July 10, 2020

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

Regarding: Notice of Exempt Modification – AT&T Site CT1175
Address: 277 Huckleberry Hill Road, Avon, CT 06001

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC ("AT&T") currently maintains a wireless telecommunications facility on an existing +/- 100' guyed laminated wood pole tower at the above-referenced address, latitude 41.788055, longitude -72.918166. Said tower is operated by SBA 2012 TC Assets, LLC.

AT&T desires to modify its existing telecommunications facility by swapping three (3) antennae and swapping three (3) TMA as more particularly detailed and described on the enclosed Construction Drawings prepared by Hudson Design Group LLC, last revised June 9, 2020. The centerline height of the existing antennas is and will remain at 90 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: Heather Maguire, Chairperson, Town Council of the Town of Avon as underlying property owner and elected official; Hiram Peck III, Director of Planning & Community Development of the Town of Avon; and SBA 2012 TC Assets, LLC, as tower operator.

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 June 16, 2020 and prepared by Tower Engineering Solutions 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,

Jennifer Iliades
Site Acquisition Consultant
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
jiliades@clinellc.com

Enclosures:
Exhibit 1 – Construction Drawings
Exhibit 2 – Property Card and GIS
Exhibit 3 – Structural Analysis
Exhibit 4 – Mount Analysis
Exhibit 5 – RF Emissions Analysis Report Evaluation
Exhibit 6 – Confirmation from Town of no Original Tower Approval Records
Exhibit 7 – Notice Delivery Confirmations

cc:
Heather Maguire, Chairperson, Town Council of the Town of Avon, as elected official and underlying property owner
Hiram Peck III, Director of Planning & Community Development, Town of Avon
SBA 2012 TC Assets, LLC, as tower operator

EXHIBIT 1

PROJECT INFORMATION

SCOPE OF WORK:

ITEMS TO BE MOUNTED ON THE EXISTING WOOD POLE:
- NEW AT&T ANTENNAS: SBNHH-1D65C (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T TMA'S TMABPD7823VG12A (TYP. OF 1 PER SECTOR, TOTAL OF 3).

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:
- ADD (1) IDLe.
- ADD (2) RBS 6630.
- ADD (1) FIF RACK.
- ADD (36) SURGE ARRESTORS.
- NEW AT&T PENTAPLEXER (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- NEW AT&T RRUS: 4449 B5/B12 (850/700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 8843 B2/B66A (PCS/AWS) (TYP. OF 1 PER SECTOR, TOTAL OF 3).

ITEMS TO BE REMOVED:
- EXISTING AT&T AM-X-CD-16-65-00T-RET (TYP. OF 1 PER ALPHA SECTOR).
- EXISTING AT&T SBNH-1D6565C (TYP. OF 1 PER BETA SECTOR).
- EXISTING AT&T AM-X-CD-17-65-00T-RET (TYP. OF 1 PER GAMMA SECTOR).
- EXISTING AT&T RRUS: RRUS-11 B12 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T TMA'S DTMABP7819VG12A (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING (6) SURGE ARRESTORS.

ITEMS TO REMAIN:
- (6) COAX CABLES

SITE ADDRESS:	277 HUCKLEBERRY HILL ROAD AVON, CT 06001
LATITUDE:	41.788200° N, 41° 47' 17.52" N
LONGITUDE:	72.918248° W, 72° 55' 5.69" W
TYPE OF SITE:	WOOD POLE / EQUIPMENT SHELTER
STRUCTURE HEIGHT:	101'-0"±
RAD CENTER:	90'-0"±
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

SITE NUMBER: CT1175

SITE NAME: AVON HUCKLEBERRY HILL ROAD

FA CODE: 10105807

PACE ID: MRCTB035210,MRCTB035253,MRCTB035182

PROJECT: LTE 4C_5C 2020 UPGRADE

DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
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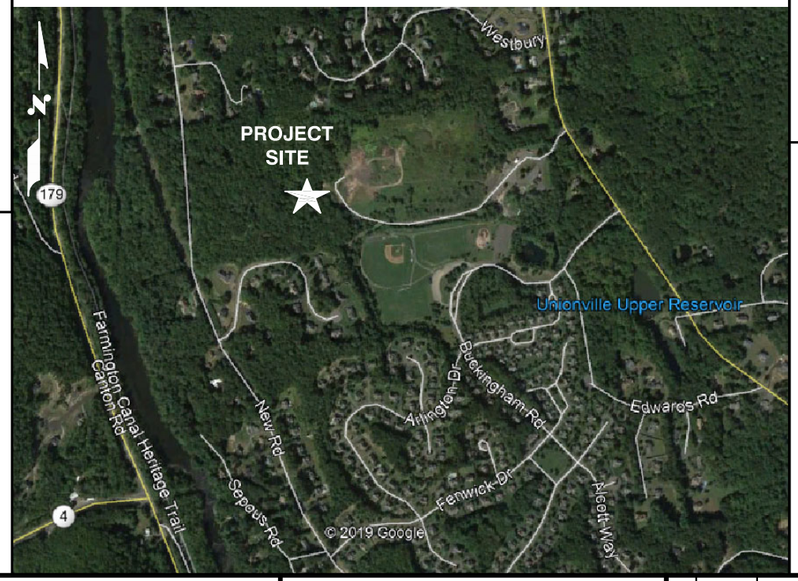
G-1	GROUNDING DETAILS	1
RF-1	RF PLUMBING DIAGRAM	1

SBA SITE # ID: CT46143

VICINITY MAP

DIRECTIONS TO SITE:

START OUT GOING NORTHEAST ON ENTERPRISE DR TOWARD CAPITOL BLVD. TURN LEFT ONTO CAPITOL BLVD. TURN LEFT ONTO WEST ST. MERGE ONTO I-91 S VIA THE RAMP ON THE LEFT TOWARD NEW HAVEN. MERGE ONTO CT-9 N VIA EXIT 22N TOWARD NEW BRITAIN 11.1 MILES. MERGE ONTO I-84 W/US-6 W VIA EXIT 32 ON THE LEFT TOWARD WATERBURY/CT-4. MERGE ONTO CT-4 W/FARMINGTON AVE VIA EXIT 39 TOWARD FARMINGTON 5.8 MILES. TURN SLIGHT RIGHT ONTO HUCKLEBERRY HILL RD 2.1 MILES. 277 HUCKLEBERRY HILL RD IS ON THE LEFT.



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

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

SITE NUMBER: CT1175
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SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: TR

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

AT&T

TITLE SHEET
LTE 4C_5C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1175	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 STANDARDS) 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 AND #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 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.

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

GENERAL NOTES

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

   CONTRACTOR – 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. TOUCH UP 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 70-2017)

    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-H, 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: CT1175
SITE NAME: AVON HUCKLEBERRY HILL ROAD
SBA SITE # ID: CT46143

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

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

AT&T

GENERAL NOTES
LTE 4C_5C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
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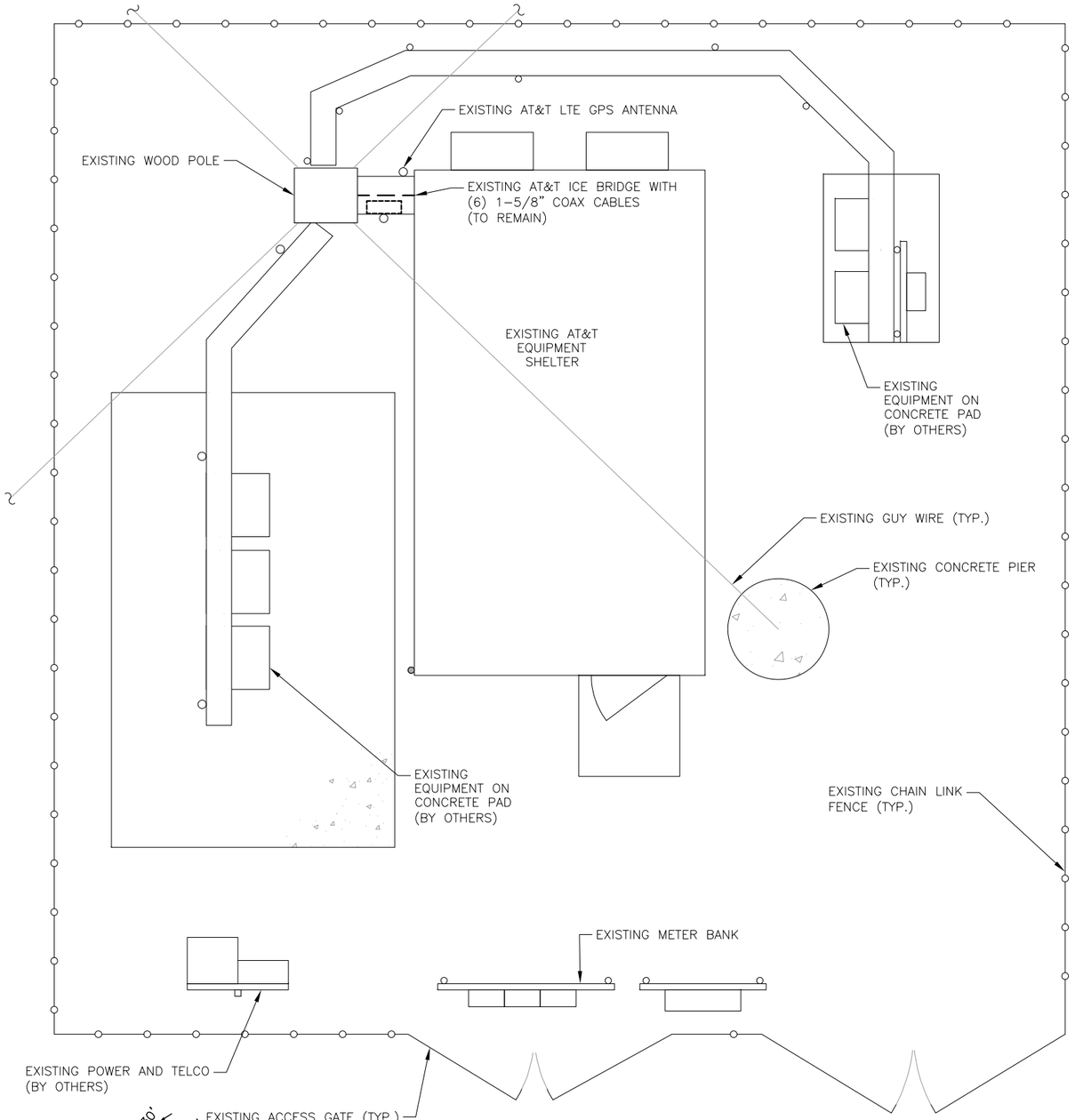
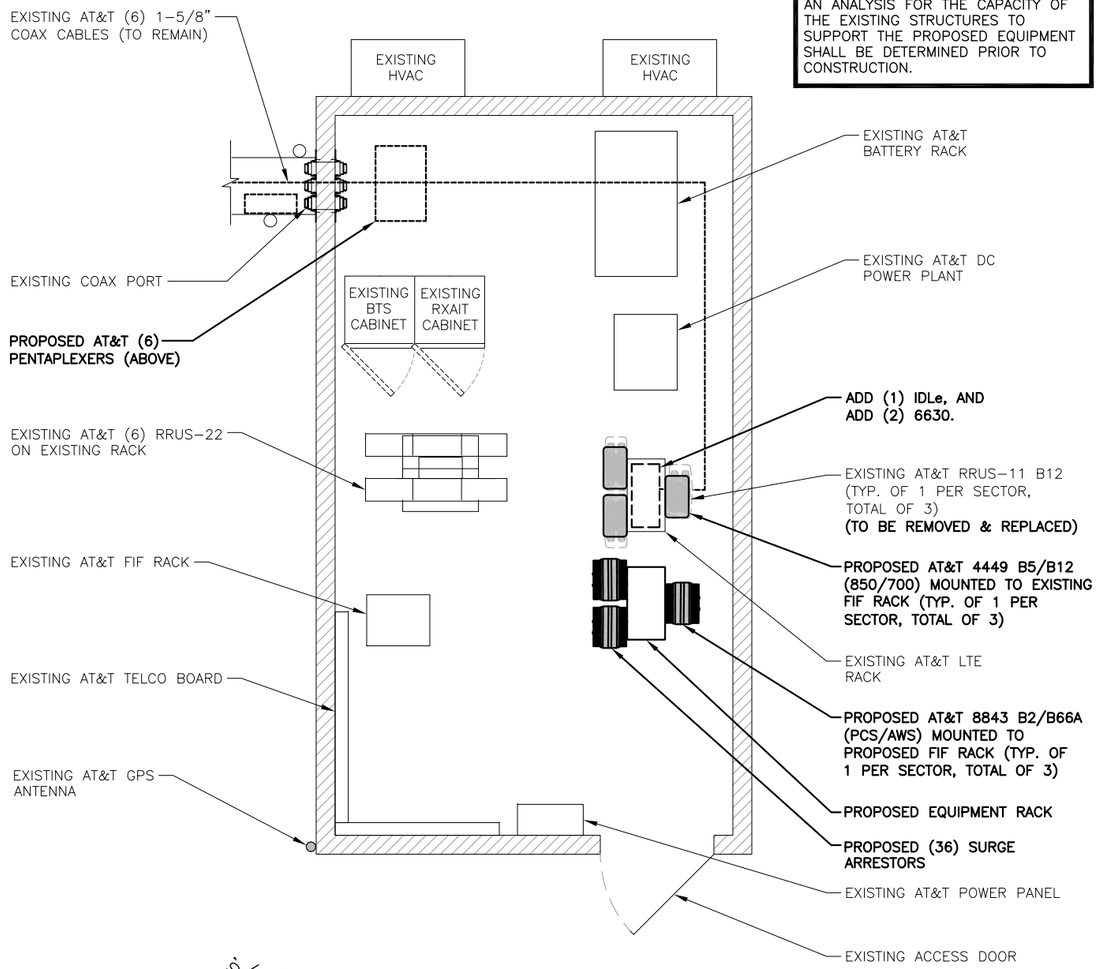


COMPOUND PLAN (1 / A-1)
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"
0 1'-4" 2'-8" 5'-4" 8'-0"



EQUIPMENT PLAN (2 / A-1)
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"
0 1'-0" 2'-0" 4'-0" 6'-0"

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: APRIL 03, 2020 (REV. 1)

NOTE:

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

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LTE 4C_5C 2020 UPGRADE

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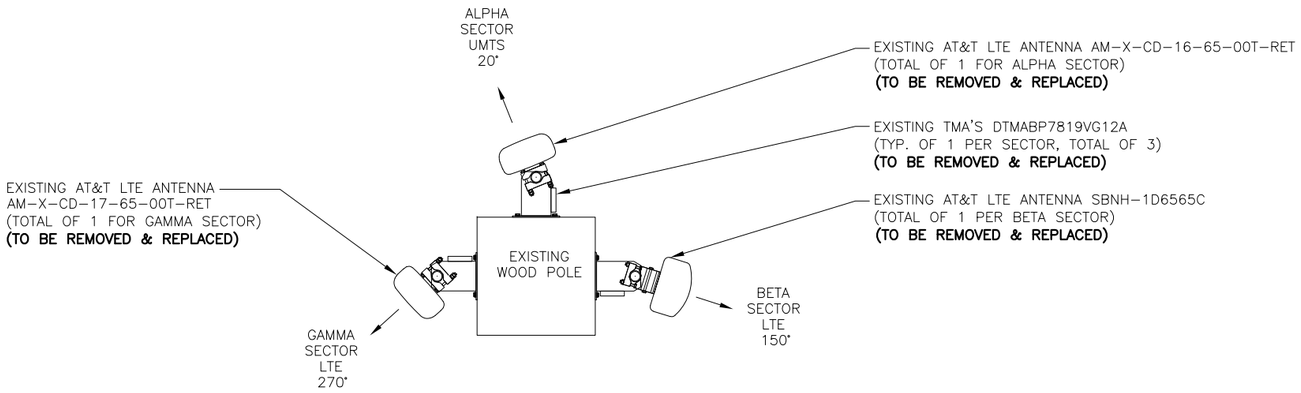
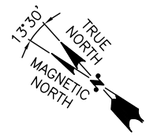
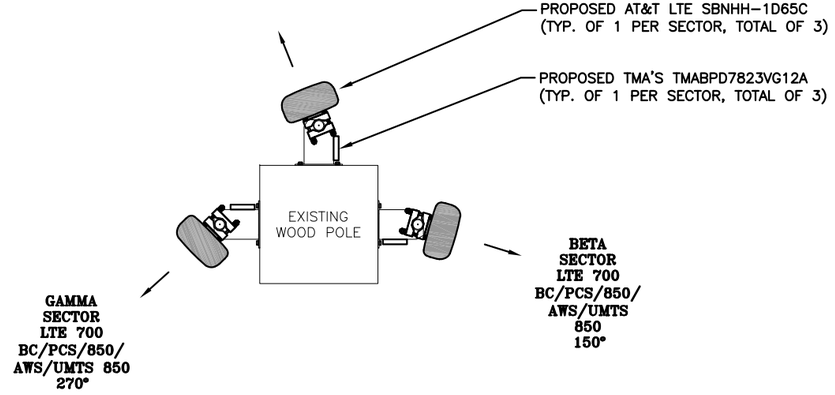
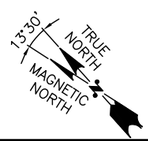




EXISTING ANTENNA LAYOUT (1 / A-2)
SCALE: N.T.S





PROPOSED ANTENNA LAYOUT (2 / A-2)
SCALE: N.T.S

NOTE:

ROTATION OF MOUNTS OR INSTALLATION OF MOUNT MODS MUST NOT ADVERSELY AFFECT, OBSTRUCT, BEND OR PINCH EXISTING SAFETY CABLE IN ANY WAY. GC, C/O AT&T, WILL PURCHASE AND INSTALL CABLE RE-ROUTING BRACKETS AS REQUIRED.

