November 2, 2018

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

Regarding: Notice of Exempt Modification – AT&T Site CT2380
Address: 237 Godfrey Road, Weston, CT 06883

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC ("AT&T") currently maintains a wireless telecommunications facility on an existing 185" self-supporting tower at the above-referenced address, latitude 41.242167, longitude -73.364306. Said self-supporting tower is owned by The Town of Weston, CT.

AT&T desires to modify its existing telecommunications facility by swapping (3) antennas and adding (3) remote radio heads. The centerline height of the existing antennas is and will remain at 151 feet.

Please accept this letter 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 the following individuals: Chris Spaulding, First Selectman of the Town of Weston; James Pjura, Zoning Enforcement Officer; Thomas J. Failla, Chair of Planning and Zoning Commission; Dominic Esposito, Building Inspector; and Jonathan Luiz, Town Administrator.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require an extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. *Please see the RF emissions calculation for AT&T's modified facility enclosed herewith.*

5. The proposed modifications will not cause an ineligible change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading. *Please see the structural analysis dated October 24, 2018 by Hudson Design Group LLC enclosed herewith.*

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

Sincerely,

Patricia Nowak
Site Acquisition Consultant
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
pnowak@clinellc.com

Enclosures: Exhibit 1 – Construction Drawings
Exhibit 2 – Structural Analysis
Exhibit 3 – Mount Analysis
Exhibit 4 – RF Emissions Analysis Report Evaluation

cc: Chris Spaulding, First Selectman of Town of Weston
James Pjura, Zoning Enforcement Officer
Thomas J. Failla, Chair of Planning and Zoning Commission
Dominic Esposito, Building Inspector
Jonathan Luiz, Town Administrator

EXHIBIT 1

PROJECT INFORMATION

SCOPE OF WORK:

ITEMS TO BE MOUNTED ON THE EXISTING ROOFTOP:
- NEW AT&T ANTENNAS: (HPA65R–BU6A) (TYP. OF 1 PER SECTOR, TOTAL OF 3) TO REPLACED (E) EXISTING ANTENNAS.
- NEW AT&T RRUS: 4415 B25 (PCS) (TYP. OF 1 PER SECTOR, TOTAL OF 3).

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:
- ADD (1) 6630.
- SWAP DUS WITH 5216 AND ADD XMU.
- NEW AT&T SURGE ARRESTOR: (TSXDC–4310FM) (TYP OF 4 PER SECTOR, TOTAL OF 12)
- NEW AT&T LOW BAND COMBINERS (DBC0061F1V51–2) (TYP OF 1 PER SECTOR, TOTAL OF 3)
- NEW AT&T RRUS: 4478 B5 (850) (TYP. OF 1 PER SECTOR, TOTAL OF 3).

ITEMS TO REMAIN:
- (6) ANTENNAS, (3) RRU'S, (1) SURGE ARRESTOR, (6) TMAS, (12) COAX CABLES, (2) DC CABLES, (1) FIBER.

SITE ADDRESS:	237 GODFREY ROAD WESTON, CT 06883
LATITUDE:	41.242167 N, 41° 14' 31.80" N
LONGITUDE:	73.364306 W, 73° 21' 51.50" W
TYPE OF SITE:	LATTICE TOWER/ INDOOR EQUIPMENT
TOWER HEIGHT:	185'–0"±
RAD CENTER:	151'–0"±
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

SITE NUMBER: CT2380

SITE NAME: WESTON GODFREY RD

FA CODE:10126664

PACE ID: MRCTB030812, MRCTB031836

PROJECT: LTE 2C_3C 2019 UPGRADE

DRAWING INDEX

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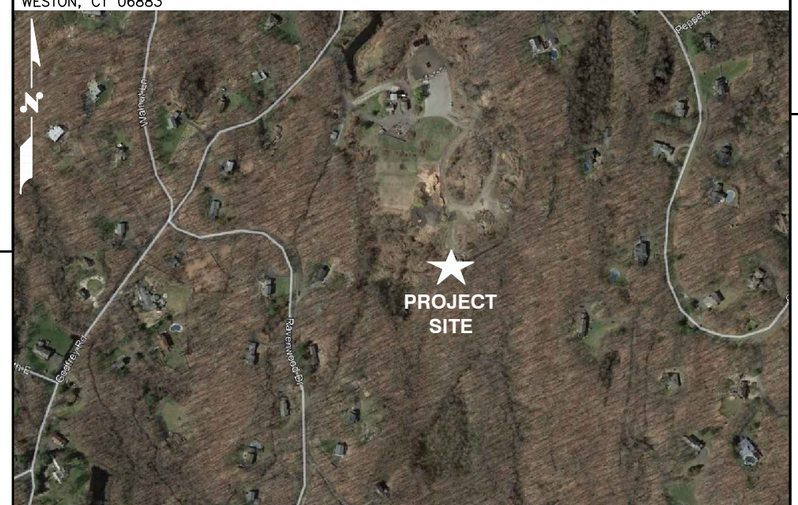
VICINITY MAP

DIRECTIONS TO SITE:
MERGE ONTO I–90 W/MASSACHUSETTS TURNPIKE. CONTINUE ON I–90 W/MASSACHUSETTS TURNPIKE. TAKE I–84, I–91 S AND CT–15 S TO CONGRESS ST IN FAIRFIELD. TAKE EXIT 44 FROM CT–15 S. MERGE ONTO I–90 W/MASSACHUSETTS TURNPIKE. USE THE RIGHT 2 LANES TO TAKE EXIT 9 FOR I–84 TOWARD US–20/HARTFORD/NEW YORK CITY. CONTINUE ONTO I–84. TAKE EXIT 1 FOR MASHAPAUG RD TOWARD SOUTHBRIDGE/STURBRIDGE. TURN RIGHT ONTO HAYNES ST/RTE 15. TAKE THE RAMP ONTO I–84. ENTERING CONNECTICUT. USE THE LEFT 2 LANES TO TAKE EXIT 57 FOR CT–15 S TOWARD I–91 S/CHARTER OAK BRIDGE/N.Y.CITY. CONTINUE ONTO CT–15 S. CONTINUE ONTO CT–15 S/US–5 S. TAKE EXIT 86 TO MERGE ONTO I–91 S TOWARD NEW HAVEN/NEW YORK CITY. TAKE EXIT 17 TO MERGE ONTO CT–15 S/WILBUR CROSS PKWY. CONTINUE TO FOLLOW CT–15 S. TAKE EXIT 44 FOR CT–58/FAIRFIELD/REDDING. TAKE CT–58 N, OLD REDDING RD AND VALLEY FORGE RD TO GODFREY RD E IN WESTON. USE THE RIGHT LANE TO TURN LEFT ONTO CONGRESS ST. TURN RIGHT ONTO CT–58 N TURN LEFT ONTO CT–136 W. TURN RIGHT ONTO OLD REDDING RD. TURN RIGHT ONTO VALLEY FORGE RD. TURN LEFT ONTO GODFREY RD E. DESTINATION WILL BE ON THE LEFT. 237 GODFREY RD E, WESTON, CT 06883



GENERAL NOTES

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

72 HOURS

CALL
BEFORE YOU DIG
CALL TOLL FREE 1–800–922–4455
OR CALL 811

UNDERGROUND SERVICE ALERT

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

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STATE OF CONNECTICUT · REGISTERED · No. 25055 · LICENSED PROFESSIONAL ENGINEER

AT&T

TITLE SHEET
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2380	T–1	1

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.

2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.

6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.

9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.

10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.

12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

   CONTRACTOR – CENTERLINE
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T MOBILITY

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.

15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.

16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."

17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

20. APPLICABLE BUILDING CODES:
    SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

    BUILDING CODE: IBC 2015 WITH 2018 CT STATE BUILDING CODE AMENDMENTS
    ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE (NFPA 70)

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

    AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

    AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

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

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

ABBREVIATIONS

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

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET., SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT2380
SITE NAME: WESTON GODFREY RD

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FAIRFIELD COUNTY

at&t
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SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: GA

STATE OF CONNECTICUT · DEREK J. CREASEY · No. 28035 · LICENSED PROFESSIONAL ENGINEER

AT&T

GENERAL NOTES
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2380	GN-1	1

NOTE:

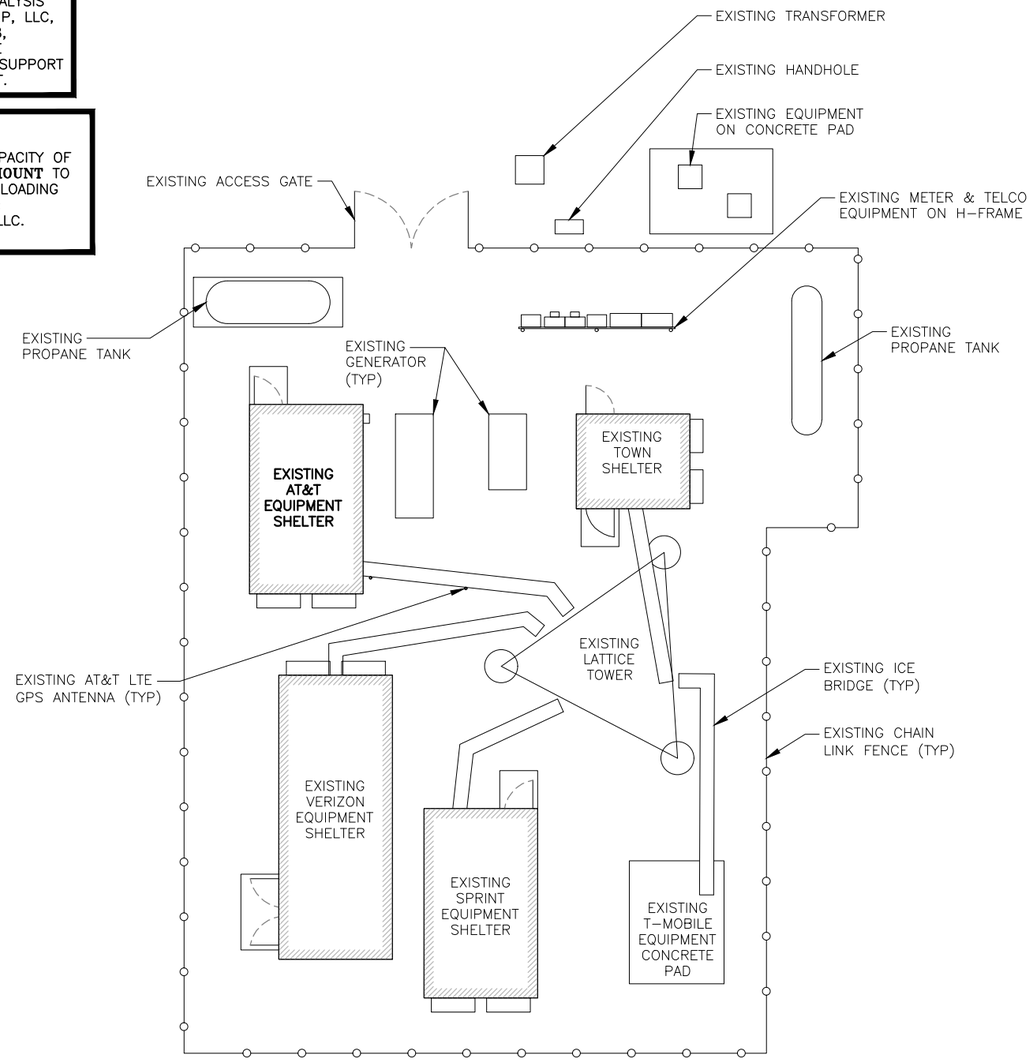
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: OCTOBER 24, 2018, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

