. Cap Bolt, M10	4	17mm Spanner 208lbf.inch 240kgf.cm
3	Plain Washer, M10	4	
4	Spring Washer, M10	4	
5	Hex. Nut, M10	8	

RRUS 11 – Dual PA RRU.

Technical Data

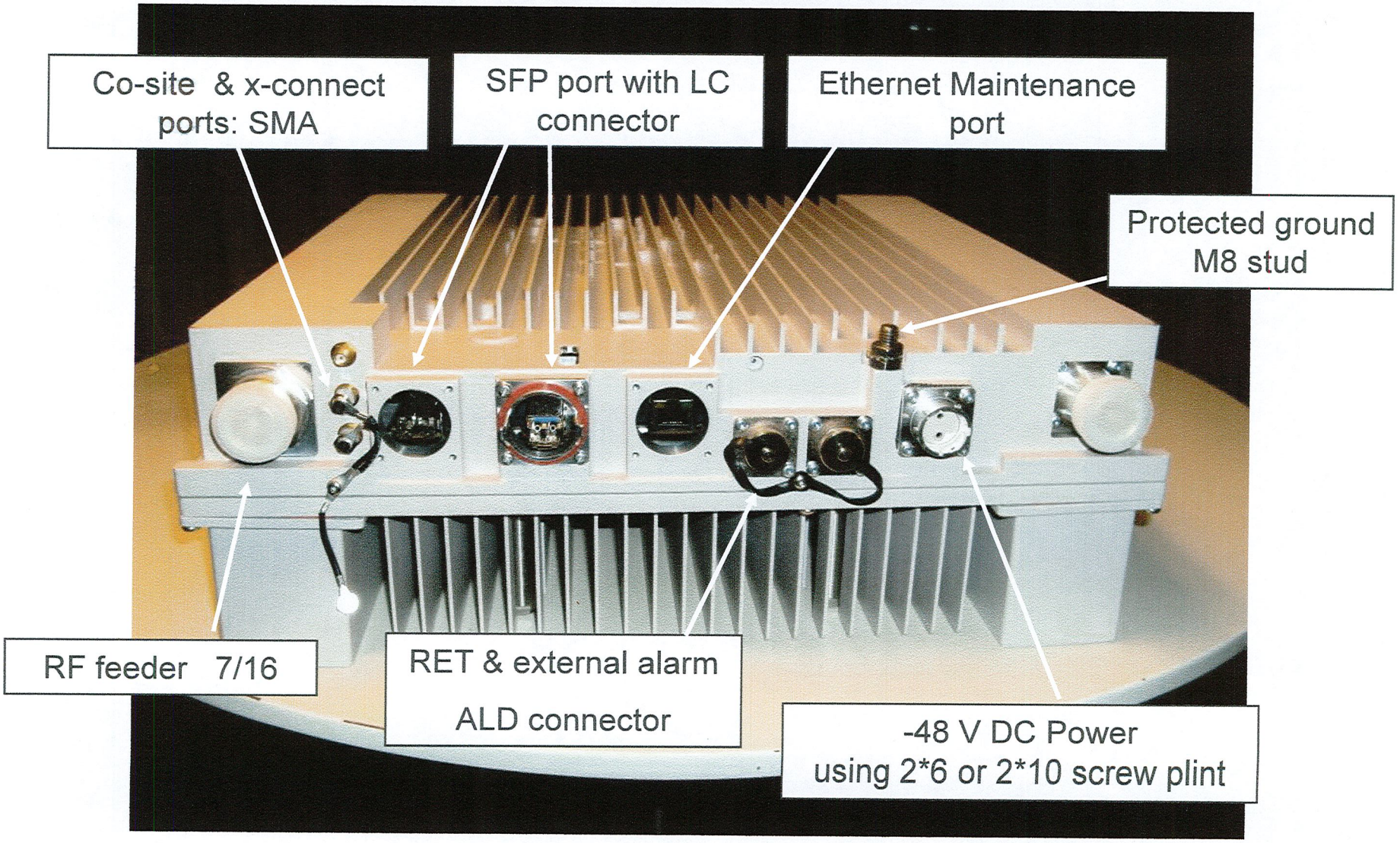
RBS6000

- Multi standard
- RF: 2x30 Watts
- Carrier BW: 1.4 – 20 MHz
- Alarms: 2
- Dimensions (with sunshield):
  - Width: 17.0 in
  - Height: 17.8 in
  - Depth: 7.2 in
  - Weight: 55 lbs (Band 12)
  - Weight: 50 lbs (Band 4)
- Temperature: -40 to +131 F
- Cooling: Self convection
- Power: -48 VDC
- Rec. fuse size 20 Amp
  - Rec. DC cable:
    - 6 mm^2 up to 60 meters
    - 10 mm^2 over 60 meters
    - Shielded
- Power Cons: 200 Watts typ.