NOTE:

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

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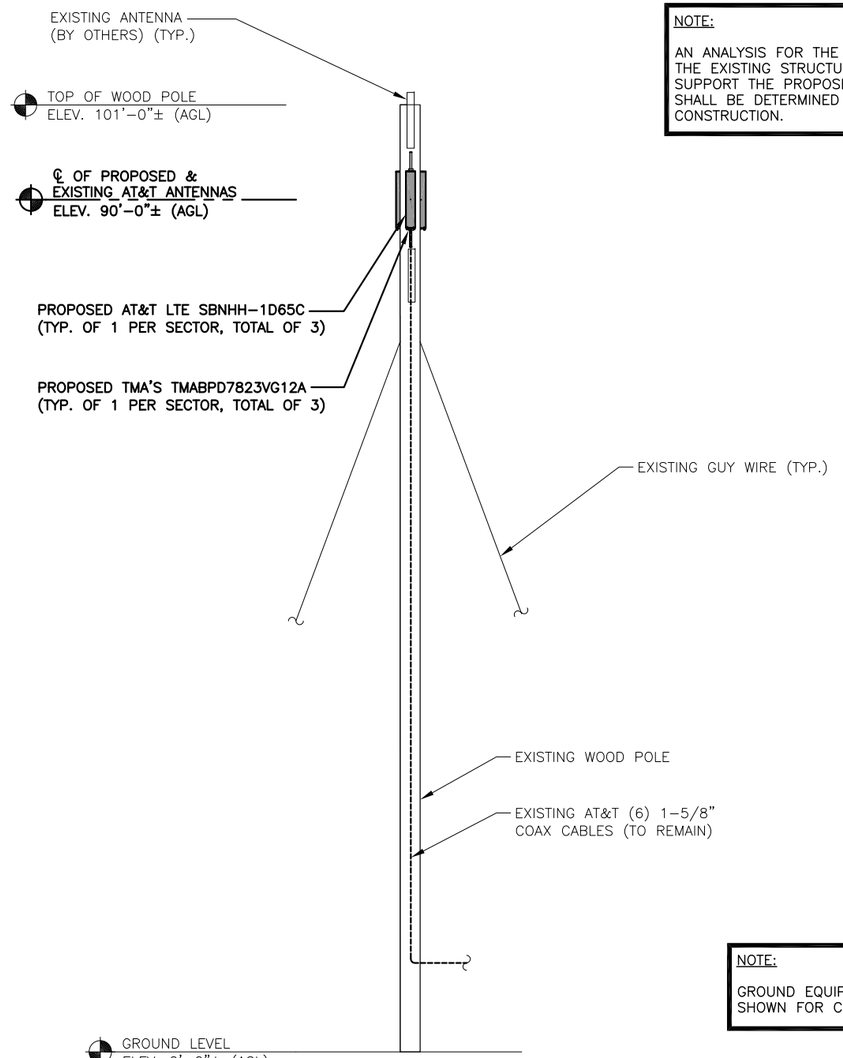

ELEVATION (3 / A-2)
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11x17 SCALE: 1/16"=1'-0"

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

NOTE:

GROUND EQUIPMENT NOT SHOWN FOR CLARITY

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: CT1175
SITE NAME: AVON HUCKLEBERRY HILL ROAD
SBA SITE # ID: CT46143

277 HUCKLEBERRY HILL ROAD
AVON, CT 06001
HARTFORD COUNTY

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	06/09/20	ISSUED FOR CONSTRUCTION	TR	AT	DPH
0	03/30/20	ISSUED FOR REVIEW	AR	AT	DPH
A	02/03/20	ISSUED FOR REVIEW	JW	AT	DPH

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

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

AT&T

ANTENNA LAYOUTS & ELEVATION
LTE 4C_5C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1175	A-2	1

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	PROPOSED	LTE 700 BC/PCS/850/ AWS/UMTS 850	SBNHH-1D65C	96.6"X11.9"x7.1"	90'-0"±	20°	(1)(P) TMABPD7823VG12A (2)(G)(P) PENTAPLEXERS	(1)(G)(P) 4449 B5/B12 (850/700) (1)(G)(P) 8843 B2/B66A (PCS/AWS)	17.9X13.2X10.4 14.9X13.2X10.9	(2)(E) 1-5/8 COAX	-
B1	PROPOSED	LTE 700 BC/PCS/850/ AWS/UMTS 850	SBNHH-1D65C	96.6"X11.9"x7.1"	90'-0"±	150°	(1)(P) TMABPD7823VG12A (2)(G)(P) PENTAPLEXERS	(1)(G)(P) 4449 B5/B12 (850/700) (1)(G)(P) 8843 B2/B66A (PCS/AWS)	17.9X13.2X10.4 14.9X13.2X10.9	(2)(E) 1-5/8 COAX	-
C1	PROPOSED	LTE 700 BC/PCS/850/ AWS/UMTS 850	SBNHH-1D65C	96.6"X11.9"x7.1"	90'-0"±	270°	(1)(P) TMABPD7823VG12A (2)(G)(P) PENTAPLEXERS	(1)(G)(P) 4449 B5/B12 (850/700) (1)(G)(P) 8843 B2/B66A (PCS/AWS)	17.9X13.2X10.4 14.9X13.2X10.9	(2)(E) 1-5/8 COAX	-

FINAL ANTENNA SCHEDULE (1 / A-3)
SCALE: N.T.S

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: APRIL 03, 2020 (REV. 1)

NOTE:

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

NOTE:

ROTATION OF MOUNTS OR INSTALLATION OF MOUNT MODS MUST NOT ADVERSELY AFFECT, OBSTRUCT, BEND OR PINCH EXISTING SAFETY CABLE IN ANY WAY. GC, C/O AT&T, WILL PURCHASE AND INSTALL CABLE RE-ROUTING BRACKETS AS REQUIRED.

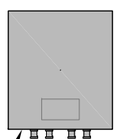
RRU CHART

QUANTITY	MODEL	SIZE (L x W x D)
3(P)	4449 (850/700)	17.9"x13.2"x10.4"
3(P)	8843 (PCS/AWS)	14.9"x13.2"x10.9"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:

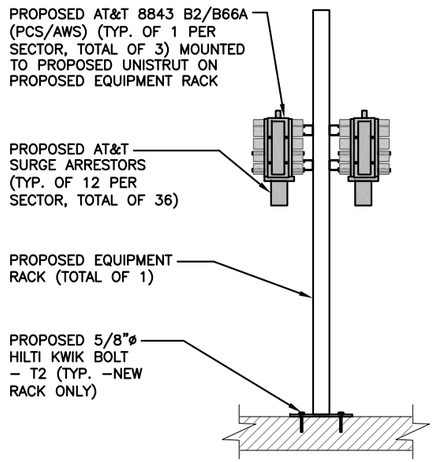
SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER



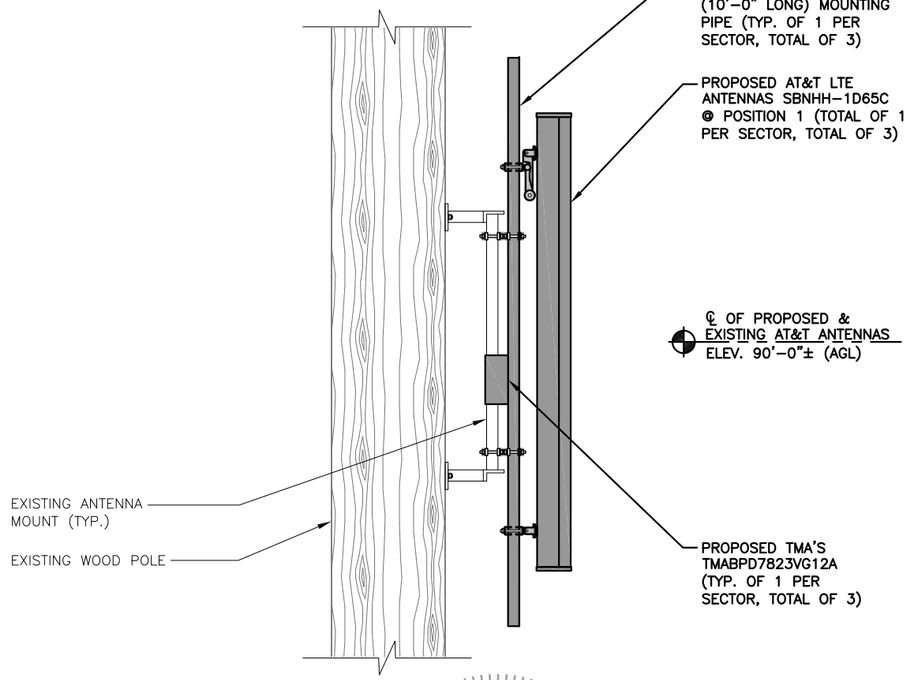
PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

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



PROPOSED EQUIPMENT RACK & RRH MOUNTING DETAIL (3 / A-3)
SCALE: N.T.S



PROPOSED LTE ANTENNA MOUNTING DETAIL (4 / A-3)
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"

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

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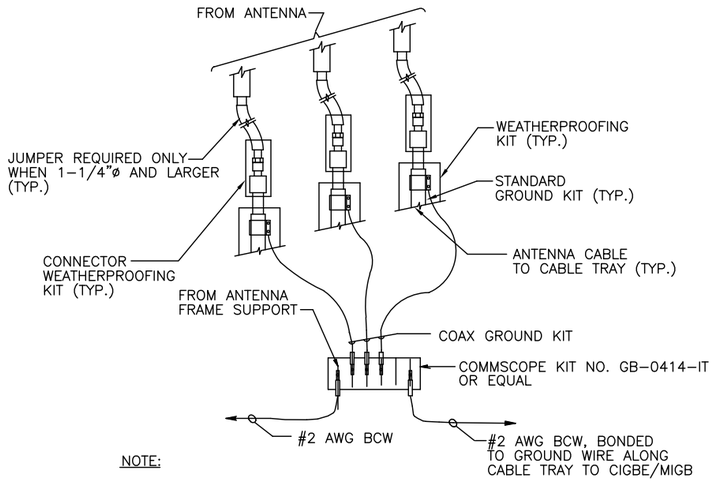
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: TR

STATE OF CONNECTICUT — No.24178 — LICENSED PROFESSIONAL ENGINEER

AT&T

DETAILS
LTE 4C_5C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1175	A-3	1

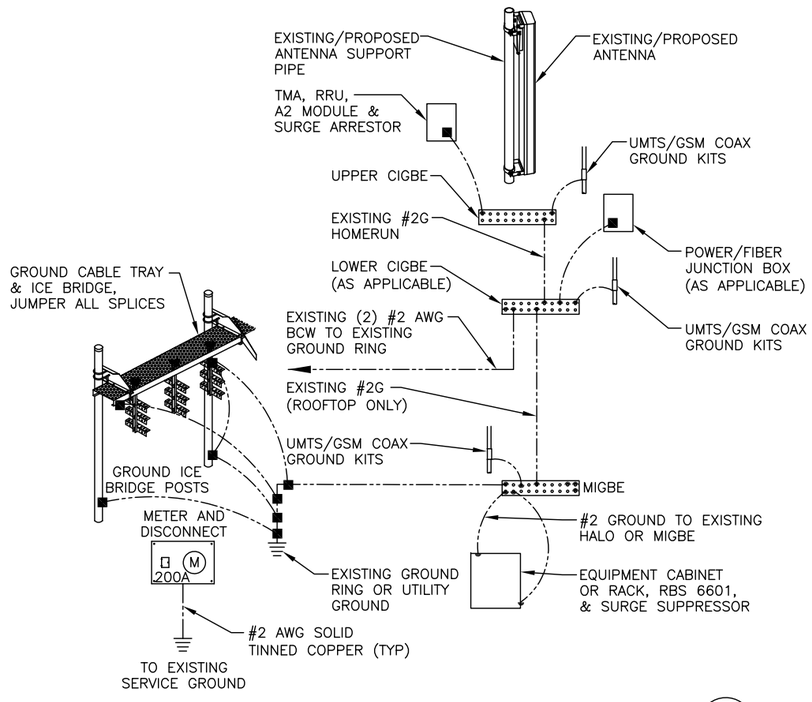


NOTE:

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

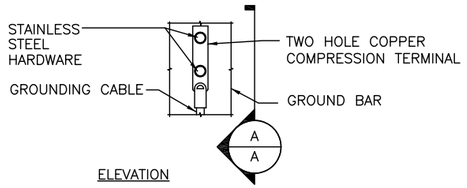
GROUND WIRE TO GROUND BAR CONNECTION DETAIL (1 / G-1)

SCALE: N.T.S



GROUNDING RISER DIAGRAM (2 / G-1)

SCALE: N.T.S



NOTES:

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 (3 / G-1)

SCALE: N.T.S

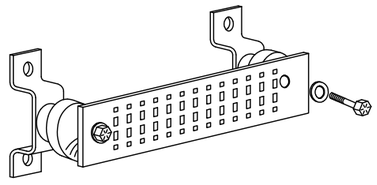
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PRODUCERS

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

SECTION "A" – SURGE ABSORBERS

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



GROUND BAR - DETAIL (AS REQUIRED) (4 / G-1)

SCALE: N.T.S

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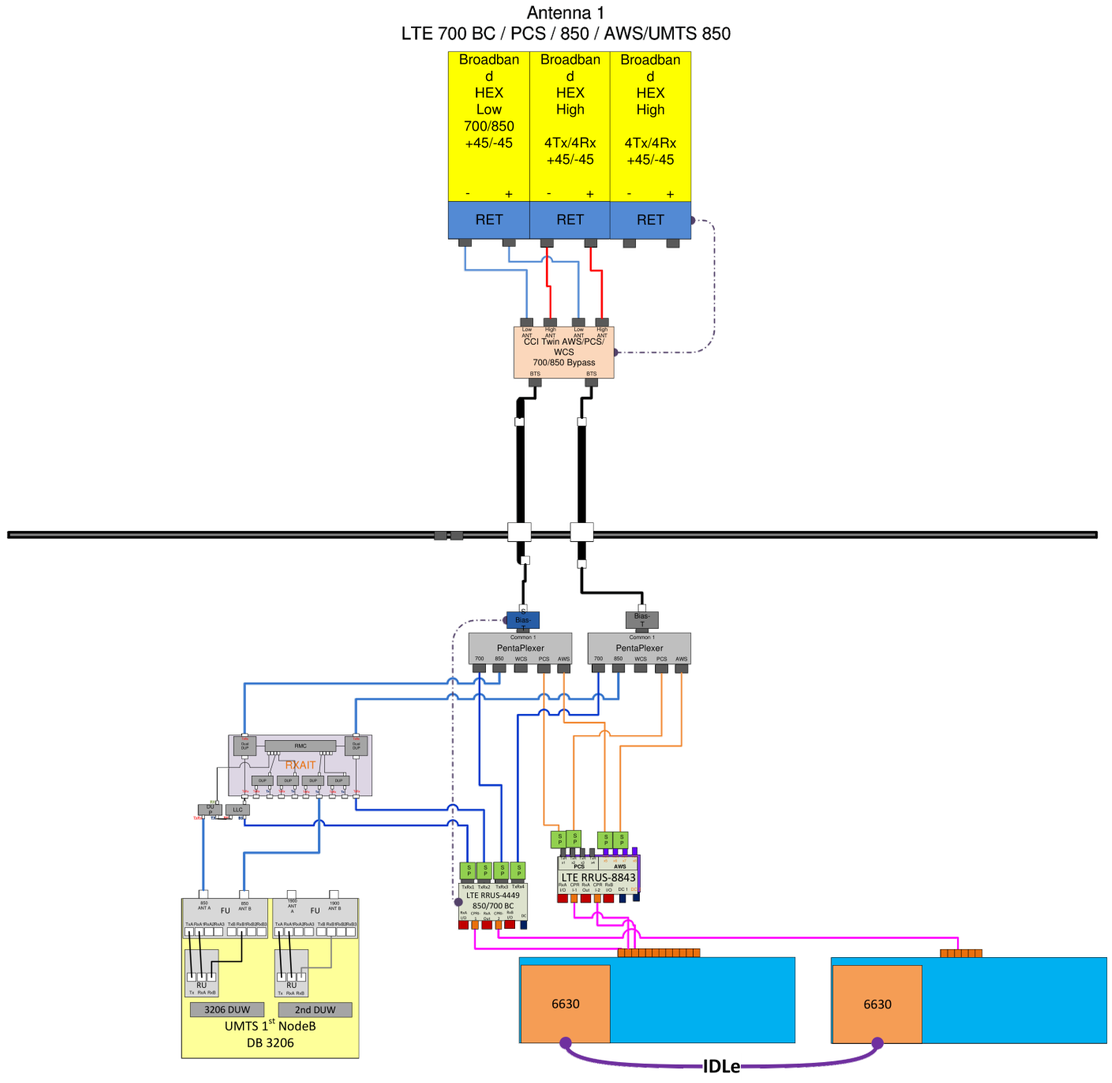
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: TR

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

AT&T

GROUNDING DETAILS
LTE 4C_5C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1175	G-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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SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: TR

AT&T

RF PLUMBING DIAGRAM
LTE 4C_5C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1175	RF–1	1

EXHIBIT 2

Property at 00277 HUCKLEBERRY HILL RD | Prop ID 2810277 | Printed 14-Feb-2019 6:30 PM | Design and Layout (C) Right/Angles

BAAX

Administrative Information

Owner name: AVON TOWN OF
Second name:
Address: 60 WEST MAIN STREET
City/state: AVON CT Zip: 06001

Location Information

Map: 016 Clerk map:
Lot: 2810277 Neigh.: Zone: R40 Vol: 80 Page: 20

Assessments

Assmt category	Qty	Amount
Resident Excess	73.40	385,350
Resident Outbldg	3.00	28,460

Exemptions

Exempt	Cat	Amount

Last sale

Sale date: 19-Dec-1972
Sale price:
Sale valid:

Values

Mkt value :
Cost value: 591,157

Summary

Total assessments	413,810
Total exemptions	
Net assessment	413,810

Utilities

Water	None
Sewer	None
Gas	None

Sales ratios

Cost/sale :
Mkt/sale :
Assmt/sale:

Land Information

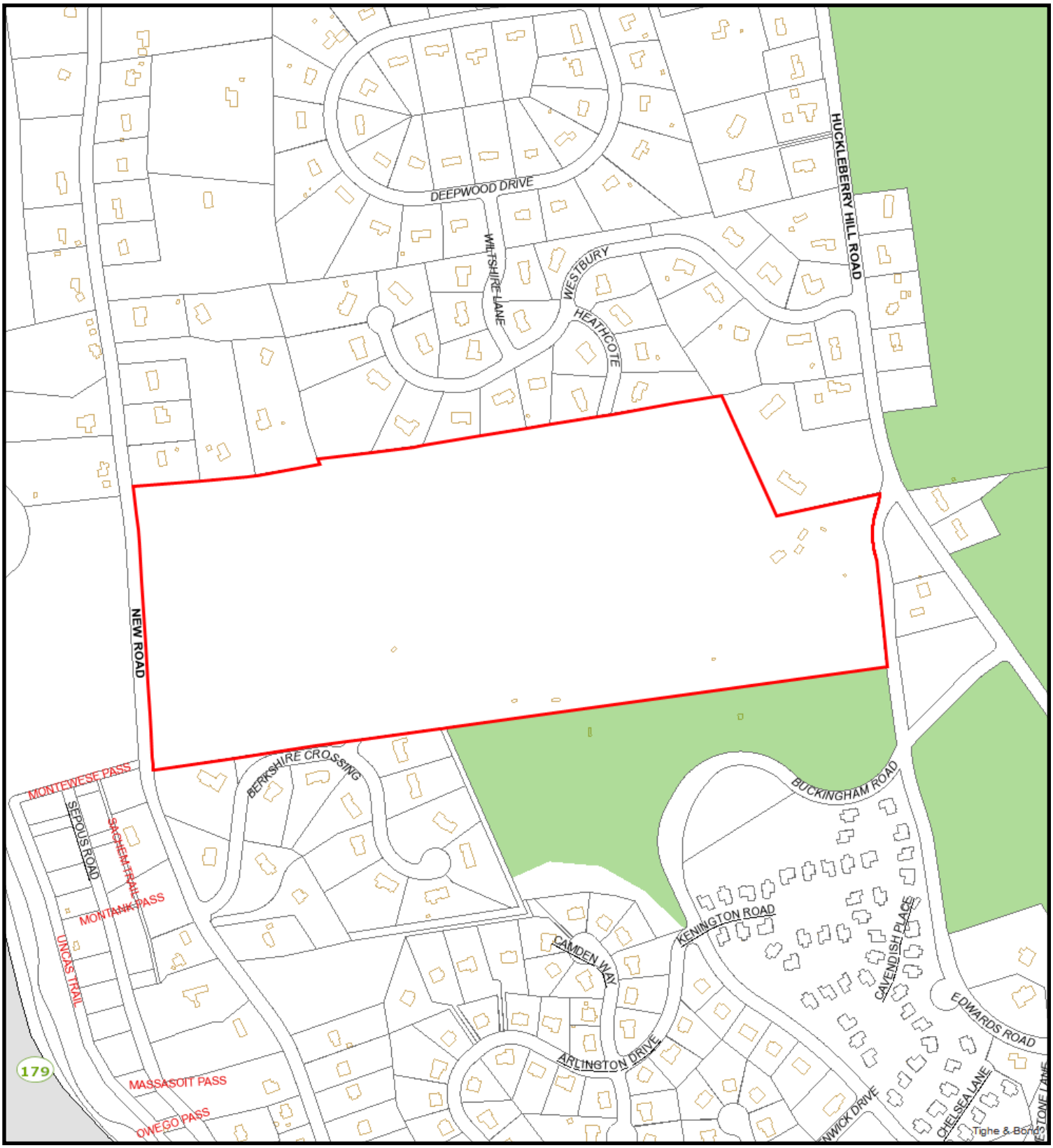
Type	Use	Acres/SqFt	Rate	Total	Infl Fact	Value	70% Value
RES	12	73.400	7,500	550,500		550,500	385,350
Residual		3,197,304					
		73.400 acres		Total land value		550,500	385,350

Outbuilding Information

Description	Wid	Len	Area	Rate	Year	Cnd	RCN	Depr	Value
C18 1 story frame	16	28	448	80.75	1957	C	36,176	50	18,090
RG1 Frame or Con Block Detach Garage	30	40	1,200	28.85		C	34,620	50	17,310
C84 Canopy	16	42	672	15.63	1992	C	10,503	50	5,250
			Value at 70%	28,455			Value at 100%		40,650

No sketch for this property

AVON LANDFILL



7/10/2020 5:40:20 PM

Scale: 1"=500'

Scale is approximate

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.

EXHIBIT 3

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 100 ft Guyed Laminated Wood Pole

Customer Name: SBA Communications Corp

Customer Site Number: CT46143-A

Customer Site Name: Burlington - Avon Landfill

Carrier Name: AT&T (App#: 129153,v1))

Carrier Site ID / Name: CT1175 / AVON HUCKLEBERRY ROAD

Site Location: 277 Huckleberry Hill Road

Avon, Connecticut

Hartford County

Latitude: 41.788055

Longitude: -72.918166

Analysis Result:

Max Structural Usage: 86.1% [Pass]

Max Foundation Usage: 82.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By: Sital Shrestha

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
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Structural Analysis Report

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Longitude: -72.918166

Analysis Result:

Max Structural Usage: 86.1% [Pass]

Max Foundation Usage: 82.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By: Sital Shrestha

Introduction

The purpose of this report is to summarize the analysis results on the 100 ft Guyed Laminated Wood Pole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Laminated Wood Systems, Inc. (DWG No. SPSM-0079) original design drawings dated April 7, 2005
Foundation Drawing	Laminated Wood Systems, Inc. (DWG No. SPSM-0079) original design drawings dated April 7, 2005
Geotechnical Report	Dr. Clarence Welti, P.E., P.C. Geotechnical Engineering (Project Name Avon Landfill Sprint Site) geotechnical report dated March 25, 2005
Modification Drawings	FDH, Project # 1309511400, Dated 6/28/2013 FDH, Project # 146EW81400, Dated 10/23/2014 TES Job # 36667, Dated 3/19/18

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-G**.** In accordance with this standard, the structure was analyzed using **tnxTower**. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 125.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 97.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1” radial ice concurrent
Operational Wind Speed:	60 mph + 0” Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft

This structural analysis is based upon the tower being classified as a Structure Class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1		3	Andrew DHHTT65B-3XR - Panel	(3) Flush Mounts	(4) 1-1/4"	Sprint Nextel
2		4	RFS ACU-A20-N RET			
3		3	ALU 1900MHz RRH			
4		3	ALU 800 MHz RRH			
5		3	ALU TD-RRH8x20-25			
6		3	ALU 800 MHz Filter			
-	90.0	1	KMW AM-X-CD-16-65-00T-RET - Panel	(3) Flush Mounts	(1) 7/16" Fiber (2) 3/4" DC (6) 1 5/8"	AT&T
-		1	Andrew SBNH-1D6565C - Panel			
-		1	Powerwave P65-17-XLH-RR - Panel			
-		3	Andrew APTDC-BDFDM-DBW			
-		3	Powerwave LGP21401 - TMA			
-		6	Ericsson RRUS 11-700 – RRU			
-		3	CCI DTMABP7819VG12A- TMA			
11	80.0	3	RFS APXV16DWV-16DWVS-C - Panel	(3) Flush Mounts	(12) 7/8"	T-Mobile
12		6	RFS ATMAA1412D-1A20 - TMA			

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
7	90.0	3	Andrew SBNHH-1D65C	(3) Flush Mounts	(1) 7/16" Fiber* (2) 3/4" DC* (6) 1 5/8"	AT&T
8		3	Powerwave LGP21401 TMA			
9		3	Cci TMABPD7823VG12A			
10		3	Andrew APTDC-BDFDM-DBW			

*(1) 3" Conduit housing (2) 3/4" DC and (1) 7/16" fiber cables.

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Guy Wires
Max. Usage:	**72.7%**	**86.1%**
Pass/Fail	**Pass**	**Pass**

Foundations

	Base Reactions			Anchors	
	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)	Uplift (Kips)	Shear (Kips)
Analysis Reactions	154	5.9	91.8	38.2	15.9

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the ANSI/TIA-222-G standards and the 2015 IBC under the design basic wind speed specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC.** Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.

2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.

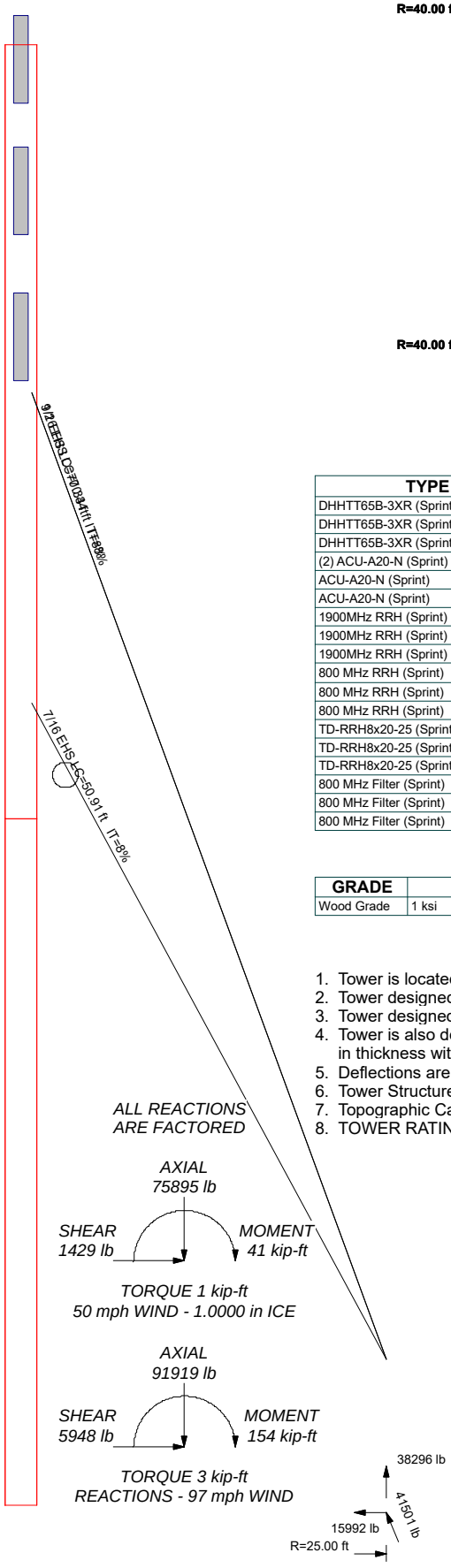
3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the EIA/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.

4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

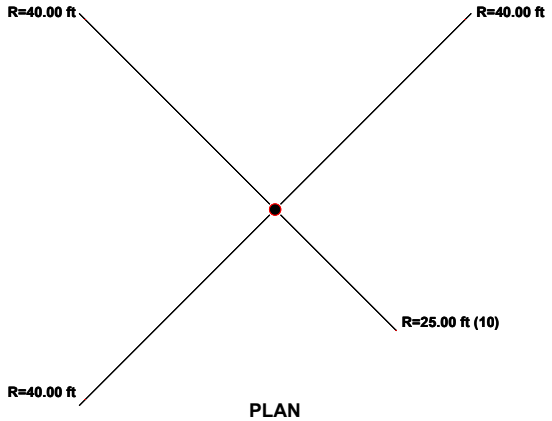
5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.

6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Section	Length (ft)	Number of Sides	Thickness (in)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	53.00	1	13.1250	26.2500	26.2500	Wood Grade	7967.5
2	47.00	1	13.1250	26.2500	26.2500		7065.5
							15033.0



ALL REACTIONS ARE FACTORED



PLAN

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
DHHTT65B-3XR (Sprint)	99	SBNHH-1D65C (ATI)	90
DHHTT65B-3XR (Sprint)	99	SBNHH-1D65C (ATI)	90
DHHTT65B-3XR (Sprint)	99	SBNHH-1D65C (ATI)	90
(2) ACU-A20-N (Sprint)	99	APTDC-BDFDM-DBW (ATI)	90
ACU-A20-N (Sprint)	99	APTDC-BDFDM-DBW (ATI)	90
ACU-A20-N (Sprint)	99	APTDC-BDFDM-DBW (ATI)	90
1900MHz RRH (Sprint)	99	LGP21401 (ATI)	90
1900MHz RRH (Sprint)	99	LGP21401 (ATI)	90
1900MHz RRH (Sprint)	99	LGP21401 (ATI)	90
800 MHz RRH (Sprint)	99	TMABPD7823VG12A (ATI)	90
800 MHz RRH (Sprint)	99	TMABPD7823VG12A (ATI)	90
800 MHz RRH (Sprint)	99	TMABPD7823VG12A (ATI)	90
TD-RRH8x20-25 (Sprint)	99	APXVAR18_43-C-NA20 (T-Mobile)	80
TD-RRH8x20-25 (Sprint)	99	APXVAR18_43-C-NA20 (T-Mobile)	80
TD-RRH8x20-25 (Sprint)	99	APXVAR18_43-C-NA20 (T-Mobile)	80
800 MHz Filter (Sprint)	99	(2) ATMAA1412D-1A20 (T-Mobile)	80
800 MHz Filter (Sprint)	99	(2) ATMAA1412D-1A20 (T-Mobile)	80
800 MHz Filter (Sprint)	99	(2) ATMAA1412D-1A20 (T-Mobile)	80

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
Wood Grade	1 ksi	2 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 97 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 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
8. TOWER RATING: 86.1%

ABC Consulting Engineers

ABC Engineering
1234 W. Jones St.
Smallville, PA 12345
Phone: (555) 555-1234
FAX: (555) 555-1235

Job: ***CT46143-A***			
Project: ***94402***			
Client: AT&T	Drawn by: sital.shrestha	App'd:	
Code: TIA-222-G	Date: 06/16/20	Scale: NTS	
Path: R:\CT46143-A-SBA\Miscellaneous\94402\tnx\CT46143-A-SBA_78523_Guyed Wood Pole (26,25).eri		Dwg No. E-1	

Guy-Tensioning Information

Guy Elevation		H	V	Temperature At Time Of Tensioning: 0 F Initial Tension	0 F Intercept	20 F Initial Tension	20 F Intercept	40 F Initial Tension	40 F Intercept	60 F Initial Tension	60 F Intercept	80 F Initial Tension	80 F Intercept	100 F Initial Tension	100 F Intercept	120 F Initial Tension	120 F Intercept
ft		ft	ft	lb	ft	lb	ft	lb	ft	lb	ft	lb	ft	lb	ft	lb	ft
76.15	A	38.91	76.15	2404	0.78	2320	0.81	2236	0.84	2152	0.87	2068	0.90	1985	0.94	1901	0.98
	B	38.91	76.15	2404	0.78	2320	0.81	2236	0.84	2152	0.87	2068	0.90	1985	0.94	1901	0.98
	C	23.91	66.15	2293	0.55	2246	0.56	2199	0.58	2152	0.59	2105	0.60	2058	0.62	2011	0.63
	D	38.91	76.15	2404	0.78	2320	0.81	2236	0.84	2152	0.87	2068	0.90	1985	0.94	1901	0.98
54.95	A	38.91	54.95	1978	0.45	1873	0.48	1768	0.51	1664	0.54	1560	0.58	1456	0.62	1352	0.66
	B	38.91	54.95	1978	0.45	1873	0.48	1768	0.51	1664	0.54	1560	0.58	1456	0.62	1352	0.66
	C	23.91	44.95	1872	0.27	1803	0.29	1733	0.30	1664	0.31	1595	0.32	1525	0.34	1456	0.35
	D	38.91	54.95	1978	0.45	1873	0.48	1768	0.51	1664	0.54	1560	0.58	1456	0.62	1352	0.66
76.15	A	38.91	76.15	3127	0.78	3018	0.81	2909	0.84	2800	0.87	2691	0.90	2583	0.94	2475	0.98
	B	38.91	76.15	3127	0.78	3018	0.81	2909	0.84	2800	0.87	2691	0.90	2583	0.94	2475	0.98
	C	23.91	66.15	2983	0.55	2922	0.56	2861	0.58	2800	0.59	2739	0.60	2678	0.61	2617	0.63
	D	38.91	76.15	3127	0.78	3018	0.81	2909	0.84	2800	0.87	2691	0.90	2583	0.94	2475	0.98

Tower Pressures - No Ice

G_H = 1.100

Section Elevation	z	K_Z	q_z	A_G	Face	A_F	A_R	A_{leg}	Leg %	C_AA_A In Face	C_AA_A Out Face
ft	ft		psf	ft^2		ft^2	ft^2	ft^2		ft^2	ft^2
L1	74.01	1.188	27	115.938	A	0.000	193.268	193.268	100.00	39.204	0.000
100.00-47.00					B	0.000	193.268		100.00	0.000	0.000
					C	0.000	193.268		100.00	51.084	0.000
					D	0.000	193.268		100.00	0.000	0.000
L2 47.00-0.00	24.55	0.942	21	102.813	A	0.000	171.388	171.388	100.00	55.836	0.000
					B	0.000	171.388		100.00	0.000	0.000
					C	0.000	171.388		100.00	55.836	0.000
					D	0.000	171.388		100.00	0.000	0.000

Tower Pressure - With Ice

G_H = 1.100

Section Elevation	z	K_Z	q_z	t_Z	A_G	Face	A_F	A_R	A_{leg}	Leg %	C_AA_A In Face	C_AA_A Out Face
ft	ft		psf	in	ft^2		ft^2	ft^2	ft^2		ft^2	ft^2
L1 100.00-47.00	74.01	1.188	7	2.1682	135.090	A	0.000	225.195	225.195	100.00	66.893	0.000
						B	0.000	225.195		100.00	0.000	0.000
						C	0.000	225.195		100.00	147.441	0.000
						D	0.000	225.195		100.00	28.187	0.000
L2 47.00-0.00	24.55	0.942	6	1.9417	118.022	A	0.000	196.743	196.743	100.00	92.610	0.000
						B	0.000	196.743		100.00	0.000	0.000
						C	0.000	196.743		100.00	147.365	0.000
						D	0.000	196.743		100.00	22.815	0.000

Tower Pressure - Service

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1	74.01	1.188	9	115.938	A	0.000	193.268	193.268	100.00	39.204	0.000
100.00-47.00					B	0.000	193.268		100.00	0.000	0.000
					C	0.000	193.268		100.00	51.084	0.000
					D	0.000	193.268		100.00	0.000	0.000
L2 47.00-0.00	24.55	0.942	7	102.813	A	0.000	171.388	171.388	100.00	55.836	0.000
					B	0.000	171.388		100.00	0.000	0.000
					C	0.000	171.388		100.00	55.836	0.000
					D	0.000	171.388		100.00	0.000	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	875.11	7967.50	A	1	0.6	27	1	1	193.268	7952.09	150.04	D
100.00-47.00			B	1	1.2		1	1	193.268			
			C	1	0.6		1	1	193.268			
			D	1	1.2		1	1	193.268			
L2 47.00-0.00	1064.55	7065.52	A	1	0.6	21	1	1	171.388	5923.25	126.03	D
			B	1	1.2		1	1	171.388			
			C	1	0.6		1	1	171.388			
			D	1	1.2		1	1	171.388			
Sum Weight:	1939.66	15033.01								13875.34		