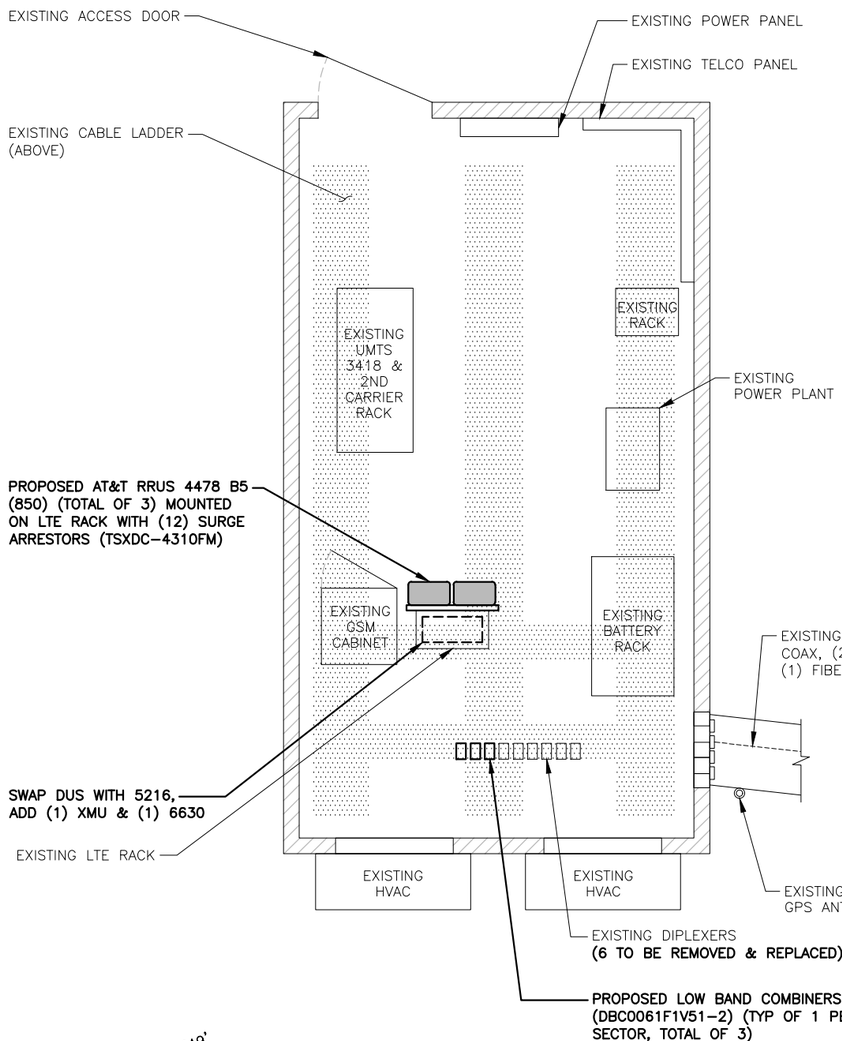
NOTE:

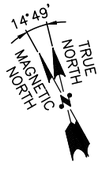
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: OCTOBER 3, 2018



COMPOUND PLAN (1 / A-1)
22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"

0 4'-0" 8'-0" 16'-0" 24'-0"





EQUIPMENT PLAN (2 / A-1)
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"

0 1'-4" 2'-8" 5'-4" 8'-0"

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DEREK J. CREASEY
No. 28554
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COMPOUND & EQUIPMENT PLANS
(LTE 2C/3C)

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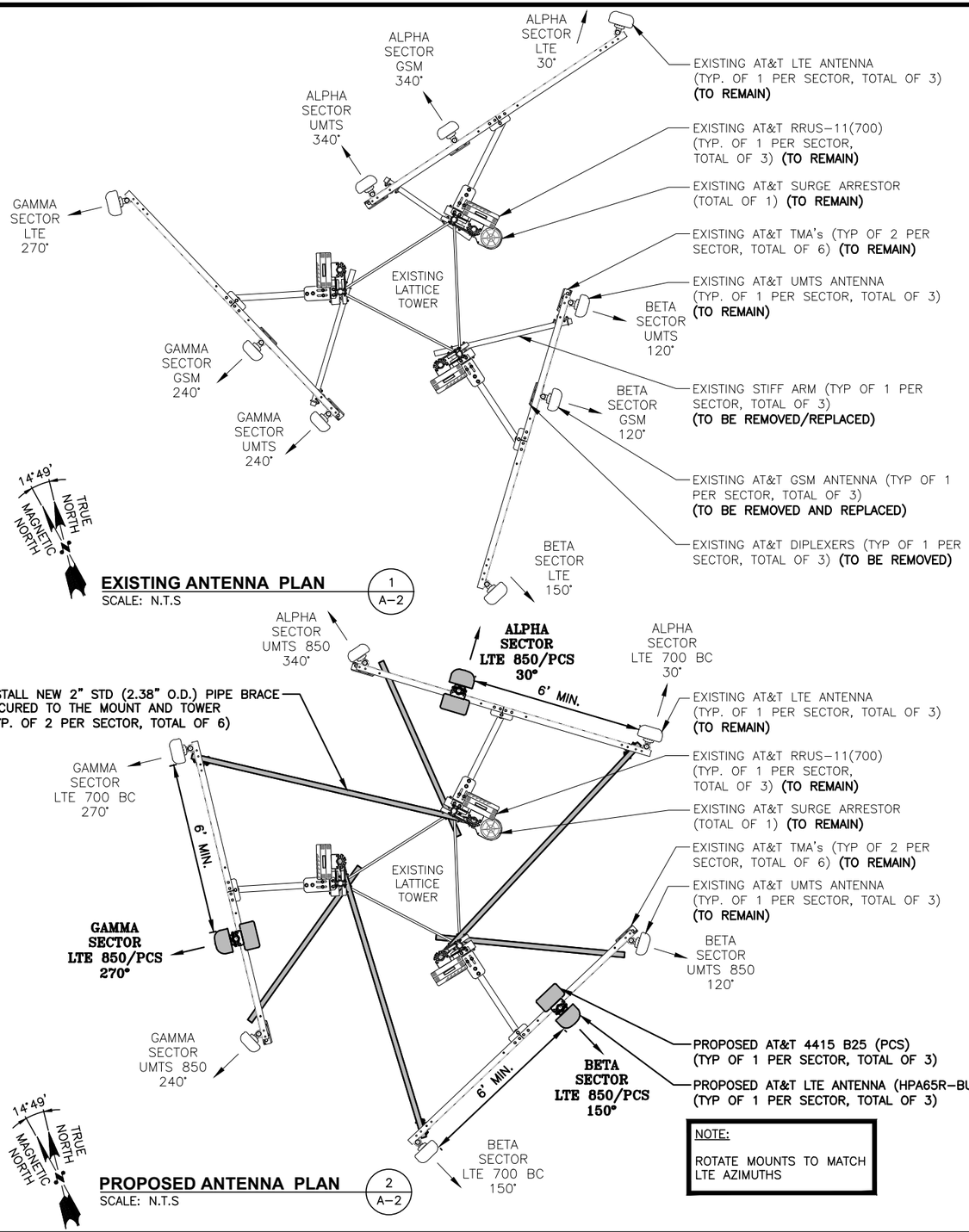
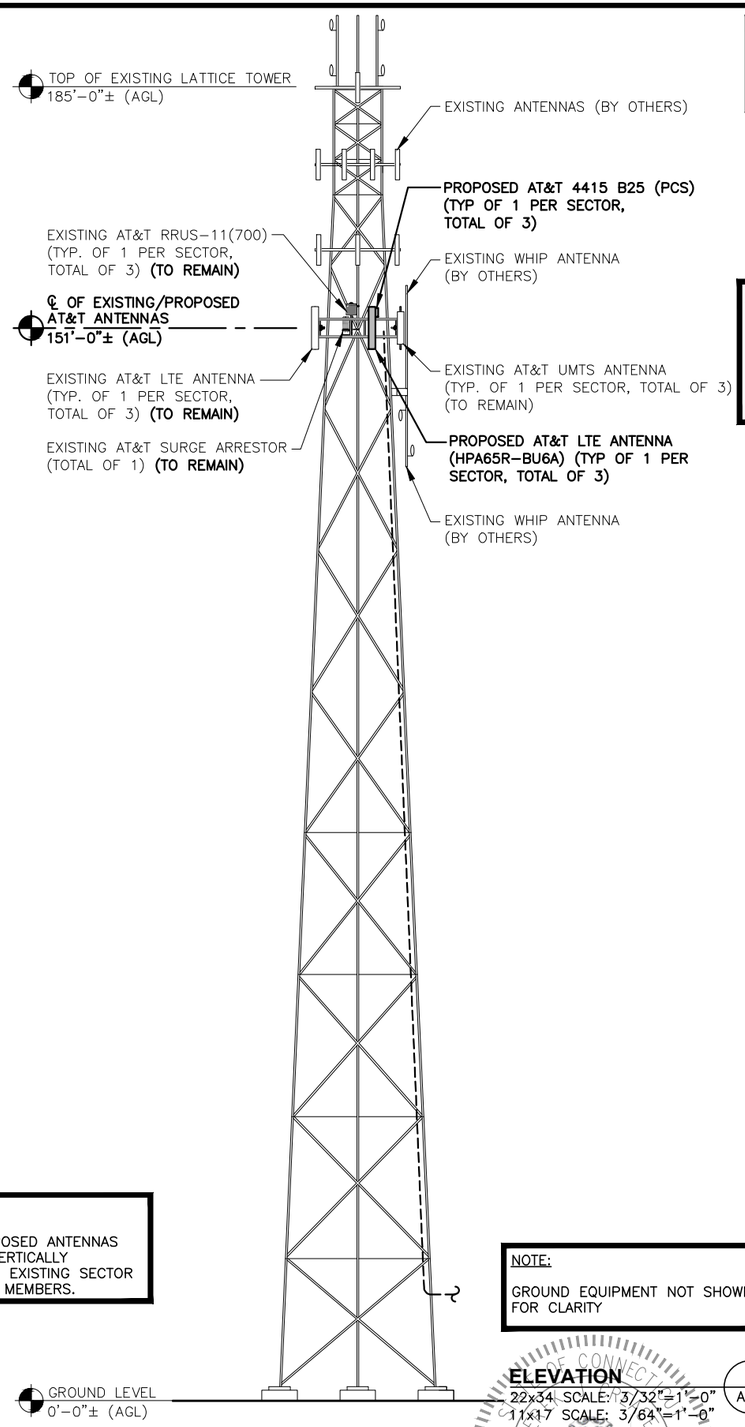


NOTE:

ROTATE MOUNTS TO MATCH LTE AZIMUTHS

NOTE:

EXISTING AND PROPOSED ANTENNAS TO BE LOWERED, VERTICALLY CENTERED BETWEEN EXISTING SECTOR FRAME HORIZONTAL MEMBERS.



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NOTE:

GROUND EQUIPMENT NOT SHOWN FOR CLARITY

ELEVATION
22x34 SCALE: 3/32"=1'-0"
11x17 SCALE: 3/64"=1'-0"
3
A-2
0 5'-4" 10'-8" 21'-4" 32'-0"

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AT&T

ANTENNA LAYOUTS & ELEVATION (LTE 2C/3C)

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

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: OCTOBER 24, 2018, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

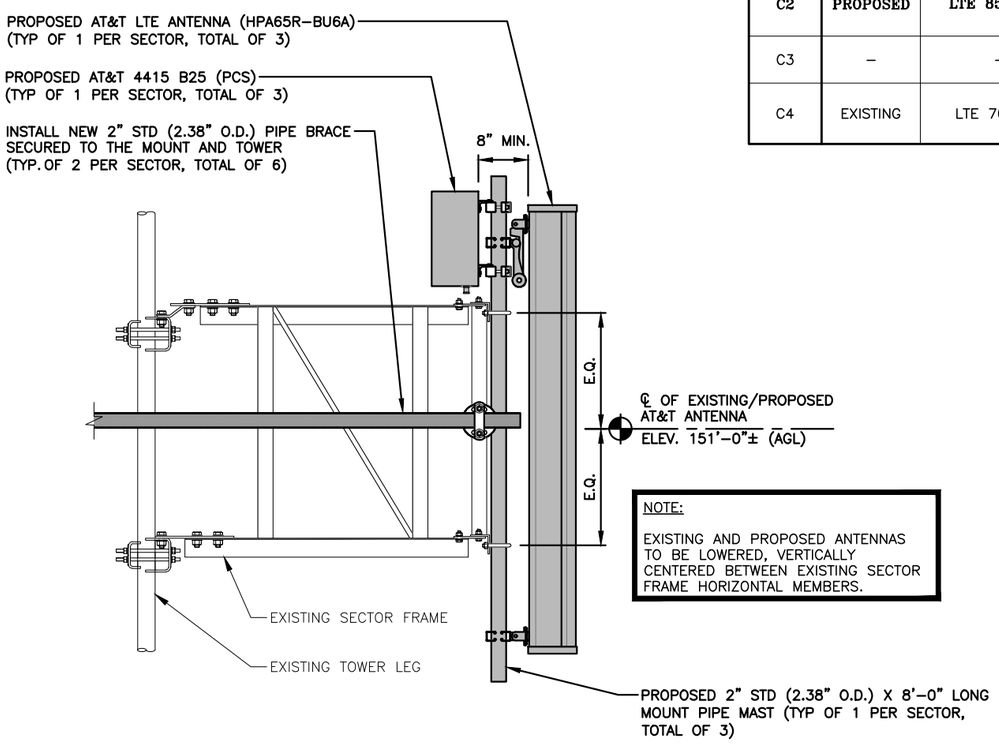
NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: OCTOBER 3, 2018