RRUS-11 I/F

RBS6000



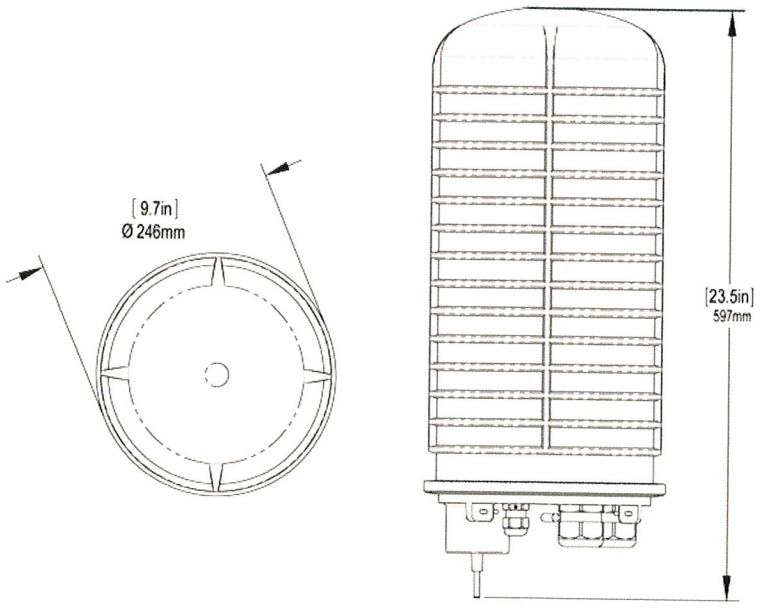
DC6-48-60-18-8F

DC Surge Suppression Solution

The DC6-48-60-18 is a dual chambered, DC surge suppression system for use in multi-circuit, Distributed Antenna Systems. The system will protect up to 6 Remote Radio Heads from voltage surges and lightning, and connect up to 18 fiber pairs. The system is enclosed in a NEMA 4 rated, waterproof enclosure.

FEATURES

- Protects up to 6 Remote Radio Heads, each with its own protection circuit.
- Flexible design allows for installation at the top of a tower for Remote Radio Head protection.
- Includes fiber connections for up to 18 pairs of fiber.
- LED indicators on individual circuits provide visual indication of suppressor status.
- Form 'C' relays allow for remote monitoring of the suppressor status.
- Patented Strikesorb technology provides over 60 kA of surge current capacity per circuit.
- Strikesorb suppression modules are fully recognized to UL 1449-3rd Edition Safety Standard, meeting all intermediate and high current fault requirements to facilitate use in OEM applications.
- Raycap recommends that DC protection system be installed within 2 meters or 6 feet of the radio.
- Dome design is lightweight and aerodynamic providing maximum flexibility for installation on top of towers.



Raycap

Phone 208.777.1166 Toll Free 800.890.2569 Fax 208.777.4466 www.raycapsurgeprotection.com

DC6-48-60-18-8F

DC Power Surge Protection

Electrical Specifications	
Model Number	DC6-48-60-18-8F
Nominal Operating Voltage	48 VDC
Nominal Discharge Current (I_n)	20 kA 8/20 µs
Maximum Discharge Current (I_{max}) per NEMA LS-1	60 kA 8/20 µs
Maximum Continuous Operating Voltage (U_c)	75 VDC
Voltage Protection Rating	400 V

Mechanical Specifications	
Suppression Connection Method	Compression lug, #2-#14 AWG Copper, #2-#12 Aluminum
Fiber Connection Method	LC-LC Single mode duplex
Environmental Rating	IP 68, 7m 72hrs
Operating Temperature	-40° C to + 80° C
Storage Temperature	-70° C to + 80° C
Cold Temperature Cycling	IEC 61300-2-22e -30° C to + 60° C 200 hrs @ 5 psi
Resistance to Aggressive Materials	CEI IEC 61073-2 including acids and bases
UV Protection	ISO 4892-2 Method A Xenon-Arc 2160 hrs
Weight	20 lbs without Mounting Bracket

STANDARDS

Strikesorb modules are compliant to the following Surge Protection Device (SPD) Standards:

- ANSI/UL 1449 – 3rd Edition
- IEEE C62.41
- NEMA LS-1, IEC 61643-1:2005 2nd Edition:2005
- IEC 61643-12
- EN 61643-11:2002 (including A11:2007)

GS-07F-0435V

Certified to ISO 9001:2000

TÜV Rheinland of North America

Raycap

G02-00-068 REV 050610

Raycap, Inc. 806 W. Clearwater Loop • Post Falls • Idaho • 83854 • USA
Phone 208.777.1166 • Toll Free 800.890.2569 • Fax 208.777.4466 • www.raycapsurgeprotection.com

New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 463-5511
Fax: (860) 513-7190

Douglas L. Culp
Real Estate Consultant

August 18, 2011

Mayor Michael Pavia
Stamford City Hall
10th Floor Govt. Ctr.
888 Washington Blvd.
Stamford, CT 06901

Re: Telecommunications Facility – 555 Main Street Stamford, CT

Dear Mayor Pavia:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") and Long Term Evolution ("LTE") capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies ("R.C.S.A.") Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review AT&T's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes Cingular's proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council's procedures; please call me at (860) 463-5511 or Ms. Linda Roberts, Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Douglas L. Culp
Real Estate Consultant

Enclosure

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

August 22, 2011

The Honorable Michael A. Pavia
Mayor
City of Stamford
Stamford Government Center
888 Washington Boulevard
P. O. Box 10152
Stamford, CT 06904-2152

RE: **EM-CING-135-110819** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 555 Main Street, Stamford, Connecticut.

Dear Mayor Pavia:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by September 5, 2011.

Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts MAB

Linda Roberts
Executive Director

LR/jbw

Enclosure: Notice of Intent

c: Norman Cole, Acting Land Use Bureau Chief, City of Stamford

CSC
CONNECTICUT SITING COUNCIL