Tower Forces - No Ice - Wind 45 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	875.11	7967.50	A	1	0.6	27	1	1	193.268	3452.81	65.15	D
100.00-47.00			B	1	0.6		1	1	193.268			
			C	1	0.6		1	1	193.268			
			D	1	0.6		1	1	193.268			
L2 47.00-0.00	1064.55	7065.52	A	1	0.6	21	1	1	171.388	2415.21	51.39	D
			B	1	0.6		1	1	171.388			
			C	1	0.6		1	1	171.388			
			D	1	0.6		1	1	171.388			
Sum Weight:	1939.66	15033.01								5868.02		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	5034.48	11957.33	A	1	1.2	7	1	1	225.195	2877.02	54.28	D
100.00-47.00			B	1	1.2		1	1	225.195			
			C	1	1.2		1	1	225.195			
			D	1	1.2		1	1	225.195			
L2 47.00-0.00	5383.90	10208.71	A	1	1.2	6	1	1	196.743	2119.63	45.10	D
			B	1	1.2		1	1	196.743			
			C	1	1.2		1	1	196.743			
			D	1	1.2		1	1	196.743			
Sum Weight:	10418.38	22166.04								4996.66		

Tower Forces - With Ice - Wind 45 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	5034.48	11957.33	A	1	1.2	7	1	1	225.195	2137.96	40.34	D
100.00-47.00			B	1	1.2		1	1	225.195			
			C	1	1.2		1	1	225.195			
			D	1	1.2		1	1	225.195			
L2 47.00-0.00	5383.90	10208.71	A	1	1.2	6	1	1	196.743	1473.33	31.35	D
			B	1	1.2		1	1	196.743			
			C	1	1.2		1	1	196.743			
			D	1	1.2		1	1	196.743			
Sum Weight:	10418.38	22166.04								3611.29		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	875.11	7967.50	A	1	0.6	9	1	1	193.268	2722.30	51.36	D
100.00-47.00			B	1	1.2		1	1	193.268			
			C	1	0.6		1	1	193.268			
			D	1	1.2		1	1	193.268			
L2 47.00-0.00	1064.55	7065.52	A	1	0.6	7	1	1	171.388	2027.75	43.14	D
			B	1	1.2		1	1	171.388			
			C	1	0.6		1	1	171.388			
			D	1	1.2		1	1	171.388			
Sum Weight:	1939.66	15033.01								4750.05		

Tower Forces - Service - Wind 45 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
L1	875.11	7967.50	A	1	0.6	9	1	1	193.268	1182.03	22.30	D
100.00-47.00			B	1	0.6		1	1	193.268			
			C	1	0.6		1	1	193.268			
			D	1	0.6		1	1	193.268			
L2 47.00-0.00	1064.55	7065.52	A	1	0.6	7	1	1	171.388	826.82	17.59	D
			B	1	0.6		1	1	171.388			
			C	1	0.6		1	1	171.388			
			D	1	0.6		1	1	171.388			
Sum Weight:	1939.66	15033.01								2008.84		

Force Totals (Does not include forces on guys)

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Torques kip-ft
Leg Weight	15033.01			
Bracing Weight	0.00			
Total Member Self-Weight	15033.01			
Guy Weight	488.90			
Total Weight	18811.23			
Wind 0 deg - No Ice		0.00	-16843.59	-0.01
Wind 45 deg - No Ice		6574.04	-6248.19	-1.24
Wind 90 deg - No Ice		9297.10	0.00	-1.75
Wind 135 deg - No Ice		6574.04	6248.19	-1.23
Wind 180 deg - No Ice		0.00	16843.59	0.01
Wind 225 deg - No Ice		-6574.04	6248.19	1.24
Wind 270 deg - No Ice		-9297.10	0.00	1.75
Wind 315 deg - No Ice		-6574.04	-6248.19	1.23
Member Ice	7133.03			
Guy Ice	5630.45			
Total Weight Ice	41829.40			
Wind 0 deg - Ice		0.00	-6015.77	-0.00
Wind 45 deg - Ice		3360.30	-3274.19	-0.44
Wind 90 deg - Ice		4752.18	0.00	-0.62
Wind 135 deg - Ice		3360.30	3274.19	-0.44
Wind 180 deg - Ice		0.00	6015.77	0.00
Wind 225 deg - Ice		-3360.30	3274.19	0.44
Wind 270 deg - Ice		-4752.18	0.00	0.62
Wind 315 deg - Ice		-3360.30	-3274.19	0.44
Total Weight	18811.23			
Wind 0 deg - Service		0.00	-5766.19	-0.00
Wind 45 deg - Service		2250.54	-2138.99	-0.42
Wind 90 deg - Service		3182.75	0.00	-0.60
Wind 135 deg - Service		2250.54	2138.99	-0.42
Wind 180 deg - Service		0.00	5766.19	0.00
Wind 225 deg - Service		-2250.54	2138.99	0.42
Wind 270 deg - Service		-3182.75	0.00	0.60
Wind 315 deg - Service		-2250.54	-2138.99	0.42

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice+1.0 Guy
3	1.2 Dead+1.6 Wind 45 deg - No Ice+1.0 Guy
4	1.2 Dead+1.6 Wind 90 deg - No Ice+1.0 Guy
5	1.2 Dead+1.6 Wind 135 deg - No Ice+1.0 Guy
6	1.2 Dead+1.6 Wind 180 deg - No Ice+1.0 Guy
7	1.2 Dead+1.6 Wind 225 deg - No Ice+1.0 Guy
8	1.2 Dead+1.6 Wind 270 deg - No Ice+1.0 Guy
9	1.2 Dead+1.6 Wind 315 deg - No Ice+1.0 Guy
10	1.2 Dead+1.0 Ice+1.0 Temp+Guy
11	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy
12	1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp+1.0 Guy
13	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy
14	1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp+1.0 Guy
15	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy
16	1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp+1.0 Guy
17	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy
18	1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp+1.0 Guy
19	Dead+Wind 0 deg - Service+Guy
20	Dead+Wind 45 deg - Service+Guy
21	Dead+Wind 90 deg - Service+Guy
22	Dead+Wind 135 deg - Service+Guy
23	Dead+Wind 180 deg - Service+Guy
24	Dead+Wind 225 deg - Service+Guy
25	Dead+Wind 270 deg - Service+Guy
26	Dead+Wind 315 deg - Service+Guy

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	100 - 47	Pole	Max Tension	14	0.13	0.00	0.00
			Max. Compression	2	-82202.33	9.51	60.38
			Max. Mx	8	-6252.45	116.83	1.29
			Max. My	2	-6150.95	0.23	147.45
			Max. Vy	8	-8161.93	116.83	1.29
			Max. Vx	2	-10798.23	0.23	147.45
			Max. Torque	4			2.80
		Guy A	Bottom Tension	6	10834.38		
			Top Tension	6	10872.37		
			Top Cable Vert	6	9685.26		
			Top Cable Norm	6	4940.06		
			Top Cable Tan	6	4.35		
			Bot Cable Vert	6	-9592.87		
			Bot Cable Norm	6	5034.42		
			Bot Cable Tan	6	123.34		
		Guy A	Bottom Tension	6	7494.08		
			Top Tension	6	7515.44		
			Top Cable Vert	6	6141.50		
			Top Cable Norm	6	4331.71		
			Top Cable Tan	6	6.33		
			Bot Cable Vert	6	-6079.87		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Bot Cable Norm	6	4380.85		
			Bot Cable Tan	6	67.44		
		Guy A	Bottom Tension	6	14059.06		
			Top Tension	6	14108.58		
			Top Cable Vert	6	12563.96		
			Top Cable Norm	6	6418.64		
			Top Cable Tan	6	15.93		
			Bot Cable Vert	6	-12452.38		
			Bot Cable Norm	6	6524.79		
			Bot Cable Tan	6	149.78		
		Guy B	Bottom Tension	6	10967.79		
			Top Tension	6	11005.78		
			Top Cable Vert	6	9803.32		
			Top Cable Norm	6	5002.20		
			Top Cable Tan	6	4.07		
			Bot Cable Vert	6	-9710.94		
			Bot Cable Norm	6	5096.56		
			Bot Cable Tan	6	123.05		
		Guy B	Bottom Tension	6	7598.75		
			Top Tension	6	7620.12		
			Top Cable Vert	6	6226.47		
			Top Cable Norm	6	4392.86		
			Top Cable Tan	6	6.50		
			Bot Cable Vert	6	-6164.83		
			Bot Cable Norm	6	4442.00		
			Bot Cable Tan	6	67.27		
		Guy B	Bottom Tension	6	14232.45		
			Top Tension	6	14281.98		
			Top Cable Vert	6	12717.40		
			Top Cable Norm	6	6499.41		
			Top Cable Tan	6	15.56		
			Bot Cable Vert	6	-12605.83		
			Bot Cable Norm	6	6605.55		
			Bot Cable Tan	6	149.41		
		Guy C	Bottom Tension	2	13427.09		
			Top Tension	2	13459.50		
			Top Cable Vert	2	12633.99		
			Top Cable Norm	2	4640.95		
			Top Cable Tan	2	45.13		
			Bot Cable Vert	2	-12564.74		
			Bot Cable Norm	2	4732.03		
			Bot Cable Tan	2	148.10		
		Guy C	Bottom Tension	2	10723.35		
			Top Tension	2	10740.54		
			Top Cable Vert	2	9464.01		
			Top Cable Norm	2	5078.48		
			Top Cable Tan	2	27.83		
			Bot Cable Vert	2	-9418.95		
			Bot Cable Norm	2	5125.03		
			Bot Cable Tan	2	87.54		
		Guy C	Bottom Tension	2	17429.12		
			Top Tension	2	17471.47		
			Top Cable Vert	2	16396.97		
			Top Cable Norm	2	6032.17		
			Top Cable Tan	2	67.49		
			Bot Cable Vert	2	-16312.78		
			Bot Cable Norm	2	6134.63		
			Bot Cable Tan	2	183.34		
		Guy D	Bottom Tension	2	10979.21		
			Top Tension	2	11016.91		
			Top Cable Vert	2	9812.96		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Top Cable Norm	2	5007.71		
			Top Cable Tan	2	30.45		
			Bot Cable Vert	2	-9720.58		
			Bot Cable Norm	2	5102.06		
			Bot Cable Tan	2	149.43		
		Guy D	Bottom Tension	2	7572.81		
			Top Tension	2	7594.05		
			Top Cable Vert	2	6205.21		
			Top Cable Norm	2	4377.78		
			Top Cable Tan	2	6.45		
			Bot Cable Vert	2	-6143.57		
			Bot Cable Norm	2	4426.92		
			Bot Cable Tan	2	80.22		
		Guy D	Bottom Tension	2	14247.26		
			Top Tension	2	14296.46		
			Top Cable Vert	2	12729.93		
			Top Cable Norm	2	6506.56		
			Top Cable Tan	2	49.79		
			Bot Cable Vert	2	-12618.36		
			Bot Cable Norm	2	6612.70		
			Bot Cable Tan	2	183.65		
L2	47 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-91915.20	16.18	153.57
			Max. Mx	8	-62775.90	65.65	7.02
			Max. My	2	-91915.20	16.18	153.57
			Max. Vy	4	-2159.79	-58.56	0.67
			Max. Vx	6	5994.46	0.97	-138.32
			Max. Torque	4			2.80

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Mast	Max. Vert	2	91918.95	34.26	5853.99
	Max. H_x	8	72514.52	1380.54	22.82
	Max. H_z	2	91918.95	34.26	5853.99
	Max. M_x	2	153.57	34.26	5853.99
	Max. M_z	4	44.05	-1358.92	1.61
	Max. Torsion	4	2.80	-1358.92	1.61
	Min. Vert	1	42200.79	28.40	13.89
	Min. H_x	4	65890.52	-1358.92	1.61
	Min. H_z	6	82066.60	12.68	-5947.60
	Min. M_x	6	-138.32	12.68	-5947.60
	Min. M_z	8	-55.99	1380.54	22.82
	Min. Torsion	8	-2.80	1380.54	22.82
Guy D @ 40 ft Elev 0 ft Azimuth 225 deg	Max. Vert	7	-1313.17	-382.99	384.06
	Max. H_x	7	-1313.17	-382.99	384.06
	Max. H_z	2	-28482.50	-11121.65	11706.15
	Min. Vert	2	-28482.50	-11121.65	11706.15
	Min. H_x	2	-28482.50	-11121.65	11706.15
	Min. H_z	6	-1484.50	-606.73	365.35
Guy C @ 25 ft Elev 10 ft Azimuth 135 deg	Max. Vert	14	-1126.04	323.70	323.83

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
	Max. H_x	2	-38296.47	11011.56	11604.10
	Max. H_z	2	-38296.47	11011.56	11604.10
	Min. Vert	2	-38296.47	11011.56	11604.10
	Min. H_x	5	-1414.25	271.09	271.47
	Min. H_z	6	-1457.18	421.90	211.73
Guy B @ 40 ft Elev 0 ft Azimuth 45 deg	Max. Vert	3	-1311.30	383.06	-382.69
	Max. H_x	6	-28481.60	11175.38	-11655.84
	Max. H_z	2	-1478.20	607.05	-360.38
	Min. Vert	6	-28481.60	11175.38	-11655.84
	Min. H_x	3	-1311.30	383.06	-382.69
	Min. H_z	6	-28481.60	11175.38	-11655.84
Guy A @ 40 ft Elev 0 ft Azimuth -45 deg	Max. Vert	18	-778.64	-425.21	-425.26
	Max. H_x	9	-1073.71	-288.11	-288.35
	Max. H_z	2	-1228.62	-504.06	-265.18
	Min. Vert	6	-28125.13	-11030.51	-11512.13
	Min. H_x	6	-28125.13	-11030.51	-11512.13
	Min. H_z	6	-28125.13	-11030.51	-11512.13

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	42200.79	-28.40	-13.89	-1.59	1.90	0.00
1.2 Dead+1.6 Wind 0 deg - No Ice+1.0 Guy	91918.95	-34.26	-5853.99	-153.57	16.18	-0.06
1.2 Dead+1.6 Wind 45 deg - No Ice+1.0 Guy	63523.96	959.71	-1169.00	-38.13	-30.41	-2.01
1.2 Dead+1.6 Wind 90 deg - No Ice+1.0 Guy	65890.52	1358.92	-1.61	-0.97	-44.05	-2.80
1.2 Dead+1.6 Wind 135 deg - No Ice+1.0 Guy	63338.24	990.69	1161.74	35.26	-33.01	-1.96
1.2 Dead+1.6 Wind 180 deg - No Ice+1.0 Guy	82066.60	-12.68	5947.60	138.32	0.97	0.04
1.2 Dead+1.6 Wind 225 deg - No Ice+1.0 Guy	63793.02	-1032.50	1133.04	32.39	36.92	2.02
1.2 Dead+1.6 Wind 270 deg - No Ice+1.0 Guy	72514.52	-1380.54	-22.82	-10.73	55.99	2.80
1.2 Dead+1.6 Wind 315 deg - No Ice+1.0 Guy	71933.19	-1014.94	-1150.95	-49.48	47.97	1.95
1.2 Dead+1.0 Ice+1.0 Temp+Guy	69388.42	-82.44	-41.25	-6.10	6.96	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy	75894.66	-90.94	-1425.87	-40.07	10.34	-0.05
1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp+1.0 Guy	71626.35	506.70	-671.40	-19.17	-4.09	-0.51
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy	72329.05	750.37	-32.25	-4.33	-14.21	-0.66
1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp+1.0 Guy	70923.21	509.27	576.43	8.68	-7.67	-0.44
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy	72748.77	-71.84	1353.49	26.48	4.97	0.04
1.2 Dead+1.0 Wind 225	71690.62	-687.34	574.46	5.01	19.94	0.52

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	kip-ft	kip-ft	kip-ft
deg+1.0 Ice+1.0 Temp+1.0 Guy 1.2 Dead+1.0 Wind 270	74790.77	-912.25	-50.39	-9.20	29.47	0.67
deg+1.0 Ice+1.0 Temp+1.0 Guy 1.2 Dead+1.0 Wind 315	74326.44	-682.62	-666.77	-22.35	23.06	0.43
deg+1.0 Ice+1.0 Temp+1.0 Guy Dead+Wind 0 deg - Service+Guy	42802.51	-28.73	-1308.03	-25.51	2.85	-0.01
Dead+Wind 45 deg - Service+Guy	42375.06	198.91	-273.14	-6.69	-2.60	-0.43
Dead+Wind 90 deg - Service+Guy	42370.02	292.88	-14.61	-1.17	-5.03	-0.60
Dead+Wind 135 deg - Service+Guy	42365.19	198.97	243.81	4.07	-3.30	-0.42
Dead+Wind 180 deg - Service+Guy	42402.92	-26.75	1282.33	22.07	1.23	0.01
Dead+Wind 225 deg - Service+Guy	42388.37	-256.95	244.12	3.33	6.60	0.43
Dead+Wind 270 deg - Service+Guy	42508.20	-349.09	-12.59	-2.12	8.97	0.60
Dead+Wind 315 deg - Service+Guy	42447.24	-255.05	-270.68	-7.26	7.13	0.42