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA ℄ HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	EXISTING	UMTS 850	7770	55X11X5	±151'	340°	(2) (E) LGP 21401	–	–	(2) 1–5/8" COAX	––
A2	**PROPOSED**	**LTE 850/PCS**	**HPA65R–BU6A**	**71X11.7X7.6**	**±151'**	**30°**	**(1)(G)(P) DBC0061F1V51–2 (4)(G)(P) TSXDC–4310FM**	**(G)(P) 4478 B5 (850) (P) 4415 B25 (PCS)**	**15X13.2X7.4 15.1X13.2X7.4**	(2) 1–5/8" COAX	(E) (1) RAYCAP DC6–48–60–18–8F
A3	–	–	–	–	–	–	–	–	–	––	
A4	EXISTING	LTE 700 BC	P65–16–XLH–RR	72X12X6	±151'	30°	–	(E) RRUS–11 (700)	–	––	
B1	EXISTING	UMTS 850	7770	55X11X5	±151'	120°	(2) (E) LGP 21401	–	–	(2) 1–5/8" COAX	––
B2	**PROPOSED**	**LTE 850/PCS**	**HPA65R–BU6A**	**71X11.7X7.6**	**±151'**	**150°**	**(1)(G)(P) DBC0061F1V51–2 (4)(G)(P) TSXDC–4310FM**	**(G)(P) 4478 B5 (850) (P) 4415 B25 (PCS)**	**15X13.2X7.4 15.1X13.2X7.4**	(2) 1–5/8" COAX	SHARED
B3	–	–	–	–	–	–	–	–	–	––	
B4	EXISTING	LTE 700 BC	P65–16–XLH–RR	72X12X6	±151'	150°	–	((E) RRUS–11 (700)	–	––	
C1	EXISTING	UMTS 850	7770	55X11X5	±151'	240°	(2) (E) LGP 21401	–	–	(2) 1–5/8" COAX	––
C2	**PROPOSED**	**LTE 850/PCS**	**HPA65R–BU6A**	**71X11.7X7.6**	**±151'**	**270°**	**(1)(G)(P) DBC0061F1V51–2 (4)(G)(P) TSXDC–4310FM**	**(G)(P) 4478 B5 (850) (P) 4415 B25 (PCS)**	**15X13.2X7.4 15.1X13.2X7.4**	(2) 1–5/8" COAX	SHARED
C3	–	–	–	–	–	–	–	–	–	––	
C4	EXISTING	LTE 700 BC	P65–16–XLH–RR	72X12X6	±151'	270°	–	(E) RRUS–11 (700)	–	––	

FINAL ANTENNA SCHEDULE (3 / A–3)
SCALE: N.T.S



NOTE:

EXISTING AND PROPOSED ANTENNAS TO BE LOWERED, VERTICALLY CENTERED BETWEEN EXISTING SECTOR FRAME HORIZONTAL MEMBERS.

PROPOSED ANTENNA & RRH MOUNTING DETAIL (1 / A–3)
22x34 SCALE: 1"=1'–0"
11x17 SCALE: 1/2"=1'–0"

0 0'–6" 1'–0" 2'–0" 3'–0"

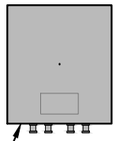
RRU CHART

QUANTITY	MODEL	L	W	D
3(E)	RRUS–11	19.7"	17.0"	7.2"
3(P)(G)	**4478 B5**	**15.0"**	**13.2"**	**7.4"**
3(P)	**4415 B25**	**15.1"**	**13.2"**	**7.4"**

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:

SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER



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

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRUS DETAIL (2 / A–3)
SCALE: N.T.S

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SITE NUMBER: CT2380
SITE NAME: WESTON GODFREY RD

237 GODFREY ROAD
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NO.	DATE	REVISIONS	BY	CHK	APP'D
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A	10/17/18	ISSUED FOR REVIEW	GA	AT	DJC

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: GA

STATE OF CONNECTICUT · DEREK J. CREASEY · NO. 25035 · LICENSED PROFESSIONAL ENGINEER

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DETAILS
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2380	A–3	1

STRUCTURAL NOTES:

1. DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
3. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
6. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
7. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
8. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND DI.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
11. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
12. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
13. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-70 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
14. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
15. LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
16. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
17. ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
18. NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
19. SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST

BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS [1]
N/A	MATERIAL SPECIFICATIONS REPORT [2]
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS [3]
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS [4]
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION [5]
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS [6]
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTES:

1. REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
2. PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
3. PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
4. HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
5. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
6. AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

NOTES:

1. ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
2. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
3. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
4. VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
5. CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
6. EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

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SITE NUMBER: CT2380
SITE NAME: WESTON GODFREY RD

237 GODFREY ROAD
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FAIRFIELD COUNTY

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	11/01/18	ISSUED FOR PERMITTING	AM	AT	DJC
A	10/17/18	ISSUED FOR REVIEW	GA	AT	DJC

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: GA

STATE OF CONNECTICUT · DEREK J. CREASEY · No. 23951 · LICENSED PROFESSIONAL ENGINEER

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STRUCTURAL NOTES
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2380	SN-1	1

NOTE:

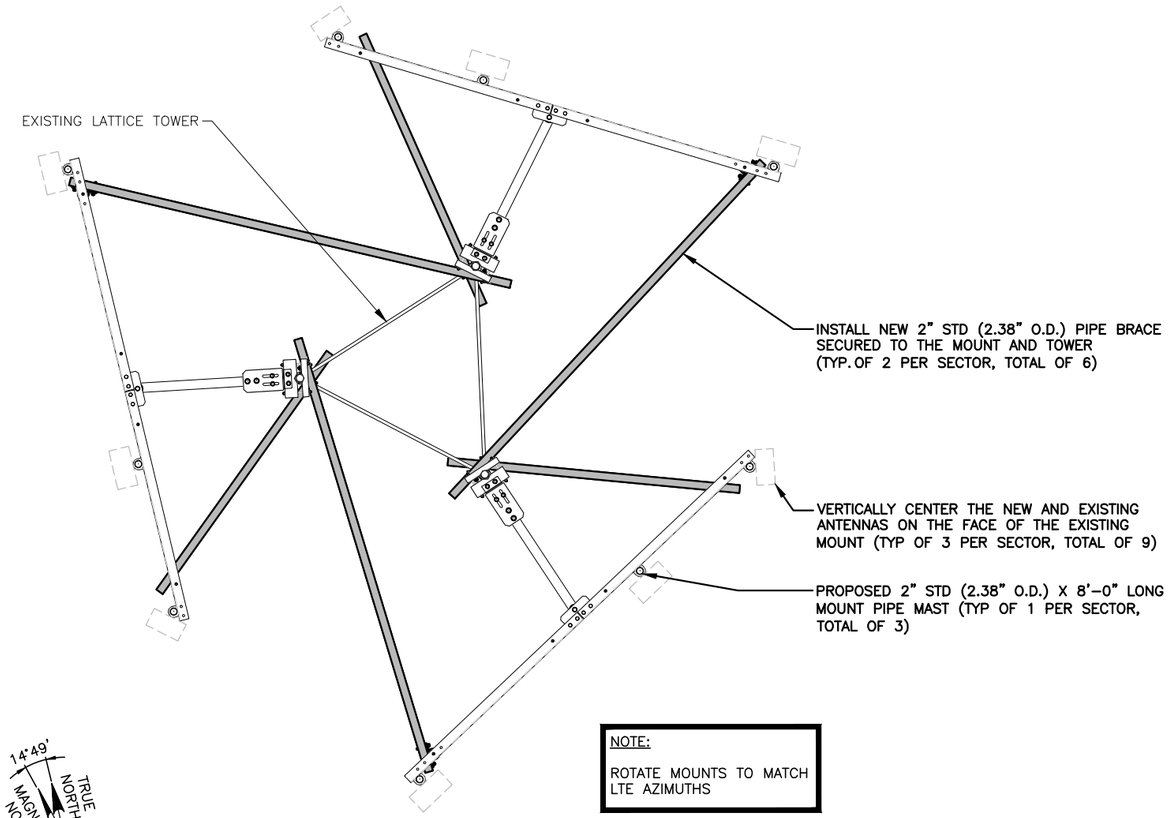
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY:
HUDSON DESIGN GROUP, LLC.
DATED: OCTOBER 3, 2018

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: OCTOBER 24, 2018, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

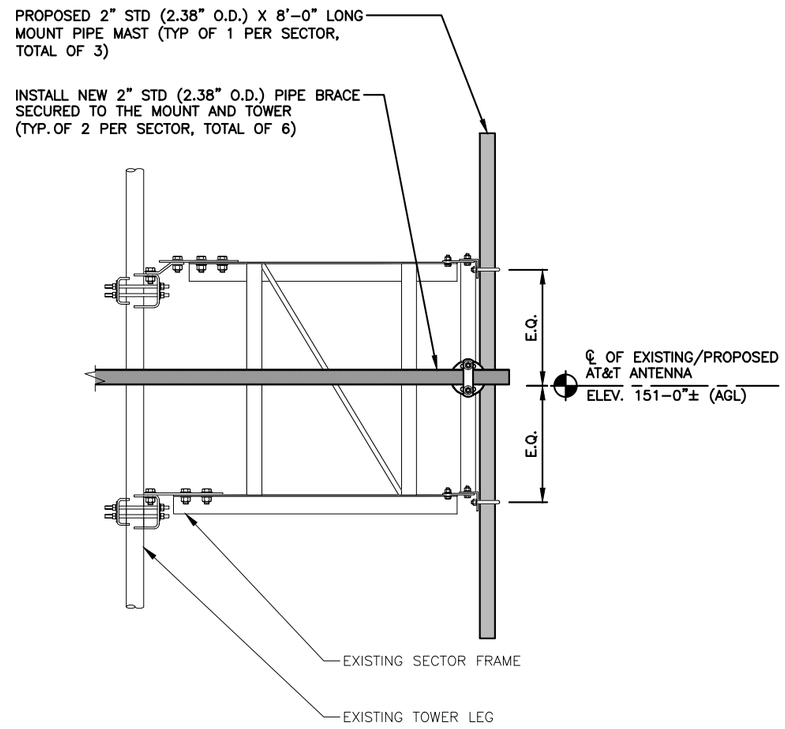


NOTE:

ROTATE MOUNTS TO MATCH LTE AZIMUTHS

PROPOSED REINFORCEMENT PLAN (1 / S-1)
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"

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



PROPOSED MOUNT MODIFICATIONS DETAILS (2 / S-1)
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"

0 0'-6" 1'-0" 2'-0" 3'-0"

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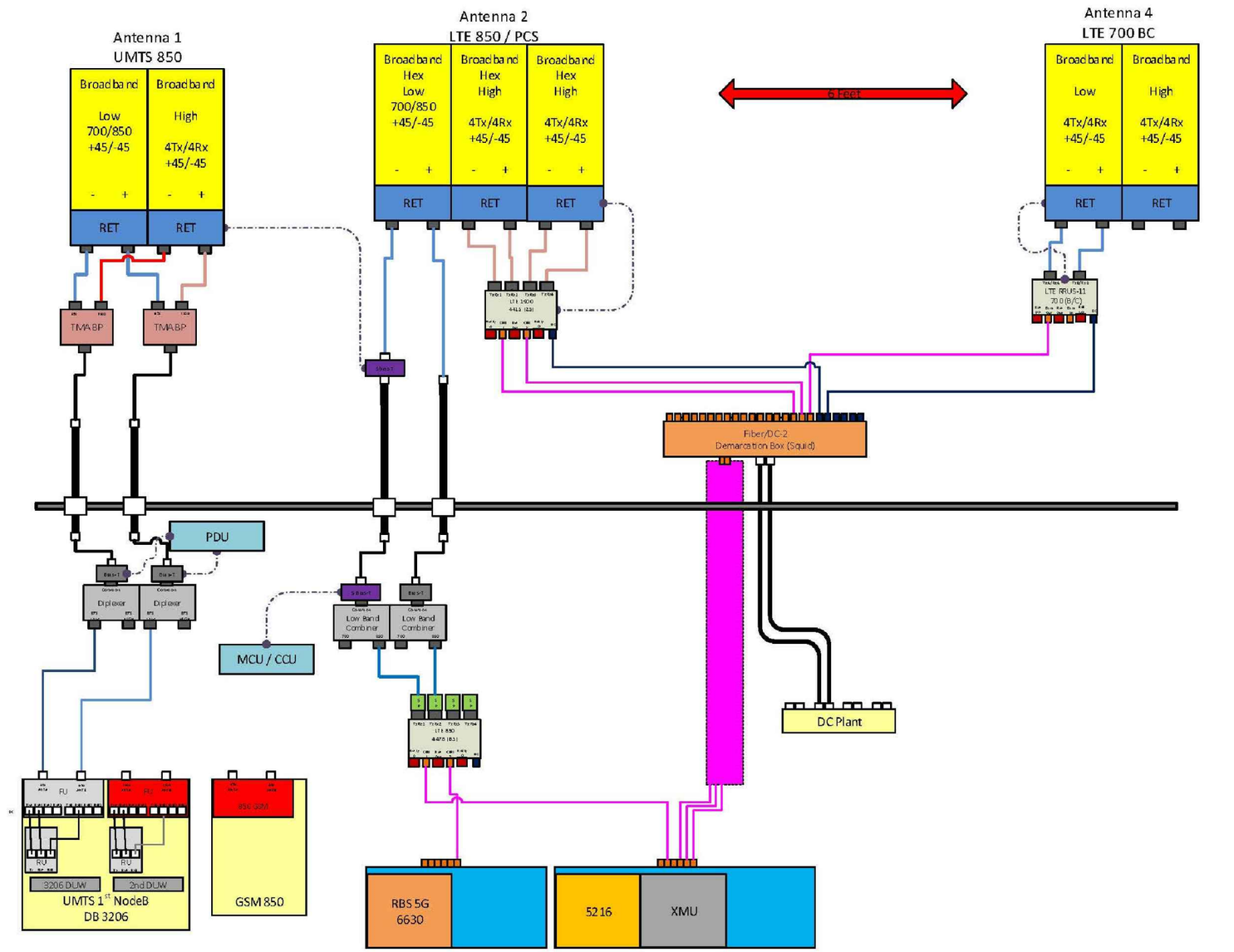
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: GA

STATE OF CONNECTICUT
DEREK J. CREASEY
No. 23557
LICENSED PROFESSIONAL ENGINEER

AT&T

MOUNT MODIFICATION DESIGN
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2380	S-1	1



RF PLUMBING DIAGRAM (1 / RF–1)
SCALE: N.T.S

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

NOTE:

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

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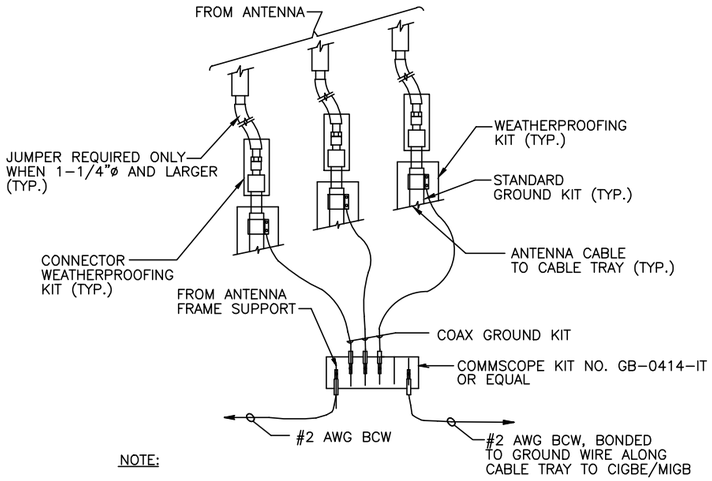
RF PLUMBING DIAGRAM
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2380	RF–1	1



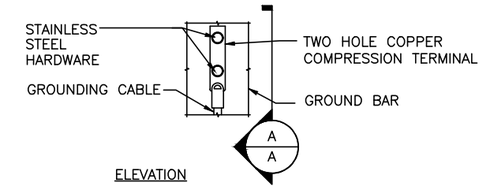
NOTE:

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

SCALE: N.T.S

1 / G-1



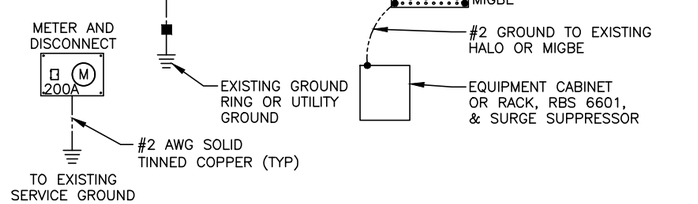
NOTE:

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

TYPICAL GROUND BAR CONNECTION DETAIL

SCALE: N.T.S

3 / G-1



GROUNDING RISER DIAGRAM

SCALE: N.T.S

2 / G-1

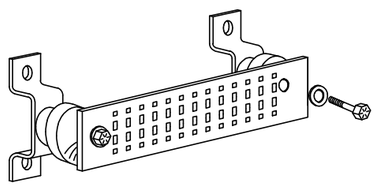
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PRODUCERS

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

SECTION "A" – SURGE ABSORBERS

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



GROUND BAR - DETAIL

SCALE: N.T.S

4 / G-1

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CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET., SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT2380
SITE NAME: WESTON GODFREY RD

237 GODFREY ROAD
WESTON, CT 06883
FAIRFIELD COUNTY

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	11/01/18	ISSUED FOR PERMITTING	AM	AT	DJC
A	10/17/18	ISSUED FOR REVIEW	GA	AT	DJC

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: GA

STATE OF CONNECTICUT
DEREK J. CREASEY
No. 28554
LICENSED PROFESSIONAL ENGINEER

AT&T

GROUNDING DETAILS
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2380	G-1	1

STRUCTURAL NOTES:

1. DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
3. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
6. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
7. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
8. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND DI.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
11. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
12. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
13. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-70 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
14. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
15. LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
16. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
17. ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
18. NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
19. SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST

BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS [1]
N/A	MATERIAL SPECIFICATIONS REPORT [2]
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS [3]
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS [4]
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION [5]
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS [6]
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTES:

1. REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
2. PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
3. PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
4. HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
5. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
6. AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

NOTES:

1. ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
2. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
3. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
4. VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
5. CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
6. EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

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CENTERLINE COMMUNICATIONS
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WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT2380
SITE NAME: WESTON GODFREY RD

237 GODFREY ROAD
WESTON, CT 06883
FAIRFIELD COUNTY

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	11/01/18	ISSUED FOR PERMITTING	AM	AT	DJC
A	10/17/18	ISSUED FOR REVIEW	GA	AT	DJC

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: GA

STATE OF CONNECTICUT · DEREK J. CREASEY · No. 23951 · LICENSED PROFESSIONAL ENGINEER

AT&T

STRUCTURAL NOTES
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2380	SN-1	1

NOTE:

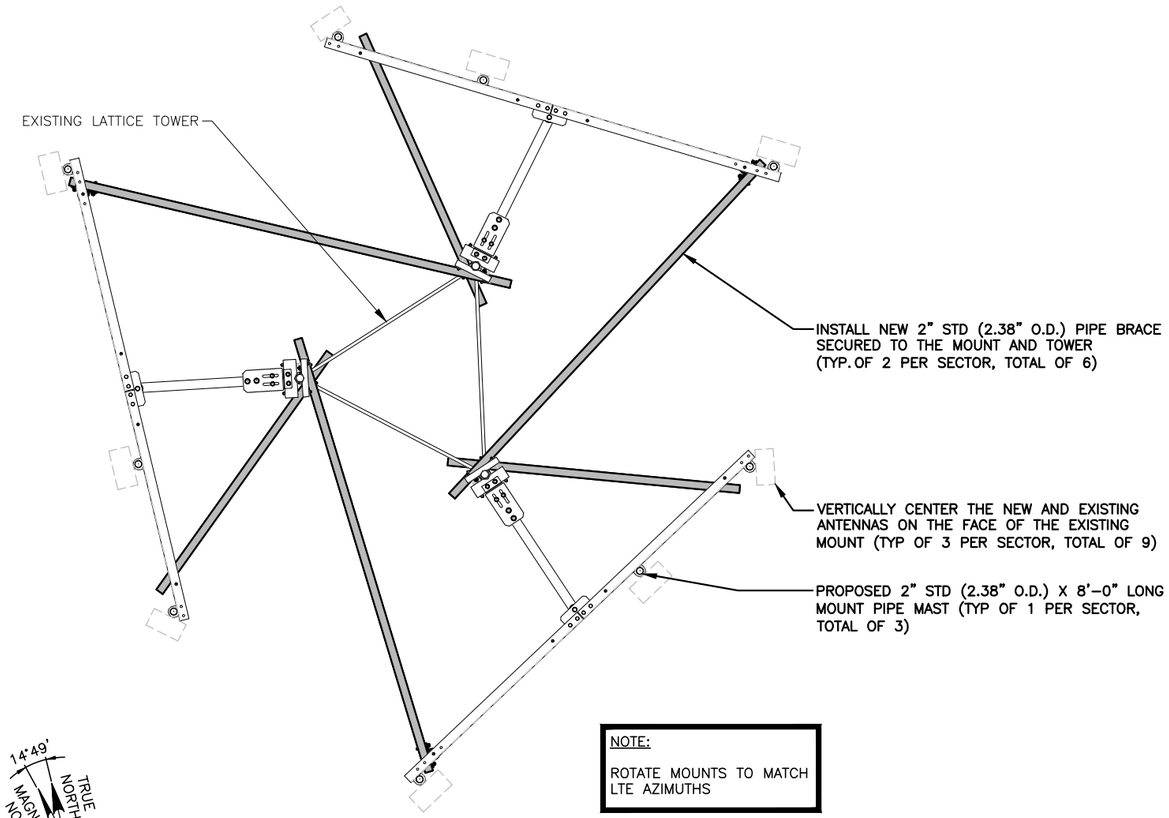
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY:
HUDSON DESIGN GROUP, LLC.
DATED: OCTOBER 3, 2018

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: OCTOBER 24, 2018, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

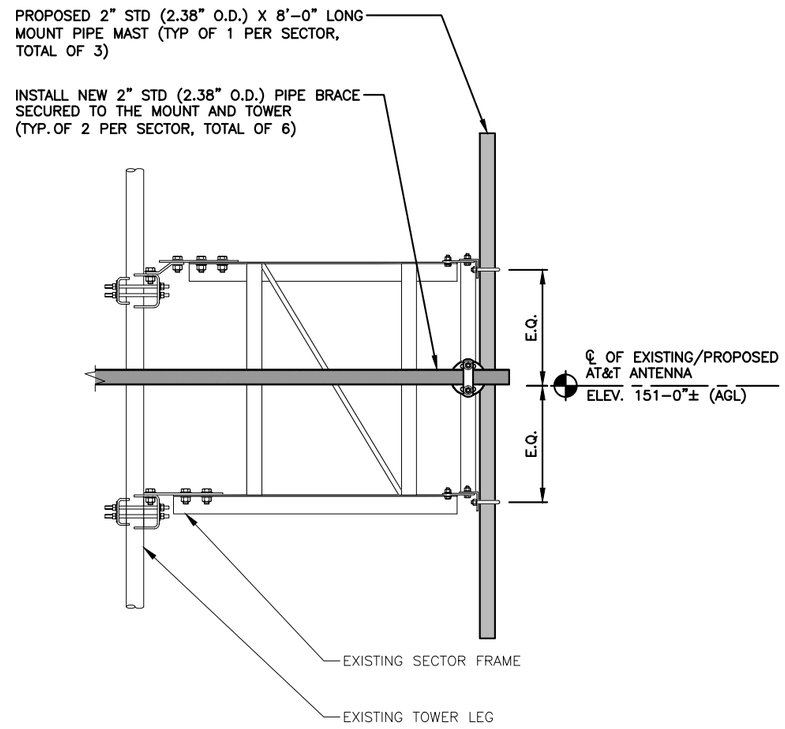


NOTE:

ROTATE MOUNTS TO MATCH LTE AZIMUTHS

PROPOSED REINFORCEMENT PLAN (1 / S-1)
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"

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



PROPOSED MOUNT MODIFICATIONS DETAILS (2 / S-1)
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"

0 0'-6" 1'-0" 2'-0" 3'-0"

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A	10/17/18	ISSUED FOR REVIEW	GA	AT	DJC

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: GA

STATE OF CONNECTICUT
DEREK J. CREASEY
No. 23557
LICENSED PROFESSIONAL ENGINEER

AT&T

MOUNT MODIFICATION DESIGN
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2380	S-1	1

EXHIBIT 2

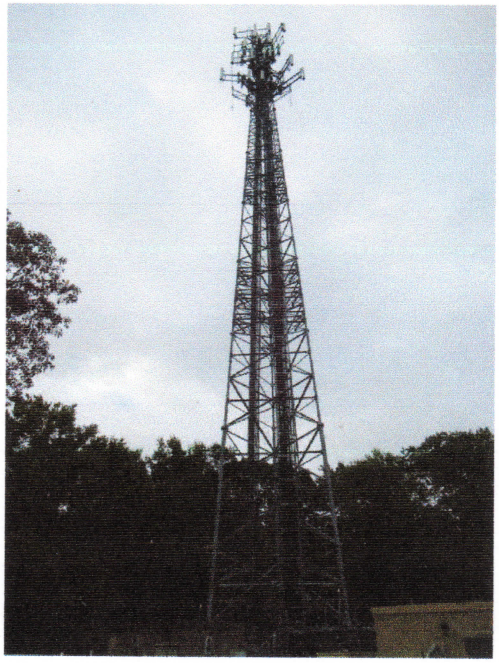
STRUCTURAL ANALYSIS REPORT

For

CT2380
WESTON GODFREY RD

237 GODFREY ROAD
WESTON, CT 06883

Antennas Mounted to the Tower



Prepared for:

CENTERLINE COMMUNICATIONS

at&t

Dated: October 24, 2018

STATE OF CONNECTICUT
KAI WANG
No. 28220
LICENSED
PROFESSIONAL ENGINEER
10/24/2018

Prepared by:

HDG | HUDSON Design Group LLC

45 Beechwood Drive
North Andover, MA 01845
(P) 978.557.5553 (F) 978.336.5586
www.hudsondesigngroupllc.com

SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by AT&T to conduct a structural evaluation of the 185' self-supporting tower supporting the proposed AT&T antennas located at elevation 151' above the ground level.