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	% Error
1	0.00	-18811.22	0.00	-0.26	18811.26	-0.32	0.002%
2	-27.24	-22433.15	-28538.89	27.17	22433.15	28538.68	0.001%
3	11620.10	-22475.68	-11098.72	-11619.92	22475.68	11098.55	0.001%
4	16464.51	-22518.21	27.24	-16464.35	22518.21	-27.26	0.001%
5	11677.80	-22527.32	11156.43	-11677.67	22527.32	-11156.30	0.001%
6	27.24	-22518.21	28538.89	-27.27	22518.20	-28538.50	0.001%
7	-11620.10	-22475.68	11098.72	11619.92	22475.68	-11098.56	0.001%
8	-16464.51	-22433.15	-27.24	16464.42	22433.15	27.20	0.000%
9	-11677.80	-22424.04	-11156.43	11677.66	22424.04	11156.29	0.001%
10	0.00	-45493.68	0.00	-1.38	45493.65	-1.44	0.004%
11	-40.37	-45432.17	-8376.47	40.19	45432.16	8376.16	0.001%
12	4997.25	-45493.68	-4911.14	-4997.08	45493.66	4910.41	0.002%
13	7112.88	-45555.19	40.37	-7112.30	45555.18	-40.45	0.001%
14	5082.74	-45567.92	4996.63	-5080.99	45567.84	-4995.06	0.005%
15	40.37	-45555.19	8376.47	-40.39	45555.18	-8375.70	0.002%
16	-4997.25	-45493.68	4911.14	4996.52	45493.67	-4911.04	0.002%
17	-7112.88	-45432.17	-40.37	7112.61	45432.16	40.20	0.001%
18	-5082.74	-45419.44	-4996.63	5082.27	45419.42	4996.17	0.001%
19	-5.83	-18802.12	-6106.21	4.90	18802.10	6104.84	0.008%
20	2486.25	-18811.22	-2374.69	-2486.20	18811.22	2374.58	0.001%
21	3522.76	-18820.32	5.83	-3522.54	18820.32	-5.83	0.001%
22	2498.59	-18822.27	2387.04	-2498.46	18822.27	-2386.93	0.001%
23	5.83	-18820.32	6106.21	-5.87	18820.32	-6105.86	0.002%
24	-2486.25	-18811.22	2374.69	2486.11	18811.22	-2374.68	0.001%
25	-3522.76	-18802.12	-5.83	3522.27	18802.11	5.57	0.003%
26	-2498.59	-18800.17	-2387.04	2498.35	18800.17	2386.80	0.002%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00001104
2	Yes	10	0.00000001	0.00006507
3	Yes	9	0.00000001	0.00006966
4	Yes	9	0.00000001	0.00005854
5	Yes	9	0.00000001	0.00005208
6	Yes	9	0.00000001	0.00011103
7	Yes	9	0.00000001	0.00006917
8	Yes	10	0.00000001	0.00003683
9	Yes	10	0.00000001	0.00005937
10	Yes	7	0.00000001	0.00014578
11	Yes	9	0.00000001	0.00008037
12	Yes	8	0.00000001	0.00009066
13	Yes	8	0.00000001	0.00005464
14	Yes	7	0.00000001	0.00010474
15	Yes	8	0.00000001	0.00008415
16	Yes	8	0.00000001	0.00009020
17	Yes	9	0.00000001	0.00006568
18	Yes	9	0.00000001	0.00014292
19	Yes	6	0.00000001	0.00010720
20	Yes	6	0.00000001	0.00000824
21	Yes	6	0.00000001	0.00001269
22	Yes	6	0.00000001	0.00000984
23	Yes	6	0.00000001	0.00001797
24	Yes	6	0.00000001	0.00000873
25	Yes	6	0.00000001	0.00002802
26	Yes	6	0.00000001	0.00001766

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	100 - 47	2.534	19	0.2466	0.0052
L2	47 - 0	0.584	19	0.0890	0.0026

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
99.00	DHHTT65B-3XR	19	2.491	0.2434	0.0051	174047
90.00	SBNHH-1D65C	19	2.104	0.2141	0.0047	87023
80.00	APXVAR18_43-C-NA20	19	1.688	0.1822	0.0042	43512
76.15	Guy	19	1.534	0.1702	0.0041	36488
76.15	Guy	19	1.534	0.1702	0.0041	36488
54.95	Guy	19	0.796	0.1090	0.0030	19317

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	100 - 47	17.718	2	1.5424	0.0250
L2	47 - 0	4.371	2	0.7312	0.0123

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
99.00	DHHTT65B-3XR	2	17.424	1.5271	0.0248	26718
90.00	SBNHH-1D65C	2	14.793	1.3900	0.0227	13359
80.00	APXVAR18_43-C-NA20	2	11.959	1.2374	0.0203	6679
76.15	Guy	2	10.911	1.1786	0.0194	5600
76.15	Guy	2	10.911	1.1786	0.0194	5600
54.95	Guy	2	5.846	0.8537	0.0143	2964

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension lb	Breaking Load lb	Actual T_u lb	Allowable ϕT_n lb	Required S.F.	Actual S.F.
L1	76.15 (A) (6)	1/2 EHS	2152.00	26900.04	10872.40	16140.00	1.000	1.484 ✔
	76.15 (B) (5)	1/2 EHS	2152.00	26900.04	11005.80	16140.00	1.000	1.467 ✔
	76.15 (C) (4)	1/2 EHS	2152.00	26900.04	13459.50	16140.00	1.000	1.199 ✔
	76.15 (D) (3)	1/2 EHS	2152.00	26900.04	11016.90	16140.00	1.000	1.465 ✔
	54.95 (A) (10)	7/16 EHS	1664.00	20800.02	7515.44	12480.00	1.000	1.661 ✔
	54.95 (B) (9)	7/16 EHS	1664.00	20800.02	7620.12	12480.00	1.000	1.638 ✔
	54.95 (C) (8)	7/16 EHS	1664.00	20800.02	10740.50	12480.00	1.000	1.162 ✔
	54.95 (D) (7)	7/16 EHS	1664.00	20800.02	7594.05	12480.00	1.000	1.643 ✔
	76.15 (A) (14)	9/16 EHS	2800.00	35000.04	14108.60	21000.00	1.000	1.488 ✔
	76.15 (B) (13)	9/16 EHS	2800.00	35000.04	14282.00	21000.00	1.000	1.470 ✔
	76.15 (C) (12)	9/16 EHS	2800.00	35000.04	17471.50	21000.00	1.000	1.202 ✔
	76.15 (D) (11)	9/16 EHS	2800.00	35000.04	14296.50	21000.00	1.000	1.469 ✔

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L1	100 - 47 (1)	TP26.25x26.25x13.125	53.00	0.00	0.0	541.1880	-6150.95	584484.00	0.011
L2	47 - 0 (2)	TP26.25x26.25x13.125	47.00	0.00	0.0	541.1880	-91915.20	584484.00	0.157

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	100 - 47 (1)	TP26.25x26.25x13.125	147.45	271.32	0.543	0.00	271.32	0.000
L2	47 - 0 (2)	TP26.25x26.25x13.125	154.42	271.32	0.569	0.00	271.32	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	100 - 47 (1)	TP26.25x26.25x13.125	10798.20	292242.00	0.037	0.01	319.64	0.000
L2	47 - 0 (2)	TP26.25x26.25x13.125	5912.62	292242.00	0.020	0.06	319.64	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	100 - 47 (1)	0.011	0.543	0.000	0.037	0.000	0.555 ✔	1.000	4.8.2 ✔
L2	47 - 0 (2)	0.157	0.569	0.000	0.020	0.000	0.727 ✔	1.000	4.8.2 ✔

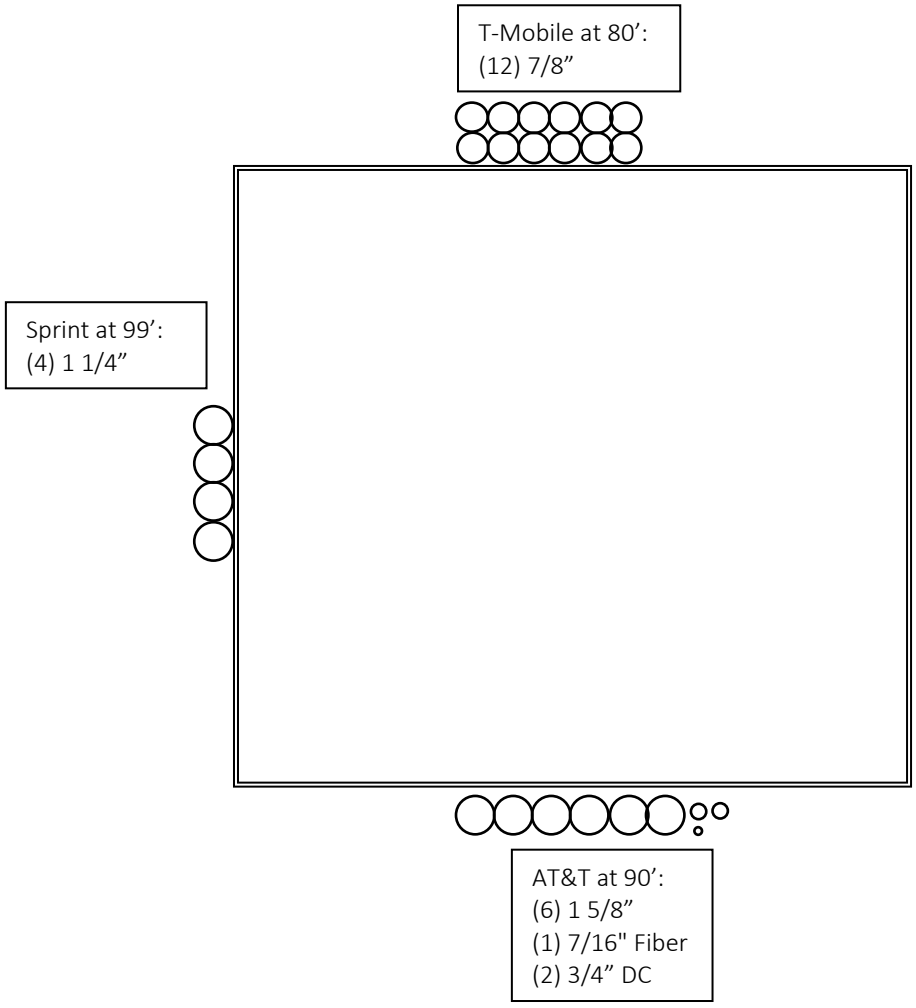
Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	100 - 47	Pole	TP26.25x26.25x13.125	1	-6150.95	584484.00	55.5	Pass
		Guy A@76.15	1/2	6	10872.40	16140.00	67.4	Pass
		Guy A@54.95	7/16	10	7515.44	12480.00	60.2	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Guy A@76.15	9/16	14	14108.60	21000.00	67.2	Pass
		Guy B@76.15	1/2	5	11005.80	16140.00	68.2	Pass
		Guy B@54.95	7/16	9	7620.12	12480.00	61.1	Pass
		Guy B@76.15	9/16	13	14282.00	21000.00	68.0	Pass
		Guy C@76.15	1/2	4	13459.50	16140.00	83.4	Pass
		Guy C@54.95	7/16	8	10740.50	12480.00	86.1	Pass
		Guy C@76.15	9/16	12	17471.50	21000.00	83.2	Pass
		Guy D@76.15	1/2	3	11016.90	16140.00	68.3	Pass
		Guy D@54.95	7/16	7	7594.05	12480.00	60.8	Pass
		Guy D@76.15	9/16	11	14296.50	21000.00	68.1	Pass
L2	47 - 0	Pole	TP26.25x26.25x13.125	2	-91915.20	584484.00	72.7	Pass
							Summary	
						Pole (L2)	72.7	Pass
						Guy A (L1)	67.4	Pass
						Guy B (L1)	68.2	Pass
						Guy C (L1)	86.1	Pass
						Guy D (L1)	68.3	Pass
						RATING =	**86.1**	**Pass**

Coax Layout

CT46143-A



Pier Foundation For Guy Anchors

			Date: 7/16/2019
Customer Name:	SBA Communications Corp	EIA/TIA Standard:	EIA-222-G
Site Name:		Structure Height (Ft.):	100
Site Number:	CT46143-A-SBA	Engineer Name:	J. Chen
Engr. Number:	94402	Engineer Login ID:	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Guy Anchor

Analysis or Design? Analysis

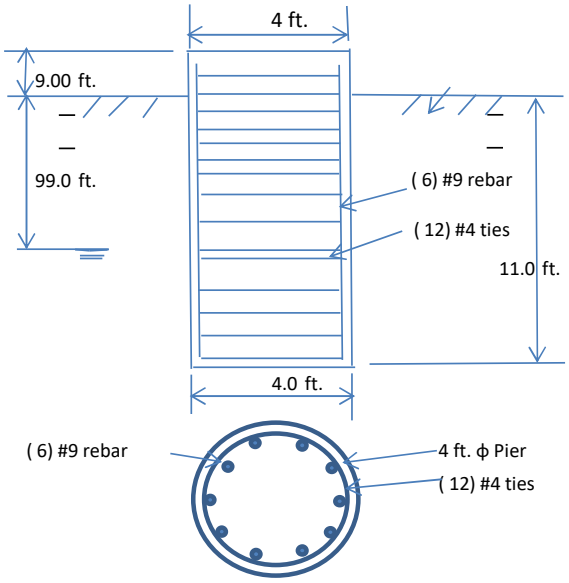
Acceptable overstress (\ 5.0%

Base Reactions (Factored):

Axial Load (Kips):	0.0	Shear Force (Kips):	16.0
Uplift Force (Kips):	38.3	Moment (Kips-ft):	0.0

Foundation Geometries:

Diameter of Pier (ft.):	4.0	Depth of Base B. G. S. :	11.0	ft.
Pier Height A. G. (ft.):	9.00			



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield strength:	40	ksi
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	6	Tie Spacing:	12.0	in.
Concrete Cover (in.):	3	Concrete unit weight:	150.0	pcf

Consider ties in concrete shear strength? Yes

Guy Anchor

Soil Design Parameters:

Water Table B.G.S. (ft):	99.0	Unit weight of water:	62.4	psf
Ratio of Uplift/Axial Skin Friction:	1.00	Pullout failure Angle:	30	(°)

Skin Frictions are to be obtained from: Calculations

Please Enter Ultimate End Bearing Pressure (psf): 5000

Kc = 1.15 For Sand

Kc = 1.0 Silt/Clay

Kt = 0.7 For Sand and Silt

Kt = 0.85 For Clay

Friction δ Between Pier & Soil = 0.95

Depth of Layers (ft) Top	Depth of Layers (ft) Bottom	γ_{soil} (pcf)	ϕ (°)	Cohesion (psf)			Soil Types	Ultimate Uplift Skin Friction (psf)	Ultimate Axial Skin Friction (psf)	Kc	Kt	α
0.0	3.0	100	0	0			Sand			1.15	0.70	
3.0	15.0	100	34	0			Sand	331.9	545.2	1.15	0.70	
15.0	20.0	100	34	0			Sand	442.5	727.0	1.15	0.70	

Soil weight Increase Factor for bouyant soils (1.0 to 1.15): 1.1

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75	
Total Dry Soil Volume from Conical Failure (cu. Ft.):	790	Dry Soil Weight from Conical Failure:	79	Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	0	Buoyant Soil Weight from Conical Failure (Kips):	0	Kips
Total Dry Concrete Volume (cu. Ft.):	251	Total Dry Concrete Weight:	37.70	Kips
Total Buoyant Concrete Volume (cu. Ft.):	0	Total Buoyant Concrete Weight:	0.00	Kips
Total Effective Concrete Weight (Kips):	37.7	Total Effective Soil Weight:	79	Kips
Total Effective Vertical Load on Base (Kips):	24			

Check Soil Capacities:

					Usage	
Calculated Foundation Uplift Capacity (Kips):	58.95	>	Design Factored Uplift Load (Kips):	38	0.65	OK!
Allowable Overturning Moment Resistance (Kips-ft.):	315.5	>	Design Factored Momont (kips-ft):	257	0.82	OK!

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75	
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00	

Reinforcing Concrete Pier:

					Usage	
Vertical Steel Rebar Area (sq. in./each):	1.00		Tie / Stirrup Area (sq. in./each):	0.20		
Maximum Moment Location Below Grade Surface (ft.):	3.98		Max. Shear force Location B. G. S. (ft.):	4.76		
Calculated Moment Capacity (Mn,Kips-Ft):	505	>	Design Factored Moment (Mu, K-Ft):	207.3	0.41	OK!
Calculated Shear Capacity (Kips):	169.4	>	Design Factored Shear (Kips):	16.0	0.09	OK!
Calculated Tension Capacity (Tn, Kips):	324.0	>	Design Factored Tension (Tu Kips):	38.3	0.12	OK!
Calculated Compression Capacity (Pn, Kips):	2392	>	Design Factored Axial Load (Pu Kips):	0.0	0.00	OK!
Moment & Axial Strength Combination(Tu/Tn+Mu/Mn):	0.41	OK!	Max. Allowable Tie/Stirrup Spacing:	12.00	in.	
Pier Reinforcement Ratio:	0.003		Reinforcement Ratio is too small			

Reinforce Pier Foundation by Adding Concrete Block (Yes/No ?) No

EXHIBIT 4

February 5. 2020
April 3, 2020 (Rev. 1)

Centerline Communications
750 West Center Street, Suite #301
West Bridgewater, MA 02379

RE:		
	Site Number:	CT1175 (LTE 4C/5C)
	FA Number:	10105807
	PACE Number:	MRCTB035210
	PT Number:	2051A0KPJ7
	Site Name:	AVON HUCKLEBERRY HILL ROAD
	Site Address:	277 Huckleberry Hill Road Avon, CT 06001

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/TMA mounts to determine their capability of supporting the following additional loading:

- **(3) SBNHH-1D65C Antennas (96.6"x11.9"x7.1" – Wt. = 50 lbs. /each)**
- **(3) TMABPD7823VG12A TMAs (10.7"x11.1"x3.8" – Wt. = 25 lbs./each)**

**Proposed equipment shown in bold*

No original structural design documents or fabrication drawings were available for the existing mounts. HDG conducted an on-site visual survey of the existing AT&T antenna mounts on January 31, 2020. Attendees included Edvin Broka (HDG – Lead Designer).

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-H, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2015 with 2018 Connecticut State Building Code, and AT&T Mount Technical Directive – R13.
- HDG considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-H and Appendix N of the Connecticut State Building Code, the max basic wind speed for this site is equal to 120 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.50 in. An escalated ice thickness of 1.99 in 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 a 250 lbs live load in a worst case location on the mount.
- The existing mount is secured to the existing wood pole with lag screws. The connection is considered OK by visual inspection.

Based on our evaluation, we have determined that the existing mounts **ARE CAPABLE** of supporting the proposed installation.