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

Record drawings of the existing tower were not available for our use. The previous structural analysis report prepared by CHA Consulting Inc., dated July 22, 2011, was available an obtained for our use.

TOWER ANALYSIS SUMMARY:

Based on our evaluation, we have determined that the existing tower **is in conformance** with the ANSI/TIA-222-G Standard for the loading considered under the criteria listed in this report. The tower structure is rated at **92.5%** - (Diagonals at Tower Section T10 from EL.0' to EL.20' Controlling).

HUDSON Design Group LLC

APPURTENANCES CONFIGURATION:

Tenant	Appurtenances	Elev.	Mount
	(2) DB222	185'	T - Frame
	(1) DB636-A	185'	T - Frame
	(12) Panel Antennas	182'	T - Frame
	(12) Panel Antennas	172'	T - Frame
	(6) DB948F85T2E-M Antennas	162'	T - Frame
	(6) DB844H90 Antennas	162'	T - Frame
AT&T	(3) Powerwave 7770 Antennas	151'	T - Frame
AT&T	(3) P65-16-XLH-RR Antennas	151'	T - Frame
AT&T	(6) LGP21401 TMA	151'	T - Frame
AT&T	(3) RRUS-11	151'	T - Frame
AT&T	(1) DC6-48-60-18-8F	151'	T - Frame
AT&T	***(3) HPA65R-BU6A Antennas***	151'	T - Frame
AT&T	***(3) B25 4415***	151'	T - Frame
	(2) DB636-A	145'	Side Mount Standoff
	(2) DB222	145'	Side Mount Standoff

Proposed AT&T Appurtenances shown in Bold.

AT&T EXISTING/PROPOSED COAX CABLES:

Tenant	Coax Cables	Elev.	Mount
AT&T	(12) 1 5/8" Cables	151'	Tower Face
AT&T	(2) DC Power Cables	151'	Tower Face
AT&T	(1) Fiber Cable	151'	Tower Face

Proposed AT&T Coax Cables shown in Bold.

ANALYSIS RESULTS SUMMARY:

Component	Max. Stress Ratio	Elev. of Component (ft)	Pass/Fail	Notes/Comments
Legs	85.3 %	140 – 160	PASS	
Diagonals	**92.5 %**	0 – 20	PASS	**Controlling**
Secondary Horizontals	12.7 %	120 – 140	PASS	
Top Girts	9.1 %	160 – 180	PASS	

HUDSON Design Group LLC

DESIGN CRITERIA:

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

2. Connecticut State Building Code

   City/Town: Weston
   Wind Load: 93 mph (3 second gust)
   Structural Class: II
   Exposure Category: B
   Topographic Category: 1
   Crest Height: 0 ft.
   Ice Thickness: 0.75 inch

3. Approximate height above grade to proposed antennas: 151'

Calculations and referenced documents are attached

ASSUMPTIONS:

1. The tower dimensions, member sizes and material strength are as indicated in the previous structural analysis report prepared by CHA Consulting Inc., dated July 22, 2011.

2. The appurtenances configuration is as stated in the previous structural analysis report prepared by CHA Consulting Inc., dated July 22, 2011. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.

3. The tower and foundation are properly constructed and maintained. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.

4. The support mounts and platforms are not analyzed and are considered adequate to support the loading. The analysis is limited to the primary support structure itself.

5. All prior structural modification, if any, are assumed to be as per the data supplied (if available), and installed properly.

6. The foundation of the tower was not checked due to lack of information. As-built foundation drawings and geotechnical report would be required to determine whether the foundation is capable of supporting the proposed loadings.

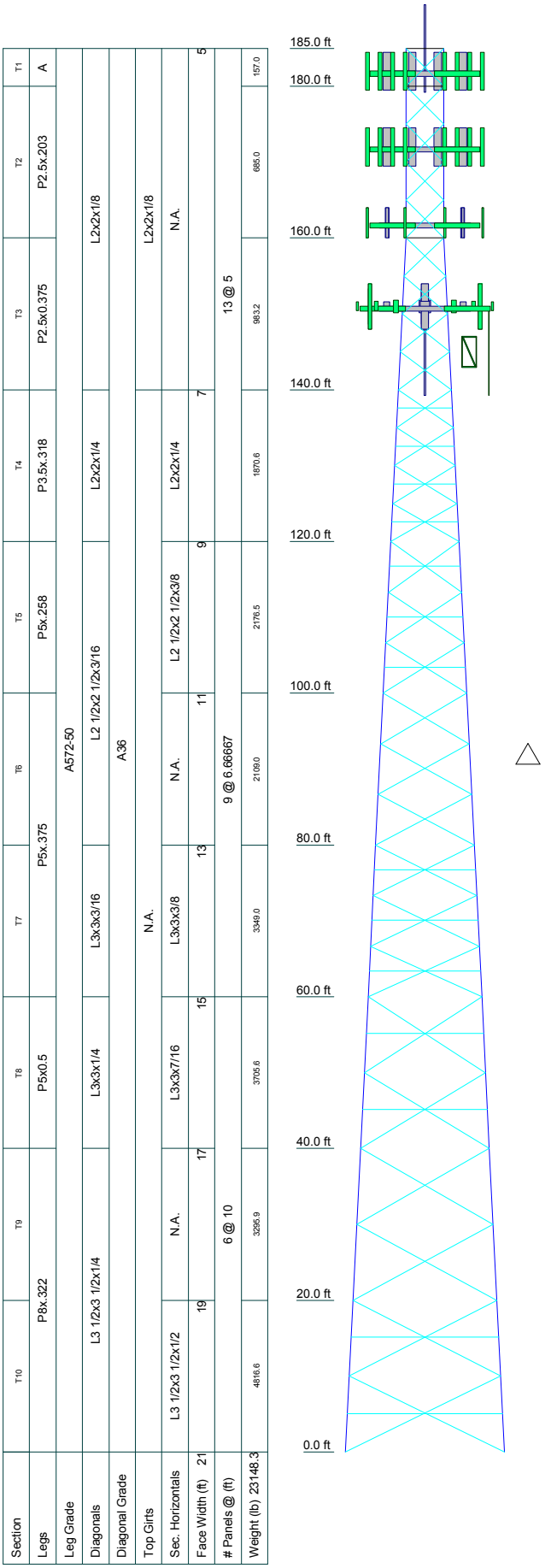
SUPPORT RECOMMENDATIONS:

HDG recommends that the proposed antennas and RRHs be mounted on the existing T-frame supported by the tower.

Photo 1: Photo illustrating the Tower with Appurtenances shown.

HUDSON
Design Group LLC

CALCULATIONS



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
DB222	185	PiROD 12' T-Frame	151
DB222	185	PiROD 12' T-Frame	151
DB636-A	185	Powerwave 7770 w/mount pipe	151
PiROD 12' Lightweight T-Frame	182	Powerwave 7770 w/mount pipe	151
PiROD 12' Lightweight T-Frame	182	Powerwave 7770 w/mount pipe	151
PiROD 12' Lightweight T-Frame	182	Powerwave P65-16-XLH-RR w/mount pipe	151
(4) Panel Antenna 5'x12"x6" w/mount pipe	182	Powerwave P65-16-XLH-RR w/mount pipe	151
(4) Panel Antenna 5'x12"x6" w/mount pipe	182	Powerwave P65-16-XLH-RR w/mount pipe	151
(4) Panel Antenna 5'x12"x6" w/mount pipe	182	(2) Powerwave TMA LGP21401	151
PiROD 12' Lightweight T-Frame	172	(2) Powerwave TMA LGP21401	151
PiROD 12' Lightweight T-Frame	172	(2) Powerwave TMA LGP21401	151
PiROD 12' Lightweight T-Frame	172	Ericsson RRUS-11	151
(4) Panel Antenna 5'x12"x6" w/mount pipe	172	Ericsson RRUS-11	151
		Ericsson RRUS-11	151
(4) Panel Antenna 5'x12"x6" w/mount pipe	172	DC6-48-60-18-8F	151
(4) Panel Antenna 5'x12"x6" w/mount pipe	172	HPA65R-BU6A w/mount pipe (ATI - propsoed)	151
PiROD 12' Lightweight T-Frame	162	HPA65R-BU6A w/mount pipe	151
PiROD 12' Lightweight T-Frame	162	HPA65R-BU6A w/mount pipe	151
PiROD 12' Lightweight T-Frame	162	B25 4415	151
(2) DB948F85T2E-M w/Mount Pipe	162	B25 4415	151
(2) DB948F85T2E-M w/Mount Pipe	162	B25 4415	151
(2) DB948F85T2E-M w/Mount Pipe	162	DB222	145
(2) DB844H90 w/Mount Pipe	162	DB222	145
(2) DB844H90 w/Mount Pipe	162	Rohn 6' Side-Arm(1)	145
(2) DB844H90 w/Mount Pipe	162	Rohn 6' Side-Arm(1)	145
PiROD 12' T-Frame (ATI - Existing)	151	DB636-A	145
		DB636-A	145

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	P2x.154		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 93 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft

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North Andover, MA 01845
Phone: (978) 557-5553
FAX: (978) 336-5586

Job: ***CT2380***			
Project: ***185 ft Self Supporting Tower***			
Client: AT&T	Drawn by: kw	App'd:	
Code: TIA-222-G	Date: 10/24/18	Scale: NTS	
Path: C:\Users\kwang\Documents\HUDSON DESIGN GROUP\AAA\CT2380 - SST (AT&T Centerline)\CT2380\CT2380.eri		Dwg No. E-1	

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 185.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 5.00 ft at the top and 21.00 ft at the base.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Tower is located in Fairfield County, Connecticut.
Basic wind speed of 93 mph.
Structure Class II.
Exposure Category B.
Topographic Category 1.
Crest Height 0.00 ft.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Tower Section Geometry

Tower Section	*Tower Elevation*	*Assembly Database*	*Description*	*Section Width*	*Number of Sections*	*Section Length*
	ft			*ft*		*ft*
T1	185.00-180.00			5.00	1	5.00
T2	180.00-160.00			5.00	1	20.00
T3	160.00-140.00			5.00	1	20.00
T4	140.00-120.00			7.00	1	20.00
T5	120.00-100.00			9.00	1	20.00
T6	100.00-80.00			11.00	1	20.00
T7	80.00-60.00			13.00	1	20.00
T8	60.00-40.00			15.00	1	20.00
T9	40.00-20.00			17.00	1	20.00
T10	20.00-0.00			19.00	1	20.00

Tower Section Geometry *(cont'd)*

Tower Section	*Tower Elevation*	*Diagonal Spacing*	*Bracing Type*	*Has K Brace End Panels*	*Has Horizontals*	*Top Girt Offset*	*Bottom Girt Offset*
	ft	*ft*				*in*	*in*
T1	185.00-180.00	5.00	X Brace	No	No	0.0000	0.0000
T2	180.00-160.00	5.00	X Brace	No	No	0.0000	0.0000

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T3	160.00-140.00	5.00	X Brace	No	No	0.0000	0.0000
T4	140.00-120.00	5.00	X Brace	No	Yes	0.0000	0.0000
T5	120.00-100.00	6.67	X Brace	No	Yes	0.0000	0.0000
T6	100.00-80.00	6.67	X Brace	No	No	0.0000	0.0000
T7	80.00-60.00	6.67	X Brace	No	Yes	0.0000	0.0000
T8	60.00-40.00	10.00	X Brace	No	Yes	0.0000	0.0000
T9	40.00-20.00	10.00	X Brace	No	No	0.0000	0.0000
T10	20.00-0.00	10.00	X Brace	No	Yes	0.0000	0.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 185.00-180.00	Pipe	P2x.154	A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T2 180.00-160.00	Pipe	P2.5x.203	A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T3 160.00-140.00	Pipe	P2.5x0.375	A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T4 140.00-120.00	Pipe	P3.5x.318	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T5 120.00-100.00	Pipe	P5x.258	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T6 100.00-80.00	Pipe	P5x.375	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T7 80.00-60.00	Pipe	P5x.375	A572-50 (50 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)
T8 60.00-40.00	Pipe	P5x0.5	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A36 (36 ksi)
T9 40.00-20.00	Pipe	P8x.322	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T10 20.00-0.00	Pipe	P8x.322	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 185.00-180.00	Equal Angle	L2x2x1/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T2 180.00-160.00	Equal Angle	L2x2x1/8	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T3 160.00-140.00	Single Angle	L2x2x1/8	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T4 140.00-120.00	Equal Angle	L2x2x1/4	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T5 120.00-100.00	Equal Angle	L2 1/2x2 1/2x3/8	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T7 80.00-60.00	Equal Angle	L3x3x3/8	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T8 60.00-40.00	Equal Angle	L3x3x7/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T10 20.00-0.00	Equal Angle	L3 1/2x3 1/2x1/2	A36 (36 ksi)	Equal Angle		A36 (36 ksi)

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
LDF7-50A (1-5/8 FOAM)	A	No	No	Ar (CaAa)	172.00 - 10.00	0.0000	0.15	12	6	0.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	A	No	No	Ar (CaAa)	172.00 - 10.00	-2.0000	0.15	6	6	0.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	C	No	No	Ar (CaAa)	182.00 - 10.00	0.0000	0.15	24	8	0.0000	1.9800		0.82
LDF5-50A (7/8 FOAM)	C	No	No	Ar (CaAa)	145.00 - 10.00	-2.0000	0.15	7	7	0.0000	1.0900		0.33
LDF5-50A (7/8 FOAM)	C	No	No	Ar (CaAa)	185.00 - 145.00	-2.0000	0.15	3	3	0.0000	1.0900		0.33
LDF7-50A (1-5/8 FOAM) **********	B	No	No	Ar (CaAa)	162.00 - 10.00	-4.0000	0.15	12	6	0.0000	1.9800		0.82
1 5/8 (AT&T - existing)	B	No	No	Ar (CaAa)	151.00 - 10.00	0.0000	0.15	12	6	0.0000	1.9800		1.04
WR-VG122S T-BRDA	B	No	No	Ar (CaAa)	151.00 - 10.00	0.0000	0.2	2	2	0.0000	0.4000		0.25
FB-L98B-002	B	No	No	Ar (CaAa)	151.00 - 10.00	0.0000	0.25	1	1	0.0000	0.4000		0.25

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
DB222	A	From Leg	3.00 0.00	0.0000	185.00	No Ice 1/2" Ice	1.60 2.88	1.60 2.88	16.00 20.80
			0.00			1" Ice	4.16	4.16	25.60
DB222	B	From Leg	3.00 0.00	0.0000	185.00	No Ice 1/2" Ice	1.60 2.88	1.60 2.88	16.00 20.80
			0.00			1" Ice	4.16	4.16	25.60

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 lb
DB636-A	A	From Leg	3.00	0.0000	185.00	No Ice	2.78	2.78	30.00
			0.00			1/2" Ice	3.96	3.96	50.78
			0.00			1" Ice	5.16	5.16	79.03
**********									
PiROD 12' Lightweight T-Frame	A	From Leg	2.00	0.0000	182.00	No Ice	10.20	10.20	253.00
			0.00			1/2" Ice	16.20	16.20	355.00
			0.00			1" Ice	22.20	22.20	457.00
PiROD 12' Lightweight T-Frame	B	From Leg	2.00	0.0000	182.00	No Ice	10.20	10.20	253.00
			0.00			1/2" Ice	16.20	16.20	355.00
			0.00			1" Ice	22.20	22.20	457.00
PiROD 12' Lightweight T-Frame	C	From Leg	2.00	0.0000	182.00	No Ice	10.20	10.20	253.00
			0.00			1/2" Ice	16.20	16.20	355.00
			0.00			1" Ice	22.20	22.20	457.00
(4) Panel Antenna 5'x12"x6" w/mount pipe	A	From Leg	3.00	0.0000	182.00	No Ice	6.79	5.17	51.90
			0.00			1/2" Ice	7.27	6.05	107.68
			0.00			1" Ice	7.73	6.81	170.39
(4) Panel Antenna 5'x12"x6" w/mount pipe	B	From Leg	3.00	0.0000	182.00	No Ice	6.79	5.17	51.90
			0.00			1/2" Ice	7.27	6.05	107.68
			0.00			1" Ice	7.73	6.81	170.39
(4) Panel Antenna 5'x12"x6" w/mount pipe	C	From Leg	3.00	0.0000	182.00	No Ice	6.79	5.17	51.90
			0.00			1/2" Ice	7.27	6.05	107.68
			0.00			1" Ice	7.73	6.81	170.39
**********									
PiROD 12' Lightweight T-Frame	A	From Leg	2.00	0.0000	172.00	No Ice	10.20	10.20	253.00
			0.00			1/2" Ice	16.20	16.20	355.00
			0.00			1" Ice	22.20	22.20	457.00
PiROD 12' Lightweight T-Frame	B	From Leg	2.00	0.0000	172.00	No Ice	10.20	10.20	253.00
			0.00			1/2" Ice	16.20	16.20	355.00
			0.00			1" Ice	22.20	22.20	457.00
PiROD 12' Lightweight T-Frame	C	From Leg	2.00	0.0000	172.00	No Ice	10.20	10.20	253.00
			0.00			1/2" Ice	16.20	16.20	355.00
			0.00			1" Ice	22.20	22.20	457.00
(4) Panel Antenna 5'x12"x6" w/mount pipe	A	From Leg	3.00	0.0000	172.00	No Ice	6.79	5.17	51.90
			0.00			1/2" Ice	7.27	6.05	107.68
			0.00			1" Ice	7.73	6.81	170.39
(4) Panel Antenna 5'x12"x6" w/mount pipe	B	From Leg	3.00	0.0000	172.00	No Ice	6.79	5.17	51.90
			0.00			1/2" Ice	7.27	6.05	107.68
			0.00			1" Ice	7.73	6.81	170.39
(4) Panel Antenna 5'x12"x6" w/mount pipe	C	From Leg	3.00	0.0000	172.00	No Ice	6.79	5.17	51.90
			0.00			1/2" Ice	7.27	6.05	107.68
			0.00			1" Ice	7.73	6.81	170.39
**********									
PiROD 12' Lightweight T-Frame	A	From Leg	2.00	0.0000	162.00	No Ice	10.20	10.20	253.00
			0.00			1/2" Ice	16.20	16.20	355.00
			0.00			1" Ice	22.20	22.20	457.00
PiROD 12' Lightweight T-Frame	B	From Leg	2.00	0.0000	162.00	No Ice	10.20	10.20	253.00
			0.00			1/2" Ice	16.20	16.20	355.00
			0.00			1" Ice	22.20	22.20	457.00
PiROD 12' Lightweight T-Frame	C	From Leg	2.00	0.0000	162.00	No Ice	10.20	10.20	253.00
			0.00			1/2" Ice	16.20	16.20	355.00
			0.00			1" Ice	22.20	22.20	457.00
(2) DB948F85T2E-M w/Mount Pipe	A	From Leg	3.00	0.0000	162.00	No Ice	2.62	4.92	34.05
			0.00			1/2" Ice	3.23	5.95	71.61
			0.00			1" Ice	3.72	6.69	115.07
(2) DB948F85T2E-M w/Mount Pipe	B	From Leg	3.00	0.0000	162.00	No Ice	2.62	4.92	34.05
			0.00			1/2" Ice	3.23	5.95	71.61
			0.00			1" Ice	3.72	6.69	115.07

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(2) DB948F85T2E-M w/Mount Pipe	C	From Leg	3.00 0.00 0.00	0.0000	162.00	No Ice 1/2" Ice 1" Ice	2.62 3.23 3.72	4.92 5.95 6.69	34.05 71.61 115.07
(2) DB844H90 w/Mount Pipe	A	From Leg	3.00 0.00 0.00	0.0000	162.00	No Ice 1/2" Ice 1" Ice	3.58 4.20 4.70	5.46 6.49 7.24	35.55 80.31 131.19
(2) DB844H90 w/Mount Pipe	B	From Leg	3.00 0.00 0.00	0.0000	162.00	No Ice 1/2" Ice 1" Ice	3.58 4.20 4.70	5.46 6.49 7.24	35.55 80.31 131.19
(2) DB844H90 w/Mount Pipe	C	From Leg	3.00 0.00 0.00	0.0000	162.00	No Ice 1/2" Ice 1" Ice	3.58 4.20 4.70	5.46 6.49 7.24	35.55 80.31 131.19
**********									
Rohn 6' Side-Arm(1)	A	From Leg	3.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice	10.60 15.40 20.20	10.60 15.40 20.20	140.00 212.00 284.00
Rohn 6' Side-Arm(1)	B	From Leg	3.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice	10.60 15.40 20.20	10.60 15.40 20.20	140.00 212.00 284.00
DB636-A	A	From Leg	6.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice	2.78 3.96 5.16	2.78 3.96 5.16	30.00 50.78 79.03
DB636-A	B	From Leg	6.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice	2.78 3.96 5.16	2.78 3.96 5.16	30.00 50.78 79.03
DB222	A	From Leg	6.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice	1.60 2.88 4.16	1.60 2.88 4.16	16.00 20.80 25.60
DB222	B	From Leg	6.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice	1.60 2.88 4.16	1.60 2.88 4.16	16.00 20.80 25.60
**********									
PiROD 12' T-Frame (AT&T - Existing)	A	From Leg	3.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	12.20 17.60 23.00	12.20 17.60 23.00	360.00 490.00 620.00
PiROD 12' T-Frame	B	From Leg	3.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	12.20 17.60 23.00	12.20 17.60 23.00	360.00 490.00 620.00
PiROD 12' T-Frame	C	From Leg	3.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	12.20 17.60 23.00	12.20 17.60 23.00	360.00 490.00 620.00
Powerwave 7770 w/mount pipe	A	From Leg	5.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	5.65 6.03 6.42	4.10 4.75 5.42	57.25 103.17 155.38
Powerwave 7770 w/mount pipe	B	From Leg	5.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	5.65 6.03 6.42	4.10 4.75 5.42	57.25 103.17 155.38
Powerwave 7770 w/mount pipe	C	From Leg	5.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	5.65 6.03 6.42	4.10 4.75 5.42	57.25 103.17 155.38
Powerwave P65-16-XLH-RR w/mount pipe	A	From Leg	5.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	8.37 8.93 9.46	6.36 7.54 8.43	48.55 114.33 188.01
Powerwave P65-16-XLH-RR w/mount pipe	B	From Leg	5.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	8.37 8.93 9.46	6.36 7.54 8.43	48.55 114.33 188.01
Powerwave P65-16-XLH-RR	C	From Leg	5.00	0.0000	151.00	No Ice	8.37	6.36	48.55