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Mount Rating (LTE 4C/5C)	1	LC1	82%	**PASS**
Connection	5/8" Lag Screw	-	33%	**PASS**

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
Vice President

Daniel P. Hamm, PE
Principal

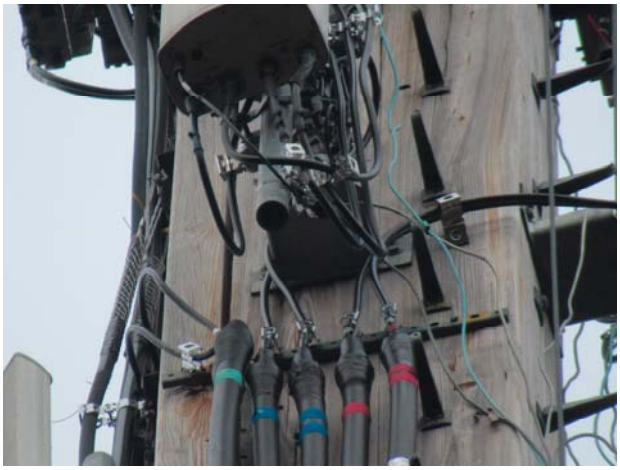
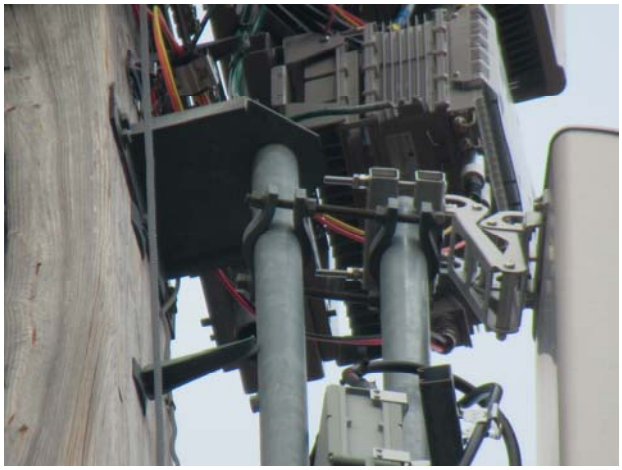
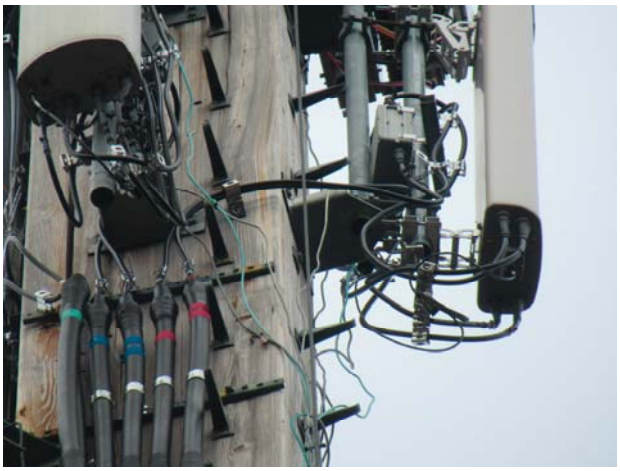
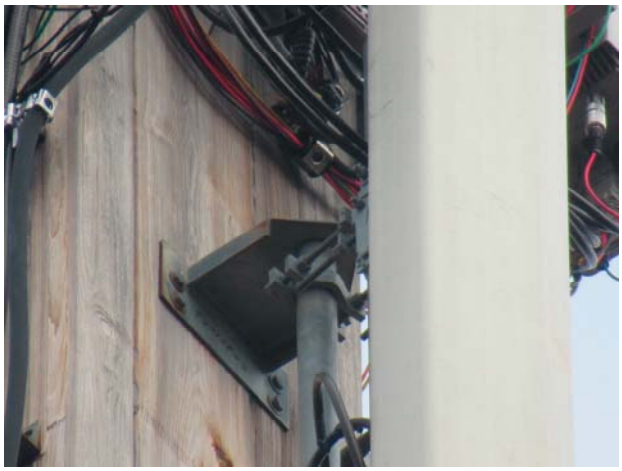
FIELD PHOTOS:






p: 978.557.5553 f: 978.336.5586 a: 45 Beechwood Drive, N. Andover, MA 01845
p: 203.208.3919 f: 203.234.6398 a: 110 Washington Avenue, 4th Floor, North Haven CT 06473



p: 978.557.5553 f: 978.336.5586 a: 45 Beechwood Drive, N. Andover, MA 01845
p: 203.208.3919 f: 203.234.6398 a: 110 Washington Avenue, 4th Floor, North Haven CT 06473

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Wind & Ice
Calculations

Date: 4/3/2020
Project Name: AVON HUCKLEBERRY HILL ROAD
Project No.: CT1175
Designed By: CL **Checked By:** MSC

HUDSON Design Group LLC

2.6.5.2 Velocity Pressure Coeff:

$K_z = 2.01 (z/z_g)^{2/\alpha}$

	z=	90 (ft)
	z_g=	900 (ft)
K_z= 1.238	α=	9.5

Kzmin ≤ Kz ≤ 2.01

Table 2-4

Exposure	Z_g	α	K_{zmin}	K_c
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.2 Topographic Factor:

Table 2-5

Topo. Category	K_t	f
2	0.43	1.25
3	0.53	2.0
4	0.72	1.5

$K_{zt} = [1+(K_c K_t/K_h)]^2$ $K_h = e^{(f*z/H)}$

K_{zt}= 1.681054212

(If Category 1 then K_{zt}=1.0)

Category= **3**

K_h=	1.7871911	
K_c=	1	(from Table 2-4)
K_t=	0.53	(from Table 2-5)
f=	2	(from Table 2-5)
z=	90	
z_s=	530	(Mean elevation of base of structure above sea level)
H=	310	(Ht. of the crest above surrounding terrain)
K_{zt}=	1.68	(from 2.6.6.2.1)
K_e=	0.98	(from 2.6.8)

2.6.10 Design Ice Thickness

Max Ice Thickness =	t_i =	1.50 in
Importance Factor =	I=	1.0 (from Table 2-3)
	K_{iz} =	1.11 (from Sec. 2.6.10)

$t_{iz} = t_i * I * K_{iz} * (K_{zt})^{0.35}$ t_{iz} = 1.99 in

Date: 4/3/2020
Project Name: AVON HUCKLEBERRY HILL ROAD
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Designed By: CL Checked By: MSC

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2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

G_h = 1.0 Latticed Structures > 600 ft

G_h = 0.85 Latticed Structures 450 ft or less

G_h = 0.85 + 0.15 [h/150 - 3.0] h= ht. of structure

h=	101	G_h=	0.85

2.6.9.2 Guyed Masts G_h= 0.85

2.6.9.3 Pole Structures G_h= 1.1

2.6.9 Appurtenances G_h= 1.0

2.6.9.4 Structures Supported on Other Structures

(Cantilivered tubular or latticed spines, pole, structures on buildings (ht. : width ratio > 5)

G_h=	1.35	**Gh=**	**1.00**

2.6.11.2 Design Wind Force on Appurtenances

F= $q_z * G_h * (EPA)_A$

q_z= $0.00256 * K_z * K_{zt} * K_s * K_e * K_d * V_{max}^2$

		K_z=	1.238	(from 2.6.5.2)
		K_{zt}=	1.7	(from 2.6.6.2.1)
		K_s=	1.0	(from 2.6.7)
q_z=	**71.49**	K_e=	0.98	(from 2.6.8)
$q_{z\,(ice)}$=	**12.41**	K_d=	0.95	(from Table 2-2)
$q_{z\,(30)}$=	**4.47**	V_{max}=	120	mph (Ultimate Wind Speed)
		$V_{max\,(ice)}$=	50	mph
		V_{30}=	30	mph

Table 2-2

Structure Type	Wind Direction Probability Factor, Kd
Latticed structures with triangular, square or rectangular cross sections	0.85
Tubular pole structures, latticed structures with other cross sections, appurtenances	0.95
Tubular pole structures supporting antennas enclosed within a cylindrical shroud	1.00

Date: 4/3/2020
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Determine Ca:

Table 2-9

Force Coefficients (Ca) for Appurtenances				
Member Type		Aspect Ratio ≤ 2.5	Aspect Ratio = 7	Aspect Ratio ≥ 25
		Ca	Ca	Ca
Flat		1.2	1.4	2.0
Square/Rectangular HSS		1.2 - 2.8(r_s) ≥ 0.85	1.4 - 4.0(r_s) ≥ 0.90	2.0 - 6.0(r_s) ≥ 1.25
Round	**C < 39** (Subcritical)	0.7	0.8	1.2
	39 ≤ C ≤ 78 (Transitional)	$4.14/(C^{0.485})$	$3.66/(C^{0.415})$	$46.8/(C^{-1.0})$
	C > 78 (Supercritical)	0.5	0.6	0.6

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.
(Aspect ratio is independent of the spacing between support points of a linear appurtenance,

Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness = 1.99 in | **Angle =** 0 (deg) | **Equivalent Angle =** 180 (deg)

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) (w/ Ice)	Force (lbs) (30 mph)
SBNHH-1D65C Antenna	96.6	11.9	7.1	7.98	8.12	1.44	820	198	51
TMABPD7823VG12A TMA	10.7	3.8	11.1	0.28	2.82	1.21	25	12	2
3" Pipe	3.5	12.0		0.29	0.29	1.20	25	12	2
2" Pipe	2.4	12.0		0.20	0.20	1.20	17	11	1
C 11-5/8x2-1/2	11.6	2.5		0.20	4.65	0.95	14	8	1

Date: 4/2/2020
Project Name: AVON HUCKLEBERRY HILL ROAD
Project No.: CT1175
Designed By: CL Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	30	(deg)	Ice Thickness =	1.99	in.	Equivalent Angle =	210	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio	Aspect Ratio	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
SBNHH-1D65C Antenna	96.6	11.9	7.1	7.98	4.76	8.12	13.61	1.44	1.62	820	552	753
TMABPD7823VG12A TMA	10.7	3.8	11.1	0.28	0.82	2.82	0.96	1.21	1.20	25	71	36

WIND LOADS WITH ICE:

SBNHH-1D65C Antenna	100.6	15.9	11.1	11.09	7.74	6.33	9.08	1.37	1.47	189	141	177
TMABPD7823VG12A TMA	14.7	7.8	15.1	0.79	1.54	1.89	0.97	1.20	1.20	12	23	15

WIND LOADS AT 30 MPH:

SBNHH-1D65C Antenna	96.6	11.9	7.1	7.98	4.76	8.12	13.61	1.44	1.62	51	34	47
TMABPD7823VG12A TMA	10.7	3.8	11.1	0.28	0.82	2.82	0.96	1.21	1.20	2	4	2

Date: 4/2/2020
Project Name: AVON HUCKLEBERRY HILL ROAD
Project No.: CT1175
Designed By: CL Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	60	(deg)	Ice Thickness =	1.99	in.	Equivalent Angle =	240	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
SBNHH-1D65C Antenna	96.6	11.9	7.1	7.98	4.76	8.12	13.61	1.44	1.62	820	552	619
TMABPD7823VG12A TMA	10.7	3.8	11.1	0.28	0.82	2.82	0.96	1.21	1.20	25	71	59

WIND LOADS WITH ICE:

SBNHH-1D65C Antenna	100.6	15.9	11.1	11.09	7.74	6.33	9.08	1.37	1.47	189	141	153
TMABPD7823VG12A TMA	14.7	7.8	15.1	0.79	1.54	1.89	0.97	1.20	1.20	12	23	20

WIND LOADS AT 30 MPH:

SBNHH-1D65C Antenna	96.6	11.9	7.1	7.98	4.76	8.12	13.61	1.44	1.62	51	34	39
TMABPD7823VG12A TMA	10.7	3.8	11.1	0.28	0.82	2.82	0.96	1.21	1.20	2	4	4

Date: 4/2/2020
Project Name: AVON HUCKLEBERRY HILL ROAD
Project No.: CT1175
Designed By: CL Checked By: MSC

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WIND LOADS

Angle =	90	(deg)	Ice Thickness =	1.99	in.	Equivalent Angle =	270	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
SBNHH-1D65C Antenna	96.6	11.9	7.1	7.98	4.76	8.12	13.61	1.44	1.62	820	552	552
TMABPD7823VG12A TMA	10.7	3.8	11.1	0.28	0.82	2.82	0.96	1.21	1.20	25	71	71

WIND LOADS WITH ICE:

SBNHH-1D65C Antenna	100.6	15.9	11.1	11.09	7.74	6.33	9.08	1.37	1.47	189	141	141
TMABPD7823VG12A TMA	14.7	7.8	15.1	0.79	1.54	1.89	0.97	1.20	1.20	12	23	23

WIND LOADS AT 30 MPH:

SBNHH-1D65C Antenna	96.6	11.9	7.1	7.98	4.76	8.12	13.61	1.44	1.62	51	34	34
TMABPD7823VG12A TMA	10.7	3.8	11.1	0.28	0.82	2.82	0.96	1.21	1.20	2	4	4

Date: 4/2/2020
Project Name: AVON HUCKLEBERRY HILL ROAD
Project No.: CT1175
Designed By: CL Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	120	(deg)	Ice Thickness =	1.99	in.	Equivalent Angle =	300	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
SBNHH-1D65C Antenna	96.6	11.9	7.1	7.98	4.76	8.12	13.61	1.44	1.62	820	552	619
TMABPD7823VG12A TMA	10.7	3.8	11.1	0.28	0.82	2.82	0.96	1.21	1.20	25	71	59

WIND LOADS WITH ICE:

SBNHH-1D65C Antenna	100.6	15.9	11.1	11.09	7.74	6.33	9.08	1.37	1.47	189	141	153
TMABPD7823VG12A TMA	14.7	7.8	15.1	0.79	1.54	1.89	0.97	1.20	1.20	12	23	20

WIND LOADS AT 30 MPH:

SBNHH-1D65C Antenna	96.6	11.9	7.1	7.98	4.76	8.12	13.61	1.44	1.62	51	34	39
TMABPD7823VG12A TMA	10.7	3.8	11.1	0.28	0.82	2.82	0.96	1.21	1.20	2	4	4

Date: 4/2/2020
Project Name: AVON HUCKLEBERRY HILL ROAD
Project No.: CT1175
Designed By: CL Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	150	(deg)	Ice Thickness =	1.99	in.	Equivalent Angle =	330	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
SBNHH-1D65C Antenna	96.6	11.9	7.1	7.98	4.76	8.12	13.61	1.44	1.62	**820**	**552**	**753**
TMABPD7823VG12A TMA	10.7	3.8	11.1	0.28	0.82	2.82	0.96	1.21	1.20	**25**	**71**	**36**

WIND LOADS WITH ICE:

SBNHH-1D65C Antenna	100.6	15.9	11.1	11.09	7.74	6.33	9.08	1.37	1.47	**189**	**141**	**177**
TMABPD7823VG12A TMA	14.7	7.8	15.1	0.79	1.54	1.89	0.97	1.20	1.20	**12**	**23**	**15**

WIND LOADS AT 30 MPH:

SBNHH-1D65C Antenna	96.6	11.9	7.1	7.98	4.76	8.12	13.61	1.44	1.62	**51**	**34**	**47**
TMABPD7823VG12A TMA	10.7	3.8	11.1	0.28	0.82	2.82	0.96	1.21	1.20	**2**	**4**	**2**

Date: 4/3/2020
Project Name: AVON HUCKLEBERRY HILL ROAD
Project No.: CT1175
Designed By: CL **Checked By:** MSC

HUDSON Design Group LLC

ICE WEIGHT CALCULATIONS

Thickness of ice:	1.99	in.
Density of ice:	56	pcf

SBNHH-1D65C Antenna

Weight of ice based on total radial SF area:

Height (in):	96.6	
Width (in):	11.9	
Depth (in):	7.1	
Total weight of ice on object:	310	lbs
Weight of object:	50.0	lbs
Combined weight of ice and object:	360	lbs

TMABPD7823VG12A TMA

Weight of ice based on total radial SF area:

Height (in):	10.7	
Width (in):	3.8	
Depth (in):	11.1	
Total weight of ice on object:	30	lbs
Weight of object:	25.0	lbs
Combined weight of ice and object:	55	lbs

C 11.625x2.5

Weight of ice based on total radial SF area:

Height (in):	11.625	
Width (in):	2.5	
Per foot weight of ice on object:	34	plf

2" pipe

Per foot weight of ice:

diameter (in):	2.38	
Per foot weight of ice on object:	11	plf

3" Pipe

Per foot weight of ice:

diameter (in):	3.5	
Per foot weight of ice on object:	13	plf

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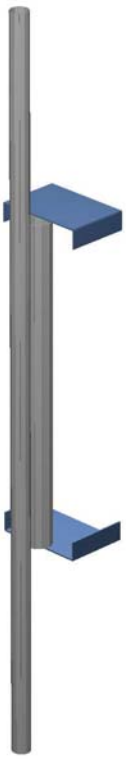
Design Group LLC

Mount Calculations
(Existing Conditions)




Y
Z
X


A53 GrB
PIPE 3x0.216
A53 GrB
PIPE 2x0.154
Y
Z
X

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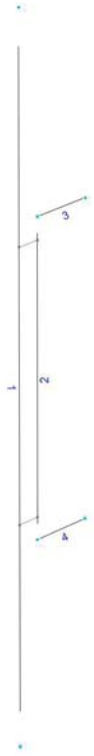
Error on design
Design O.K.
With warnings


3
2
1
4


Y
Z
X

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Load data

GLOSSARY

Comb : Indicates if load condition is a load combination

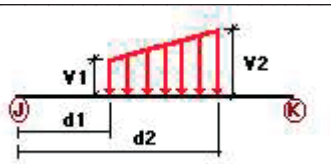
Load Conditions

Condition	Description	Comb.	Category
D	Dead Load	No	DL
Wo	Wind Load (NO ICE)	No	WIND
W30	WL 30deg	No	WIND
W60	WL 60deg	No	WIND
W90	WL 90deg	No	WIND
W120	WL 120deg	No	WIND
W150	WL 150deg	No	WIND
Di	Ice Load	No	LL
WI0	WL ICE 0deg	No	WIND
WI30	WL ICE 30deg	No	WIND
WI60	WL ICE 60deg	No	WIND
WI90	WL ICE 90deg	No	WIND
WI120	WL ICE 120deg	No	WIND
WI150	WL ICE 150deg	No	WIND
WL0	WL 30 mph 0deg	No	WIND
WL30	WL 30 mph 30deg	No	WIND
WL60	WL 30 mph 60deg	No	WIND
WL90	WL 30 mph 90deg	No	WIND
WL120	WL 30 mph 120deg	No	WIND
WL150	WL 30 mph 150deg	No	WIND
LL1	250 lb Live Load Center of Mount	No	LL
LL2	250 lb Live Load Right End of Mount	No	LL
LL3	250 lb Live Load Left End of Mount	No	LL
LLa1	250 lb Live Load Antenna 1	No	LL
LLa2	250 lb Live Load Antenna 2	No	LL
LLa3	250 lb Live Load Antenna 3	No	LL
LLa4	250 lb Live Load Antenna 4	No	LL
LC1	1.2D+Wo	Yes	
LC2	1.2D+W30	Yes	
LC3	1.2D+W60	Yes	
LC4	1.2D+W90	Yes	
LC5	1.2D+W120	Yes	
LC6	1.2D+W150	Yes	
LC7	1.2D-Wo	Yes	
LC8	1.2D-W30	Yes	
LC9	1.2D-W60	Yes	
LC10	1.2D-W90	Yes	
LC11	1.2D-W120	Yes	
LC12	1.2D-W150	Yes	
LC13	0.9D+Wo	Yes	
LC14	0.9D+W30	Yes	
LC15	0.9D+W60	Yes	
LC16	0.9D+W90	Yes	
LC17	0.9D+W120	Yes	

LC18	0.9D+W150	Yes
LC19	0.9D-Wo	Yes
LC20	0.9D-W30	Yes
LC21	0.9D-W60	Yes
LC22	0.9D-W90	Yes
LC23	0.9D-W120	Yes
LC24	0.9D-W150	Yes
LC25	1.2D+Di+WI0	Yes
LC26	1.2D+Di+WI30	Yes
LC27	1.2D+Di+WI60	Yes
LC28	1.2D+Di+WI90	Yes
LC29	1.2D+Di+WI120	Yes
LC30	1.2D+Di+WI150	Yes
LC31	1.2D+Di-WI0	Yes
LC32	1.2D+Di-WI30	Yes
LC33	1.2D+Di-WI60	Yes
LC34	1.2D+Di-WI90	Yes
LC35	1.2D+Di-WI120	Yes
LC36	1.2D+Di-WI150	Yes
LC38	1.2D+1.5LL1	Yes
LC39	1.2D+1.5LL2	Yes
LC40	1.2D+1.5LL3	Yes
LC41	1.2D+WL0+1.5LLa1	Yes
LC42	1.2D+WL30+1.5LLa1	Yes
LC43	1.2D+WL60+1.5LLa1	Yes
LC44	1.2D+WL90+1.5LLa1	Yes
LC45	1.2D+WL120+1.5LLa1	Yes
LC46	1.2D+WL150+1.5LLa1	Yes
LC47	1.2D-WL0+1.5LLa1	Yes
LC48	1.2D-WL30+1.5LLa1	Yes
LC49	1.2D-WL60+1.5LLa1	Yes
LC50	1.2D-WL90+1.5LLa1	Yes
LC51	1.2D-WL120+1.5LLa1	Yes
LC52	1.2D-WL150+1.5LLa1	Yes
LC53	1.2D+WL0+1.5LLa2	Yes
LC54	1.2D+WL30+1.5LLa2	Yes
LC55	1.2D+WL60+1.5LLa2	Yes
LC56	1.2D+WL90+1.5LLa2	Yes
LC57	1.2D+WL120+1.5LLa2	Yes
LC58	1.2D+WL150+1.5LLa2	Yes
LC59	1.2D-WL0+1.5LLa2	Yes
LC60	1.2D-WL30+1.5LLa2	Yes
LC61	1.2D-WL60+1.5LLa2	Yes
LC62	1.2D-WL90+1.5LLa2	Yes
LC63	1.2D-WL120+1.5LLa2	Yes
LC64	1.2D-WL150+1.5LLa2	Yes
LC65	1.2D+WL0+1.5LLa3	Yes
LC66	1.2D+WL30+1.5LLa3	Yes
LC67	1.2D+WL60+1.5LLa3	Yes
LC68	1.2D+WL90+1.5LLa3	Yes
LC69	1.2D+WL120+1.5LLa3	Yes
LC70	1.2D+WL150+1.5LLa3	Yes
LC71	1.2D-WL0+1.5LLa3	Yes
LC72	1.2D-WL30+1.5LLa3	Yes
LC73	1.2D-WL60+1.5LLa3	Yes
LC74	1.2D-WL90+1.5LLa3	Yes
LC75	1.2D-WL120+1.5LLa3	Yes
LC76	1.2D-WL150+1.5LLa3	Yes
LC77	1.2D+WL0+1.5LLa4	Yes
LC78	1.2D+WL30+1.5LLa4	Yes

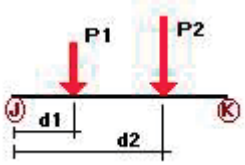
LC79	1.2D+WL60+1.5LLa4	Yes
LC80	1.2D+WL90+1.5LLa4	Yes
LC81	1.2D+WL120+1.5LLa4	Yes
LC82	1.2D+WL150+1.5LLa4	Yes
LC83	1.2D-WL0+1.5LLa4	Yes
LC84	1.2D-WL30+1.5LLa4	Yes
LC85	1.2D-WL60+1.5LLa4	Yes
LC86	1.2D-WL90+1.5LLa4	Yes
LC87	1.2D-WL120+1.5LLa4	Yes
LC88	1.2D-WL150+1.5LLa4	Yes

Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
Wo	4	z	-0.014	-0.014	0.00	No	100.00	Yes
	1	z	-0.017	-0.017	0.00	No	100.00	Yes
	3	z	-0.014	-0.014	0.00	No	100.00	Yes
	2	z	-0.025	-0.025	0.00	No	100.00	Yes
W30	4	z	-0.014	-0.014	0.00	No	100.00	Yes
	1	z	-0.017	-0.017	0.00	No	100.00	Yes
	3	z	-0.014	-0.014	0.00	No	100.00	Yes
	2	z	-0.025	-0.025	0.00	No	100.00	Yes
W60	4	x	-0.014	-0.014	0.00	No	100.00	Yes
	1	x	-0.017	-0.017	0.00	No	100.00	Yes
	3	x	-0.014	-0.014	0.00	No	100.00	Yes
	2	x	-0.025	-0.025	0.00	No	100.00	Yes
W90	4	x	-0.014	-0.014	0.00	No	100.00	Yes
	1	x	-0.017	-0.017	0.00	No	100.00	Yes
	3	x	-0.014	-0.014	0.00	No	100.00	Yes
	2	x	-0.025	-0.025	0.00	No	100.00	Yes
W120	4	x	-0.014	-0.014	0.00	No	100.00	Yes
	1	x	-0.017	-0.017	0.00	No	100.00	Yes
	3	x	-0.014	-0.014	0.00	No	100.00	Yes
	2	x	-0.025	-0.025	0.00	No	100.00	Yes
W150	4	z	0.014	0.014	0.00	No	100.00	Yes
	1	z	0.017	0.017	0.00	No	100.00	Yes
	3	z	0.014	0.014	0.00	No	100.00	Yes
	2	z	0.025	0.025	0.00	No	100.00	Yes
Di	4	y	-0.034	-0.034	0.00	No	100.00	Yes
	1	y	-0.011	-0.011	0.00	No	100.00	Yes
	3	y	-0.034	-0.034	0.00	No	100.00	Yes
	2	y	-0.013	-0.013	0.00	No	100.00	Yes

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
D	1	y	-0.025	1.00	No
		y	-0.025	7.00	No
		y	-0.025	7.50	No
Wo	1	z	-0.41	1.00	No
		z	-0.41	7.00	No
		z	-0.025	7.50	No
W30	1	3	-0.377	1.00	No
		3	-0.377	7.00	No
		3	-0.036	7.50	No
W60	1	3	-0.31	1.00	No
		3	-0.31	7.00	No
		3	-0.03	7.50	No
W90	1	x	-0.276	1.00	No
		x	-0.276	7.00	No
		x	-0.071	7.50	No
W120	1	2	-0.31	1.00	No
		2	-0.31	7.00	No
		2	-0.03	7.50	No
W150	1	2	-0.377	1.00	No
		2	-0.377	7.00	No
		2	-0.036	7.50	No
Di	1	y	-0.155	1.00	No
		y	-0.155	7.00	No
		y	-0.03	7.50	No
WI0	1	z	-0.099	1.00	No
		z	-0.099	7.00	No
		z	-0.012	7.50	No
WI30	1	3	-0.089	1.00	No
		3	-0.089	7.00	No
		3	-0.015	7.50	No
WI60	1	3	-0.077	1.00	No
		3	-0.077	7.00	No
		3	-0.02	7.50	No
WI90	1	x	-0.071	1.00	No
		x	-0.071	7.00	No
		x	-0.023	7.50	No
WI120	1	2	-0.077	1.00	No
		2	-0.077	7.00	No
		2	-0.02	7.50	No
WI150	1	2	-0.089	1.00	No
		2	-0.089	7.00	No
		2	-0.015	7.50	No
WL0	1	z	-0.026	1.00	No
		z	-0.026	7.00	No
		z	-0.002	7.50	No
WL30	1	3	-0.024	1.00	No
		3	-0.024	7.00	No
		3	-0.002	7.50	No
WL60	1	3	-0.02	1.00	No
		3	-0.02	7.00	No
		3	-0.004	7.50	No
WL90	1	x	-0.017	1.00	No
		x	-0.017	7.00	No
		x	-0.004	7.50	No

WL120	1	2	-0.02	1.00	No
		2	-0.02	7.00	No
		2	-0.004	7.50	No
WL150	1	2	-0.024	1.00	No
		2	-0.024	7.00	No
		2	-0.002	7.50	No
LLa1	1	y	-0.25	8.00	No

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
D	Dead Load	No	0.00	-1.00	0.00
Wo	Wind Load (NO ICE)	No	0.00	0.00	0.00
W30	WL 30deg	No	0.00	0.00	0.00
W60	WL 60deg	No	0.00	0.00	0.00
W90	WL 90deg	No	0.00	0.00	0.00
W120	WL 120deg	No	0.00	0.00	0.00
W150	WL 150deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
WI0	WL ICE 0deg	No	0.00	0.00	0.00
WI30	WL ICE 30deg	No	0.00	0.00	0.00
WI60	WL ICE 60deg	No	0.00	0.00	0.00
WI90	WL ICE 90deg	No	0.00	0.00	0.00
WI120	WL ICE 120deg	No	0.00	0.00	0.00
WI150	WL ICE 150deg	No	0.00	0.00	0.00
WL0	WL 30 mph 0deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30deg	No	0.00	0.00	0.00
WL60	WL 30 mph 60deg	No	0.00	0.00	0.00
WL90	WL 30 mph 90deg	No	0.00	0.00	0.00
WL120	WL 30 mph 120deg	No	0.00	0.00	0.00
WL150	WL 30 mph 150deg	No	0.00	0.00	0.00
LL1	250 lb Live Load Center of Mount	No	0.00	0.00	0.00
LL2	250 lb Live Load Right End of Mount	No	0.00	0.00	0.00
LL3	250 lb Live Load Left End of Mount	No	0.00	0.00	0.00
LLa1	250 lb Live Load Antenna 1	No	0.00	0.00	0.00
LLa2	250 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	250 lb Live Load Antenna 3	No	0.00	0.00	0.00
LLa4	250 lb Live Load Antenna 4	No	0.00	0.00	0.00
LC1	1.2D+Wo	Yes	0.00	0.00	0.00
LC2	1.2D+W30	Yes	0.00	0.00	0.00
LC3	1.2D+W60	Yes	0.00	0.00	0.00
LC4	1.2D+W90	Yes	0.00	0.00	0.00
LC5	1.2D+W120	Yes	0.00	0.00	0.00
LC6	1.2D+W150	Yes	0.00	0.00	0.00
LC7	1.2D-Wo	Yes	0.00	0.00	0.00
LC8	1.2D-W30	Yes	0.00	0.00	0.00
LC9	1.2D-W60	Yes	0.00	0.00	0.00
LC10	1.2D-W90	Yes	0.00	0.00	0.00
LC11	1.2D-W120	Yes	0.00	0.00	0.00
LC12	1.2D-W150	Yes	0.00	0.00	0.00
LC13	0.9D+Wo	Yes	0.00	0.00	0.00
LC14	0.9D+W30	Yes	0.00	0.00	0.00
LC15	0.9D+W60	Yes	0.00	0.00	0.00
LC16	0.9D+W90	Yes	0.00	0.00	0.00

LC17	0.9D+W120	Yes	0.00	0.00	0.00
LC18	0.9D+W150	Yes	0.00	0.00	0.00
LC19	0.9D-Wo	Yes	0.00	0.00	0.00
LC20	0.9D-W30	Yes	0.00	0.00	0.00
LC21	0.9D-W60	Yes	0.00	0.00	0.00
LC22	0.9D-W90	Yes	0.00	0.00	0.00
LC23	0.9D-W120	Yes	0.00	0.00	0.00
LC24	0.9D-W150	Yes	0.00	0.00	0.00
LC25	1.2D+Di+WI0	Yes	0.00	0.00	0.00
LC26	1.2D+Di+WI30	Yes	0.00	0.00	0.00
LC27	1.2D+Di+WI60	Yes	0.00	0.00	0.00
LC28	1.2D+Di+WI90	Yes	0.00	0.00	0.00
LC29	1.2D+Di+WI120	Yes	0.00	0.00	0.00
LC30	1.2D+Di+WI150	Yes	0.00	0.00	0.00
LC31	1.2D+Di-WI0	Yes	0.00	0.00	0.00
LC32	1.2D+Di-WI30	Yes	0.00	0.00	0.00
LC33	1.2D+Di-WI60	Yes	0.00	0.00	0.00
LC34	1.2D+Di-WI90	Yes	0.00	0.00	0.00
LC35	1.2D+Di-WI120	Yes	0.00	0.00	0.00
LC36	1.2D+Di-WI150	Yes	0.00	0.00	0.00
LC38	1.2D+1.5LL1	Yes	0.00	0.00	0.00
LC39	1.2D+1.5LL2	Yes	0.00	0.00	0.00
LC40	1.2D+1.5LL3	Yes	0.00	0.00	0.00
LC41	1.2D+WL0+1.5LLa1	Yes	0.00	0.00	0.00
LC42	1.2D+WL30+1.5LLa1	Yes	0.00	0.00	0.00
LC43	1.2D+WL60+1.5LLa1	Yes	0.00	0.00	0.00
LC44	1.2D+WL90+1.5LLa1	Yes	0.00	0.00	0.00
LC45	1.2D+WL120+1.5LLa1	Yes	0.00	0.00	0.00
LC46	1.2D+WL150+1.5LLa1	Yes	0.00	0.00	0.00
LC47	1.2D-WL0+1.5LLa1	Yes	0.00	0.00	0.00
LC48	1.2D-WL30+1.5LLa1	Yes	0.00	0.00	0.00
LC49	1.2D-WL60+1.5LLa1	Yes	0.00	0.00	0.00
LC50	1.2D-WL90+1.5LLa1	Yes	0.00	0.00	0.00
LC51	1.2D-WL120+1.5LLa1	Yes	0.00	0.00	0.00
LC52	1.2D-WL150+1.5LLa1	Yes	0.00	0.00	0.00
LC53	1.2D+WL0+1.5LLa2	Yes	0.00	0.00	0.00
LC54	1.2D+WL30+1.5LLa2	Yes	0.00	0.00	0.00
LC55	1.2D+WL60+1.5LLa2	Yes	0.00	0.00	0.00
LC56	1.2D+WL90+1.5LLa2	Yes	0.00	0.00	0.00
LC57	1.2D+WL120+1.5LLa2	Yes	0.00	0.00	0.00
LC58	1.2D+WL150+1.5LLa2	Yes	0.00	0.00	0.00
LC59	1.2D-WL0+1.5LLa2	Yes	0.00	0.00	0.00
LC60	1.2D-WL30+1.5LLa2	Yes	0.00	0.00	0.00
LC61	1.2D-WL60+1.5LLa2	Yes	0.00	0.00	0.00
LC62	1.2D-WL90+1.5LLa2	Yes	0.00	0.00	0.00
LC63	1.2D-WL120+1.5LLa2	Yes	0.00	0.00	0.00
LC64	1.2D-WL150+1.5LLa2	Yes	0.00	0.00	0.00
LC65	1.2D+WL0+1.5LLa3	Yes	0.00	0.00	0.00
LC66	1.2D+WL30+1.5LLa3	Yes	0.00	0.00	0.00
LC67	1.2D+WL60+1.5LLa3	Yes	0.00	0.00	0.00
LC68	1.2D+WL90+1.5LLa3	Yes	0.00	0.00	0.00
LC69	1.2D+WL120+1.5LLa3	Yes	0.00	0.00	0.00
LC70	1.2D+WL150+1.5LLa3	Yes	0.00	0.00	0.00
LC71	1.2D-WL0+1.5LLa3	Yes	0.00	0.00	0.00
LC72	1.2D-WL30+1.5LLa3	Yes	0.00	0.00	0.00
LC73	1.2D-WL60+1.5LLa3	Yes	0.00	0.00	0.00
LC74	1.2D-WL90+1.5LLa3	Yes	0.00	0.00	0.00
LC75	1.2D-WL120+1.5LLa3	Yes	0.00	0.00	0.00
LC76	1.2D-WL150+1.5LLa3	Yes	0.00	0.00	0.00

LC77	1.2D+WL0+1.5LLa4	Yes	0.00	0.00	0.00
LC78	1.2D+WL30+1.5LLa4	Yes	0.00	0.00	0.00
LC79	1.2D+WL60+1.5LLa4	Yes	0.00	0.00	0.00
LC80	1.2D+WL90+1.5LLa4	Yes	0.00	0.00	0.00
LC81	1.2D+WL120+1.5LLa4	Yes	0.00	0.00	0.00
LC82	1.2D+WL150+1.5LLa4	Yes	0.00	0.00	0.00
LC83	1.2D-WL0+1.5LLa4	Yes	0.00	0.00	0.00
LC84	1.2D-WL30+1.5LLa4	Yes	0.00	0.00	0.00
LC85	1.2D-WL60+1.5LLa4	Yes	0.00	0.00	0.00
LC86	1.2D-WL90+1.5LLa4	Yes	0.00	0.00	0.00
LC87	1.2D-WL120+1.5LLa4	Yes	0.00	0.00	0.00
LC88	1.2D-WL150+1.5LLa4	Yes	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
D	0.00	0.00	0.00
Wo	0.00	0.00	0.00
W30	0.00	0.00	0.00
W60	0.00	0.00	0.00
W90	0.00	0.00	0.00
W120	0.00	0.00	0.00
W150	0.00	0.00	0.00
Di	0.00	0.00	0.00
WI0	0.00	0.00	0.00
WI30	0.00	0.00	0.00
WI60	0.00	0.00	0.00
WI90	0.00	0.00	0.00
WI120	0.00	0.00	0.00
WI150	0.00	0.00	0.00
WL0	0.00	0.00	0.00
WL30	0.00	0.00	0.00
WL60	0.00	0.00	0.00
WL90	0.00	0.00	0.00
WL120	0.00	0.00	0.00
WL150	0.00	0.00	0.00
LL1	0.00	0.00	0.00
LL2	0.00	0.00	0.00
LL3	0.00	0.00	0.00
LLa1	0.00	0.00	0.00
LLa2	0.00	0.00	0.00
LLa3	0.00	0.00	0.00
LLa4	0.00	0.00	0.00
LC1	0.00	0.00	0.00
LC2	0.00	0.00	0.00
LC3	0.00	0.00	0.00
LC4	0.00	0.00	0.00
LC5	0.00	0.00	0.00
LC6	0.00	0.00	0.00
LC7	0.00	0.00	0.00
LC8	0.00	0.00	0.00
LC9	0.00	0.00	0.00
LC10	0.00	0.00	0.00
LC11	0.00	0.00	0.00