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 lb
w/mount pipe			0.00			1/2" Ice	8.93	7.54	114.33
			0.00			1" Ice	9.46	8.43	188.01
(2) Powerwave TMA	A	From Leg	4.00	0.0000	151.00	No Ice	1.05	0.38	14.10
LGP21401			0.00			1/2" Ice	1.18	0.47	21.29
			0.00			1" Ice	1.32	0.57	30.37
(2) Powerwave TMA	B	From Leg	4.00	0.0000	151.00	No Ice	1.05	0.38	14.10
LGP21401			0.00			1/2" Ice	1.18	0.47	21.29
			0.00			1" Ice	1.32	0.57	30.37
(2) Powerwave TMA	C	From Leg	4.00	0.0000	151.00	No Ice	1.05	0.38	14.10
LGP21401			0.00			1/2" Ice	1.18	0.47	21.29
			0.00			1" Ice	1.32	0.57	30.37
Ericsson RRUS-11	A	From Leg	1.00	0.0000	151.00	No Ice	2.79	1.19	50.70
			0.00			1/2" Ice	3.00	1.34	71.57
			0.00			1" Ice	3.21	1.50	95.48
Ericsson RRUS-11	B	From Leg	1.00	0.0000	151.00	No Ice	2.79	1.19	50.70
			0.00			1/2" Ice	3.00	1.34	71.57
			0.00			1" Ice	3.21	1.50	95.48
Ericsson RRUS-11	C	From Leg	1.00	0.0000	151.00	No Ice	2.79	1.19	50.70
			0.00			1/2" Ice	3.00	1.34	71.57
			0.00			1" Ice	3.21	1.50	95.48
DC6-48-60-18-8F	A	From Leg	1.00	0.0000	151.00	No Ice	0.79	0.79	20.00
			0.00			1/2" Ice	1.27	1.27	35.12
			0.00			1" Ice	1.45	1.45	52.57
**********									
HPA65R-BU6A w/mount	A	From Leg	5.00	0.0000	151.00	No Ice	8.16	7.56	87.43
pipe			0.00			1/2" Ice	8.70	8.59	159.54
(AT&T - propsoed)			0.00			1" Ice	9.22	9.47	240.51
HPA65R-BU6A w/mount	B	From Leg	5.00	0.0000	151.00	No Ice	8.16	7.56	87.43
pipe			0.00			1/2" Ice	8.70	8.59	159.54
			0.00			1" Ice	9.22	9.47	240.51
HPA65R-BU6A w/mount	C	From Leg	5.00	0.0000	151.00	No Ice	8.16	7.56	87.43
pipe			0.00			1/2" Ice	8.70	8.59	159.54
			0.00			1" Ice	9.22	9.47	240.51
B25 4415	A	From Leg	4.00	0.0000	151.00	No Ice	1.65	0.93	60.00
			0.00			1/2" Ice	1.81	1.05	74.37
			0.00			1" Ice	1.98	1.19	91.23
B25 4415	B	From Leg	4.00	0.0000	151.00	No Ice	1.65	0.93	60.00
			0.00			1/2" Ice	1.81	1.05	74.37
			0.00			1" Ice	1.98	1.19	91.23
B25 4415	C	From Leg	4.00	0.0000	151.00	No Ice	1.65	0.93	60.00
			0.00			1/2" Ice	1.81	1.05	74.37
			0.00			1" Ice	1.98	1.19	91.23

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice

Comb. No.	Description
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Tower Mast Reaction Summary

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead Only	39107.51	0.00	0.00	3986.05	-3470.25	0.04
1.2 Dead+1.6 Wind 0 deg - No Ice	46929.01	0.00	-46445.40	-5284118.43	-4195.50	-1228.77
0.9 Dead+1.6 Wind 0 deg - No Ice	35196.76	0.00	-46445.40	-5277418.64	-3142.41	-1241.00
1.2 Dead+1.6 Wind 30 deg - No Ice	46929.01	22256.80	-38549.90	-4418222.54	-2557921.11	15400.83
0.9 Dead+1.6 Wind 30 deg - No	35196.77	22256.78	-38549.91	-4412793.39	-2553031.16	15379.72

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Ice						
1.2 Dead+1.6 Wind 60 deg - No Ice	46929.01	37925.76	-21896.45	-2512761.92	-4364801.97	7486.63
0.9 Dead+1.6 Wind 60 deg - No Ice	35196.76	37925.76	-21896.45	-2510190.54	-4357206.21	7474.59
1.2 Dead+1.6 Wind 90 deg - No Ice	46929.01	44818.59	-0.00	4727.17	-5137866.45	-13425.05
0.9 Dead+1.6 Wind 90 deg - No Ice	35196.76	44818.59	-0.01	3520.69	-5129124.69	-13431.42
1.2 Dead+1.6 Wind 120 deg - No Ice	46929.01	40223.91	23223.29	2646164.72	-4579265.73	-8430.70
0.9 Dead+1.6 Wind 120 deg - No Ice	35196.76	40223.91	23223.29	2641014.21	-4571382.64	-8433.64
1.2 Dead+1.6 Wind 150 deg - No Ice	46929.01	22664.34	39255.78	4522714.89	-2612575.36	7787.03
0.9 Dead+1.6 Wind 150 deg - No Ice	35196.76	22664.33	39255.78	4514719.08	-2607602.55	7789.17
1.2 Dead+1.6 Wind 180 deg - No Ice	46929.01	0.00	43905.34	5085873.97	-4197.52	1230.16
0.9 Dead+1.6 Wind 180 deg - No Ice	35196.76	0.00	43905.34	5077008.16	-3145.66	1240.48
1.2 Dead+1.6 Wind 210 deg - No Ice	46929.01	-22256.80	38549.90	4427916.31	2549400.09	-15400.71
0.9 Dead+1.6 Wind 210 deg - No Ice	35196.77	-22256.81	38549.89	4420069.51	2546624.99	-15379.59
1.2 Dead+1.6 Wind 240 deg - No Ice	46929.01	-40125.52	23166.48	2626352.88	4536404.22	-7488.33
0.9 Dead+1.6 Wind 240 deg - No Ice	35196.76	-40125.52	23166.48	2621246.35	4530700.45	-7475.56
1.2 Dead+1.6 Wind 270 deg - No Ice	46929.01	-44818.59	-0.00	4721.98	5129485.97	13425.25
0.9 Dead+1.6 Wind 270 deg - No Ice	35196.76	-44818.59	-0.01	3516.86	5122849.47	13431.62
1.2 Dead+1.6 Wind 300 deg - No Ice	46929.01	-38024.15	-21953.25	-2532719.18	4390820.30	8431.30
0.9 Dead+1.6 Wind 300 deg - No Ice	35196.76	-38024.15	-21953.25	-2530104.06	4385255.48	8433.66
1.2 Dead+1.6 Wind 330 deg - No Ice	46929.01	-22664.34	-39255.78	-4513074.35	2604243.64	-7786.85
0.9 Dead+1.6 Wind 330 deg - No Ice	35196.76	-22664.34	-39255.78	-4507490.91	2601375.57	-7789.01
1.2 Dead+1.0 Ice+1.0 Temp	124328.00	-0.00	-0.00	7549.55	-11700.29	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	124328.00	0.00	-13704.32	-1638677.69	-11766.50	1799.16
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	124328.00	6671.10	-11554.68	-1388753.34	-817935.11	4384.78
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	124328.00	11463.16	-6618.26	-793226.65	-1398781.43	1991.55
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	124328.00	13397.31	-0.00	7559.35	-1628932.73	-2929.98
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	124328.00	11916.01	6879.71	833096.22	-1441642.04	-3262.42
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	124328.00	6741.25	11676.19	1420427.04	-827475.82	-726.53
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	124328.00	0.00	13321.72	1623417.81	-11766.45	-1798.56
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	124328.00	-6671.10	11554.68	1403896.91	794400.65	-4384.79
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	124328.00	-11794.50	6809.56	823566.90	1401583.48	-1992.56
1.2 Dead+1.0 Wind 270	124328.00	-13397.31	-0.00	7555.29	1605416.11	2929.99

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 300	124328.00	-11584.67	-6688.42	-802788.84	1391794.39	3262.07
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 330	124328.00	-6741.25	-11676.19	-1405295.82	803955.86	726.61
deg+1.0 Ice+1.0 Temp						
Dead+Wind 0 deg - Service	39107.51	0.00	-12082.57	-1370600.40	-3488.73	-322.02
Dead+Wind 30 deg - Service	39107.51	5790.01	-10028.59	-1145534.38	-667189.66	4001.74
Dead+Wind 60 deg - Service	39107.51	9866.22	-5696.27	-650302.27	-1136783.33	1945.91
Dead+Wind 90 deg - Service	39107.51	11659.36	0.00	3990.44	-1337719.21	-3491.43
Dead+Wind 120 deg - Service	39107.51	10464.08	6041.44	690506.83	-1192555.97	-2193.67
Dead+Wind 150 deg - Service	39107.51	5896.03	10212.22	1178204.08	-681411.61	2023.93
Dead+Wind 180 deg - Service	39107.51	0.00	11421.78	1324536.94	-3489.54	320.67
Dead+Wind 210 deg - Service	39107.51	-5790.01	10028.59	1153552.63	660188.96	-4001.73
Dead+Wind 240 deg - Service	39107.51	-10438.48	6026.66	685344.55	1176626.92	-1946.04
Dead+Wind 270 deg - Service	39107.51	-11659.36	-0.00	3989.29	1330741.67	3491.44
Dead+Wind 300 deg - Service	39107.51	-9891.82	-5711.04	-655475.56	1138751.07	2193.22
Dead+Wind 330 deg - Service	39107.51	-5896.03	-10212.22	-1170196.59	674438.88	-2023.94

Maximum Tower Deflections - Service Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
T1	185 - 180	7.098	43	0.3784	0.0243
T2	180 - 160	6.701	43	0.3778	0.0235
T3	160 - 140	5.132	43	0.3438	0.0202
T4	140 - 120	3.754	43	0.2881	0.0154
T5	120 - 100	2.644	43	0.2274	0.0121
T6	100 - 80	1.780	43	0.1710	0.0093
T7	80 - 60	1.116	43	0.1306	0.0066
T8	60 - 40	0.622	43	0.0898	0.0042
T9	40 - 20	0.288	43	0.0585	0.0026
T10	20 - 0	0.083	43	0.0290	0.0013

Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
185.00	DB222	43	7.098	0.3784	0.0243	202201
182.00	PiROD 12' Lightweight T-Frame	43	6.860	0.3783	0.0238	202201
172.00	PiROD 12' Lightweight T-Frame	43	6.063	0.3695	0.0223	71711
162.00	PiROD 12' Lightweight T-Frame	43	5.284	0.3488	0.0206	24203
151.00	PiROD 12' T-Frame	43	4.481	0.3199	0.0181	18954
145.00	Rohn 6' Side-Arm(1)	43	4.074	0.3028	0.0166	17704

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T1	185 - 180	Leg	P2x.154	3	-2345.85	31617.20	7.4	Pass
T2	180 - 160	Leg	P2.5x.203	15	-33255.10	57192.30	58.1	Pass
T3	160 - 140	Leg	P2.5x0.375	45	-81243.40	95225.20	85.3	Pass
T4	140 - 120	Leg	P3.5x.318	75	-122911.00	158893.00	77.4	Pass
T5	120 - 100	Leg	P5x.258	114	-156490.00	186764.00	83.8	Pass
T6	100 - 80	Leg	P5x.375	144	-189165.00	239388.00	79.0	Pass
T7	80 - 60	Leg	P5x.375	164	-218874.00	265233.00	82.5	Pass
T8	60 - 40	Leg	P5x0.5	194	-245738.00	328178.00	74.9	Pass
T9	40 - 20	Leg	P8x.322	215	-273582.00	334421.00	81.8	Pass
T10	20 - 0	Leg	P8x.322	230	-298863.00	366022.00	81.7	Pass
T1	185 - 180	Diagonal	L2x2x1/8	9	-834.68	8481.47	9.8	Pass
T2	180 - 160	Diagonal	L2x2x1/8	22	-5090.13	8543.00	59.6	Pass
T3	160 - 140	Diagonal	L2x2x1/8	52	-5922.56	6675.94	88.7	Pass
T4	140 - 120	Diagonal	L2x2x1/4	79	-5761.11	9029.81	63.8	Pass
T5	120 - 100	Diagonal	L2 1/2x2 1/2x3/16	117	-6299.15	8981.53	70.1	Pass
T6	100 - 80	Diagonal	L2 1/2x2 1/2x3/16	148	-5997.76	6909.26	86.8	Pass
T7	80 - 60	Diagonal	L3x3x3/16	169	-6721.87	9528.18	70.5	Pass
T8	60 - 40	Diagonal	L3x3x1/4	199	-7399.21	8468.23	87.4	Pass
T9	40 - 20	Diagonal	L3 1/2x3 1/2x1/4	220	-7640.21	11825.50	64.6	Pass
T10	20 - 0	Diagonal	L3 1/2x3 1/2x1/4	234	-9273.05	10029.40	92.5	Pass
T4	140 - 120	Secondary Horizontal	L2x2x1/4	84	-1226.94	9660.12	12.7	Pass
T5	120 - 100	Secondary Horizontal	L2 1/2x2 1/2x3/8	132	-1759.08	20067.40	8.8	Pass
T7	80 - 60	Secondary Horizontal	L3x3x3/8	174	-1563.20	18401.90	8.5	Pass
T8	60 - 40	Secondary Horizontal	L3x3x7/16	213	-1297.73	19292.50	6.7	Pass
T10	20 - 0	Secondary Horizontal	L3 1/2x3 1/2x1/2	249	-2225.32	23469.90	9.5	Pass
T1	185 - 180	Top Girt	L2x2x1/8	4	-83.92	5972.10	1.4	Pass
T2	180 - 160	Top Girt	L2x2x1/8	16	-546.15	5972.10	9.1	Pass
T3	160 - 140	Top Girt	L2x2x1/8	48	-532.16	6035.86	8.8	Pass
							Summary	
						Leg (T3)	85.3	Pass
						Diagonal (T10)	92.5	Pass
						Secondary Horizontal (T4)	12.7	Pass
						Top Girt (T2)	9.1	Pass
						RATING =	**92.5**	**Pass**

EXHIBIT 3

October 3, 2018

Centerline Communications
95 Ryan Drive
Raynham, MA 02767

RE:		
	Site Number:	CT2380 (LTE 2C/3C)
	FA Number:	10126664
	PACE Number:	MRCTB031836
	PT Number:	2101A0GJJYT
	Site Name:	Weston Godfrey Rd
	Site Address:	237 Godfrey Road Weston, CT 06883

To Whom It May Concern:

Hudson Design Group LLC (HDG) has been authorized by Centerline Communications to perform a mount analysis on the existing AT&T antenna/RRH mounts to determine their capability of supporting the following additional loading:

- (3) 7770 Antennas (55"x11"x5"– Wt. = 35 lbs. /each)
- (3) P65-16-XLH-RR Antennas (72"x12"x6" – Wt. = 50 lbs. /each)
- (3) RRUS-11 RRH's (19.7"x17.0"x7.2" – Wt. = 51 lbs. /each) (Tower Mount)
- (6) LGP21401 TMA's (14.4"x9.0"x2.7" – Wt. = 19 lbs. /each)
- (1) Squid Surge Arrestor (24.0"x9.7" Φ – Wt. = 33 lbs. /each) (Tower Mount)
- **(3) HPA65R-BU6A Antennas (71.1"x11.7"x7.6"– Wt. = 42 lbs. /each)**
- **(3) 4415 B25 RRH's (15"x13.2"x5.4" – Wt. = 44 lbs. /each)**

**Proposed equipment shown in bold*

No original structural design documents or fabrication drawings were available for the existing mounts. HDG's subconsultant, ProVertic LLC, conducted a survey climb and mapping of the existing AT&T antenna mounts on September 20, 2018.

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-G, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2012 with 2016 Connecticut State Building Code, and AT&T Mount Technical Directive – R9.
- HDG considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-G Annex B, the max basic wind speed for this site is equal to 110 mph with a max basic wind speed with ice of 50 mph. Per the AT&T Mount Technical Directive and Appendix N of the Connecticut State Building Code, an ultimate wind speed of 120 mph converted to a nominal wind speed of 93 mph was used for this analysis.
- HDG considers this site to be exposure category B; tower is located in an urban/suburban or wooded area with numerous closely spaced obstructions.

- HDG considers this site to be topographic category 3; tower is located at the upper half of a hill.
- The mount has been analyzed with load combinations consisting of 250 lbs live load using a service wind speed of 30 mph wind on the worse case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 3.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worse case location on the mount.
- The existing mount is secured to the existing tower with U-Bolts. The connection is considered OK by visual inspection.

Based on our evaluation, we have determined that the existing mounts **ARE NOT CAPABLE** of supporting the proposed installation. HDG recommends the following modifications:

- **Install new 2" std. (2.38" O.D.) pipe brace secured to the mount and tower (typ. of 1 per sector, total of 3).**
- **Vertically center the new and existing antennas on the face of the existing mount (typ. Of 3 per sector, total of 9).**

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Existing 2C/3C Mount Rating	4	LC13	220%	**FAIL**
Modified 2C/3C Mount Rating	23	LC38	96%	**PASS**

Reference Documents:

- Mount mapping report prepared by ProVertic LLC.

This determination was based on the following limitations and assumptions:

1. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
2. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The existing mount has been adequately secured to the tower structure per the mount manufacturer's specifications.
5. All components pertaining to AT&T's mounts must be tightened and re-plumbed prior to the installation of new appurtenances.
6. HDG performed a localized analysis on the mount itself and not on the supporting tower structure.

Please feel free to contact our office should you have any questions.

Respectfully Submitted,
Hudson Design Group LLC

Michael Cabral
Structural Dept. Head

Daniel P. Hamm, PE
Principal

FIELD PHOTOS:

p: 978.557.5553 f: 978.336.5586 a: 45 Beechwood Drive, N. Andover, MA 01845
p: 413.588.8139 f: 413.517.0590 a: 116 Pleasant Street, Ste 302, Easthampton, MA 01027

p: 978.557.5553 f: 978.336.5586 a: 45 Beechwood Drive, N. Andover, MA 01845
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EXHIBIT 4

Radio Frequency Emissions Analysis Report

AT&T Existing Facility

Site ID: CT2380

FA#: 10126664

Weston Godfrey Rd
237 Godfrey Road
Weston, CT 06883

November 2, 2018

Centerline Communications Project Number: 950012-181

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**7.43 %**

November 2, 2018

AT&T Mobility – New England
Attn: John Benedetto, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 06040

Emissions Analysis for Site: **CT2380 – Weston Godfrey Rd**

Centerline Communications, LLC ("Centerline") was directed to analyze the proposed AT&T facility located at **237 Godfrey Road, Weston, CT**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately 467 $\mu W/cm^2$ and 567 $\mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed AT&T Wireless antenna facility located at **237 Godfrey Road, Weston, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
UMTS	850 MHz	2	30
LTE	850 MHz	2	40
LTE	1900 MHz (PCS)	4	40
LTE	700 MHz	2	40

Table 1: Channel Data Table

The following antennas listed in *Table 2* were used in the modeling for transmission in the 700 MHz, 850 MHz and 1900 MHz (PCS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Powerwave 7770	151
A	2	CCI HPA65R-BU6A	151
A	3	Powerwave P65-16-XLH-RR	151
B	1	Powerwave 7770	151
B	2	CCI HPA65R-BU6A	151
B	3	Powerwave P65-16-XLH-RR	151
C	1	Powerwave 7770	151
C	2	CCI HPA65R-BU6A	151
C	3	Powerwave P65-16-XLH-RR	151

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.

RESULTS

Per the calculations completed for the proposed AT&T configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Powerwave 7770	850 MHz	11.4	2	60	828.23	0.25
Antenna A2	CCI HPA65R-BU6A	850 MHz / 1900 MHz (PCS)	11.85 / 15.15	6	240	6,462.32	1.26
Antenna A3	Powerwave P65-16-XLH-RR	700 MHz	12.7	2	80	1,489.67	0.55
						Sector A Composite MPE%	**2.06**
Antenna B1	Powerwave 7770	850 MHz	11.4	2	60	828.23	0.25
Antenna B2	CCI HPA65R-BU6A	850 MHz / 1900 MHz (PCS)	11.85 / 15.15	6	240	6,462.32	1.26
Antenna B3	Powerwave P65-16-XLH-RR	700 MHz	12.7	2	80	1,489.67	0.55
						Sector B Composite MPE%	**2.06**
Antenna C1	Powerwave 7770	850 MHz	11.4	2	60	828.23	0.25
Antenna C2	CCI HPA65R-BU6A	850 MHz / 1900 MHz (PCS)	11.85 / 15.15	6	240	6,462.32	1.26
Antenna C3	Powerwave P65-16-XLH-RR	700 MHz	12.7	2	80	1,489.67	0.55
						Sector C Composite MPE%	**2.06**

Table 3: AT&T Emissions Levels

The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum AT&T MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each AT&T Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	**MPE%**
AT&T – Max Per Sector Value	**2.06 %**
Weston Police	0.02 %
Weston FD	0.02 %
Weston EMS	0.02 %
Weston Public Works	0.02 %
Sprint	1.88 %
Verizon Wireless	2.10 %
T-Mobile	1.31 %
Site Total MPE %:	**7.43 %**

Table 4: All Carrier MPE Contributions

AT&T Sector A Total:	2.06 %
AT&T Sector B Total:	2.06 %
AT&T Sector C Total:	2.06 %
Site Total:	7.43 %

Table 5: Site MPE Summary

FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

AT&T _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
AT&T 850 MHz UMTS	2	414.12	151	1.42	850 MHz	567	0.25%
AT&T 850 MHz LTE	2	612.43	151	2.09	850 MHz	567	0.37%
AT&T 1900 MHz (PCS) UMTS	4	1,309.36	151	8.96	1900 MHz (PCS)	1000	0.90%
AT&T 700 MHz LTE	2	744.83	151	2.55	700 MHz	467	0.55%
						Total:	**2.06%**

Table 6: AT&T Maximum Sector MPE Power Values

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	2.06 %
Sector B:	2.06 %
Sector C:	2.06 %
AT&T Maximum Total (per sector):	2.06 %
Site Total:	7.43 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **7.43 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

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PATRICIA NOWAK
508 265 5599
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET
WEST BRIDGEWATER MA 02379

1 LBS PAK 1 OF 1

DWT: 17,13,1

SHIP TO:
MELANIE A. BACHMAN
CONNECTICUT SITING COUNCIL
10 FRANKLIN SQUARE
NEW BRITAIN CT 06051

CT 067 9-06

UPS NEXT DAY AIR **1**

TRACKING #: 1Z 9Y4 503 01 2257 2911

BILLING: P/P

XOL 18.10.01 NV45 06.0A 10/2018

TM

PATRICIA NOWAK
508 265 5599
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET
WEST BRIDGEWATER MA 02379

0.3 LBS LTR

1 OF 1

SHIP TO:
CHRIS SPAULDING
TOWN OF WESTON
OFFICE OF FIRST SELECTMAN
56 NORFIELD
WESTON CT 06883

CT 069 9-04

UPS NEXT DAY AIR

TRACKING #: 1Z 9Y4 503 01 0978 6868

1

BILLING: P/P

XOL 18.10 01 NV45 06 0A 10/2018

TM

PATRICIA NOWAK
508 265 5599
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET
WEST BRIDGEWATER MA 02379

0.3 LBS LTR **1 OF 1**

SHIP TO:
JAMES PJURA
TOWN OF WESTON
ZONING ENFORCEMENT OFFICER
56 NORFIELD ROAD
WESTON CT 06883

CT 069 9-04

UPS NEXT DAY AIR **1**
TRACKING #: 1Z 9Y4 503 01 0716 1876

BILLING: P/P

XOL 18.10 01 NV45 06 0A 10/2018

PATRICIA NOWAK
508 265 5599
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET
WEST BRIDGEWATER MA 02379

0.3 LBS LTR

1 OF 1

SHIP TO:
THOMAS J. FAILLA
TOWN OF WESTON
CHAIR OF PLANNING AND ZONING
56 NORFIELD ROAD
WESTON CT 06883

CT 069 9-04

UPS NEXT DAY AIR

1

TRACKING #: 1Z 9Y4 503 01 3557 1139

BILLING: P/P

XOL 18.09.09 NV45 06.0A 10/2018

PATRICIA NOWAK
508 265 5599
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET
WEST BRIDGEWATER MA 02379

0.3 LBS LTR **1 OF 1**

SHIP TO:
DOMINIC ESPOSITO
TOWN OF WESTON
BUILDING DEPARTMENT
56 NORFIELD ROAD
WESTON CT 06883

CT 069 9-04

UPS NEXT DAY AIR **1**
TRACKING #: 1Z 9Y4 503 01 1953 8885

BILLING: P/P

XOL 18.10 01 NV45 06.0A 10/2018

PATRICIA NOWAK
508 265 5599
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET
WEST BRIDGEWATER MA 02379

0.3 LBS LTR

1 OF 1

SHIP TO:
JONATHAN LUIZ
TOWN OF WESTON
TOWN ADMINISTRATOR
56 NORFIELD ROAD
WESTON CT 06883

CT 069 9-04

UPS NEXT DAY AIR **1**

TRACKING #: 1Z 9Y4 503 01 0731 7896

BILLING: P/P

XOL 18.10.01 NV45 06 0A 10/2018

TM