LC12	0.00	0.00	0.00
LC13	0.00	0.00	0.00
LC14	0.00	0.00	0.00
LC15	0.00	0.00	0.00
LC16	0.00	0.00	0.00
LC17	0.00	0.00	0.00
LC18	0.00	0.00	0.00
LC19	0.00	0.00	0.00
LC20	0.00	0.00	0.00
LC21	0.00	0.00	0.00
LC22	0.00	0.00	0.00
LC23	0.00	0.00	0.00
LC24	0.00	0.00	0.00
LC25	0.00	0.00	0.00
LC26	0.00	0.00	0.00
LC27	0.00	0.00	0.00
LC28	0.00	0.00	0.00
LC29	0.00	0.00	0.00
LC30	0.00	0.00	0.00
LC31	0.00	0.00	0.00
LC32	0.00	0.00	0.00
LC33	0.00	0.00	0.00
LC34	0.00	0.00	0.00
LC35	0.00	0.00	0.00
LC36	0.00	0.00	0.00
LC38	0.00	0.00	0.00
LC39	0.00	0.00	0.00
LC40	0.00	0.00	0.00
LC41	0.00	0.00	0.00
LC42	0.00	0.00	0.00
LC43	0.00	0.00	0.00
LC44	0.00	0.00	0.00
LC45	0.00	0.00	0.00
LC46	0.00	0.00	0.00
LC47	0.00	0.00	0.00
LC48	0.00	0.00	0.00
LC49	0.00	0.00	0.00
LC50	0.00	0.00	0.00
LC51	0.00	0.00	0.00
LC52	0.00	0.00	0.00
LC53	0.00	0.00	0.00
LC54	0.00	0.00	0.00
LC55	0.00	0.00	0.00
LC56	0.00	0.00	0.00
LC57	0.00	0.00	0.00
LC58	0.00	0.00	0.00
LC59	0.00	0.00	0.00
LC60	0.00	0.00	0.00
LC61	0.00	0.00	0.00
LC62	0.00	0.00	0.00
LC63	0.00	0.00	0.00
LC64	0.00	0.00	0.00
LC65	0.00	0.00	0.00
LC66	0.00	0.00	0.00
LC67	0.00	0.00	0.00
LC68	0.00	0.00	0.00
LC69	0.00	0.00	0.00
LC70	0.00	0.00	0.00
LC71	0.00	0.00	0.00
LC72	0.00	0.00	0.00

LC73	0.00	0.00	0.00
LC74	0.00	0.00	0.00
LC75	0.00	0.00	0.00
LC76	0.00	0.00	0.00
LC77	0.00	0.00	0.00
LC78	0.00	0.00	0.00
LC79	0.00	0.00	0.00
LC80	0.00	0.00	0.00
LC81	0.00	0.00	0.00
LC82	0.00	0.00	0.00
LC83	0.00	0.00	0.00
LC84	0.00	0.00	0.00
LC85	0.00	0.00	0.00
LC86	0.00	0.00	0.00
LC87	0.00	0.00	0.00
LC88	0.00	0.00	0.00

Current Date: 4/3/2020 9:21 AM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1175\LTE 4C-5C\CT1175 (LTE 4C-5C).retx\

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

LC1=1.2D+Wo
LC2=1.2D+W30
LC3=1.2D+W60
LC4=1.2D+W90
LC5=1.2D+W120
LC6=1.2D+W150
LC7=1.2D-Wo
LC8=1.2D-W30
LC9=1.2D-W60
LC10=1.2D-W90
LC11=1.2D-W120
LC12=1.2D-W150
LC13=0.9D+Wo
LC14=0.9D+W30
LC15=0.9D+W60
LC16=0.9D+W90
LC17=0.9D+W120
LC18=0.9D+W150
LC19=0.9D-Wo
LC20=0.9D-W30
LC21=0.9D-W60
LC22=0.9D-W90
LC23=0.9D-W120
LC24=0.9D-W150
LC25=1.2D+Di+WI0
LC26=1.2D+Di+WI30
LC27=1.2D+Di+WI60
LC28=1.2D+Di+WI90
LC29=1.2D+Di+WI120
LC30=1.2D+Di+WI150
LC31=1.2D+Di-WI0
LC32=1.2D+Di-WI30
LC33=1.2D+Di-WI60
LC34=1.2D+Di-WI90
LC35=1.2D+Di-WI120
LC36=1.2D+Di-WI150
LC38=1.2D+1.5LL1
LC39=1.2D+1.5LL2
LC40=1.2D+1.5LL3
LC41=1.2D+WL0+1.5LLa1
LC42=1.2D+WL30+1.5LLa1
LC43=1.2D+WL60+1.5LLa1
LC44=1.2D+WL90+1.5LLa1
LC45=1.2D+WL120+1.5LLa1
LC46=1.2D+WL150+1.5LLa1
LC47=1.2D-WL0+1.5LLa1
LC48=1.2D-WL30+1.5LLa1
LC49=1.2D-WL60+1.5LLa1
LC50=1.2D-WL90+1.5LLa1
LC51=1.2D-WL120+1.5LLa1
LC52=1.2D-WL150+1.5LLa1
LC53=1.2D+WL0+1.5LLa2

LC54=1.2D+WL30+1.5LLa2
LC55=1.2D+WL60+1.5LLa2
LC56=1.2D+WL90+1.5LLa2
LC57=1.2D+WL120+1.5LLa2
LC58=1.2D+WL150+1.5LLa2
LC59=1.2D-WL0+1.5LLa2
LC60=1.2D-WL30+1.5LLa2
LC61=1.2D-WL60+1.5LLa2
LC62=1.2D-WL90+1.5LLa2
LC63=1.2D-WL120+1.5LLa2
LC64=1.2D-WL150+1.5LLa2
LC65=1.2D+WL0+1.5LLa3
LC66=1.2D+WL30+1.5LLa3
LC67=1.2D+WL60+1.5LLa3
LC68=1.2D+WL90+1.5LLa3
LC69=1.2D+WL120+1.5LLa3
LC70=1.2D+WL150+1.5LLa3
LC71=1.2D-WL0+1.5LLa3
LC72=1.2D-WL30+1.5LLa3
LC73=1.2D-WL60+1.5LLa3
LC74=1.2D-WL90+1.5LLa3
LC75=1.2D-WL120+1.5LLa3
LC76=1.2D-WL150+1.5LLa3
LC77=1.2D+WL0+1.5LLa4
LC78=1.2D+WL30+1.5LLa4
LC79=1.2D+WL60+1.5LLa4
LC80=1.2D+WL90+1.5LLa4
LC81=1.2D+WL120+1.5LLa4
LC82=1.2D+WL150+1.5LLa4
LC83=1.2D-WL0+1.5LLa4
LC84=1.2D-WL30+1.5LLa4
LC85=1.2D-WL60+1.5LLa4
LC86=1.2D-WL90+1.5LLa4
LC87=1.2D-WL120+1.5LLa4
LC88=1.2D-WL150+1.5LLa4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	C 11-5/8x2-1/2x3/16	**4**	LC31 at 100.00%	0.15	With warnings	Sec. C3.3
		3	LC41 at 0.00%	**0.16**	**With warnings**	Sec. C3.3
	PIPE 2x0.154	**1**	LC1 at 68.75%	**0.82**	**OK**	Eq. H1-1b
	PIPE 3x0.216	**2**	LC10 at 91.67%	**0.10**	**OK**	Eq. H1-1b

Current Date: 4/3/2020 9:20 AM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1175\LTE 4C-5C\CT1175 (LTE 4C-5C).retx\

Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
1	0.00	-1.75	0.00	0
2	0.00	4.00	0.25	0
3	0.00	-4.00	0.25	0
4	0.00	1.75	0.00	0
5	0.00	1.75	-0.6667	0
6	0.00	-1.75	-0.6667	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
5	1	1	1	0	0	0
6	1	1	1	0	0	0

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	lg factor
4	6	1		C 11-5/8x2-1/2x3/16	A36	0.00	0.00	0.00
1	2	3		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
3	4	5		C 11-5/8x2-1/2x3/16	A36	0.00	0.00	0.00
2	4	1		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
4	270.00	0	0.00	0.00	0.00
1	315.00	0	0.00	0.00	0.00
3	90.00	0	0.00	0.00	0.00

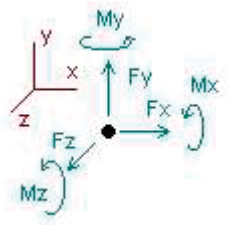

N2
N5
N4
N6
N1
N3


Y
Z
X

Current Date: 4/3/2020 9:21 AM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT1175\LTE 4C-5C\CT1175 (LTE 4C-5C).retx\

Analysis result

Reactions



Direction of positive forces and moments

	Forces [Kip]			Moments [Kip*ft]		
Node	**FX**	**FY**	**FZ**	**MX**	**MY**	**MZ**
Condition **D=Dead Load**						
5	0.00000	0.07208	-0.03337	0.00000	0.00000	0.00000
6	0.00000	0.07101	0.03337	0.00000	0.00000	0.00000
SUM	0.00000	0.14309	0.00000	0.00000	0.00000	0.00000
Condition **Wo=Wind Load (NO ICE)**						
5	0.00000	-0.01403	0.50925	0.00000	0.00000	0.00000
6	0.00000	0.01403	0.55925	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	1.06850	0.00000	0.00000	0.00000
Condition **W30=WL 30deg**						
5	-0.00221	-0.01945	0.36560	0.00000	0.00000	0.00000
6	0.00221	0.01945	0.41651	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	0.78211	0.00000	0.00000	0.00000
Condition **W60=WL 60deg**						
5	0.01603	0.00964	0.20860	0.00000	0.00000	0.00000
6	0.01971	-0.00964	0.25102	0.00000	0.00000	0.00000
SUM	0.03574	0.00000	0.45962	0.00000	0.00000	0.00000
Condition **W90=WL 90deg**						
5	0.01170	0.00000	0.00000	0.00000	0.00000	0.00000
6	0.02404	0.00000	0.00000	0.00000	0.00000	0.00000
SUM	0.03574	0.00000	0.00000	0.00000	0.00000	0.00000
Condition **W120=WL 120deg**						
5	0.01603	-0.00964	-0.20860	0.00000	0.00000	0.00000
6	0.01971	0.00964	-0.25102	0.00000	0.00000	0.00000
SUM	0.03574	0.00000	-0.45962	0.00000	0.00000	0.00000

Condition **W150=WL 150deg**

5	-0.00221	0.01945	-0.36560	0.00000	0.00000	0.00000
6	0.00221	-0.01945	-0.41651	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	-0.78211	0.00000	0.00000	0.00000

Condition **Di=Ice Load**

5	0.00000	0.19331	-0.09337	0.00000	0.00000	0.00000
6	0.00000	0.19202	0.09337	0.00000	0.00000	0.00000
SUM	0.00000	0.38533	0.00000	0.00000	0.00000	0.00000

Condition **WI0=WL ICE 0deg**

5	0.00000	0.00450	0.09300	0.00000	0.00000	0.00000
6	0.00000	-0.00450	0.11700	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	0.21000	0.00000	0.00000	0.00000

Condition **WI30=WL ICE 30deg**

5	-0.00092	0.00305	0.05763	0.00000	0.00000	0.00000
6	0.00092	-0.00305	0.07884	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	0.13647	0.00000	0.00000	0.00000

Condition **WI60=WL ICE 60deg**

5	-0.00123	0.00294	0.04738	0.00000	0.00000	0.00000
6	0.00123	-0.00294	0.07566	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	0.12304	0.00000	0.00000	0.00000

Condition **WI90=WL ICE 90deg**

5	-0.00200	0.00000	0.00000	0.00000	0.00000	0.00000
6	0.00200	0.00000	0.00000	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Condition **WI120=WL ICE 120deg**

5	-0.00123	-0.00294	-0.04738	0.00000	0.00000	0.00000
6	0.00123	0.00294	-0.07566	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	-0.12304	0.00000	0.00000	0.00000

Condition **WI150=WL ICE 150deg**

5	-0.00092	-0.00305	-0.05763	0.00000	0.00000	0.00000
6	0.00092	0.00305	-0.07884	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	-0.13647	0.00000	0.00000	0.00000

Condition **WL0=WL 30 mph 0deg**

5	0.00000	0.00111	0.02500	0.00000	0.00000	0.00000
6	0.00000	-0.00111	0.02900	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	0.05400	0.00000	0.00000	0.00000

Condition **WL30=WL 30 mph 30deg**

5	-0.00012	0.00073	0.01626	0.00000	0.00000	0.00000
6	0.00012	-0.00073	0.01909	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	0.03536	0.00000	0.00000	0.00000

Condition **WL60=WL 30 mph 60deg**

5	-0.00025	0.00071	0.01273	0.00000	0.00000	0.00000
6	0.00025	-0.00071	0.01838	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	0.03111	0.00000	0.00000	0.00000

Condition **WL90=WL 30 mph 90deg**

5	-0.00035	0.00000	0.00000	0.00000	0.00000	0.00000
6	0.00035	0.00000	0.00000	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Condition **WL120=WL 30 mph 120deg**

5	-0.00025	-0.00071	-0.01273	0.00000	0.00000	0.00000
6	0.00025	0.00071	-0.01838	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	-0.03111	0.00000	0.00000	0.00000

Condition **WL150=WL 30 mph 150deg**

5	-0.00012	-0.00073	-0.01626	0.00000	0.00000	0.00000
6	0.00012	0.00073	-0.01909	0.00000	0.00000	0.00000
SUM	0.00000	0.00000	-0.03536	0.00000	0.00000	0.00000

Condition **LL1=250 lb Live Load Center of Mount**

SUM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Condition **LL2=250 lb Live Load Right End of Mount**

SUM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Condition **LL3=250 lb Live Load Left End of Mount**

SUM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Condition **LLa1=250 lb Live Load Antenna 1**

5	0.00000	0.13037	-0.06548	0.00000	0.00000	0.00000
6	0.00000	0.11963	0.06548	0.00000	0.00000	0.00000
SUM	0.00000	0.25000	0.00000	0.00000	0.00000	0.00000

Condition **LLa2=250 lb Live Load Antenna 2**

SUM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Condition **LLa3=250 lb Live Load Antenna 3**

SUM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Condition **LLa4=250 lb Live Load Antenna 4**

SUM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Condition **LC1=1.2D+Wo**

5	0.00000	0.07247	0.46920	0.00000	0.00000	0.00000
6	0.00000	0.09924	0.59930	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	1.06850	0.00000	0.00000	0.00000

Condition **LC2=1.2D+W30**

5	-0.00221	0.06704	0.32555	0.00000	0.00000	0.00000
6	0.00221	0.10466	0.45656	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.78211	0.00000	0.00000	0.00000

Condition **LC3=1.2D+W60**

5	0.01603	0.09614	0.16855	0.00000	0.00000	0.00000
6	0.01971	0.07557	0.29107	0.00000	0.00000	0.00000
SUM	0.03574	0.17171	0.45962	0.00000	0.00000	0.00000

Condition **LC4=1.2D+W90**

5	0.01170	0.08650	-0.04005	0.00000	0.00000	0.00000
6	0.02404	0.08521	0.04005	0.00000	0.00000	0.00000
SUM	0.03574	0.17171	0.00000	0.00000	0.00000	0.00000

Condition **LC5=1.2D+W120**

5	0.01603	0.07685	-0.24865	0.00000	0.00000	0.00000
6	0.01971	0.09485	-0.21097	0.00000	0.00000	0.00000
SUM	0.03574	0.17171	-0.45962	0.00000	0.00000	0.00000

Condition **LC6=1.2D+W150**

5	-0.00221	0.10595	-0.40565	0.00000	0.00000	0.00000
6	0.00221	0.06575	-0.37646	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.78211	0.00000	0.00000	0.00000

Condition **LC7=1.2D-Wo**

5	0.00000	0.10053	-0.54930	0.00000	0.00000	0.00000
6	0.00000	0.07118	-0.51920	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-1.06850	0.00000	0.00000	0.00000

Condition **LC8=1.2D-W30**

5	0.00221	0.10595	-0.40565	0.00000	0.00000	0.00000
6	-0.00221	0.06575	-0.37646	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.78211	0.00000	0.00000	0.00000

Condition **LC9=1.2D-W60**

5	-0.01603	0.07685	-0.24865	0.00000	0.00000	0.00000
6	-0.01971	0.09485	-0.21097	0.00000	0.00000	0.00000
SUM	-0.03574	0.17171	-0.45962	0.00000	0.00000	0.00000

Condition **LC10=1.2D-W90**

5	-0.01170	0.08650	-0.04005	0.00000	0.00000	0.00000
6	-0.02404	0.08521	0.04005	0.00000	0.00000	0.00000
SUM	-0.03574	0.17171	0.00000	0.00000	0.00000	0.00000

Condition **LC11=1.2D-W120**

5	-0.01603	0.09614	0.16855	0.00000	0.00000	0.00000
6	-0.01971	0.07557	0.29107	0.00000	0.00000	0.00000
SUM	-0.03574	0.17171	0.45962	0.00000	0.00000	0.00000

Condition **LC12=1.2D-W150**

5	0.00221	0.06704	0.32555	0.00000	0.00000	0.00000
6	-0.00221	0.10466	0.45656	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.78211	0.00000	0.00000	0.00000

Condition **LC13=0.9D+Wo**

5	0.00000	0.05084	0.47921	0.00000	0.00000	0.00000
6	0.00000	0.07794	0.58929	0.00000	0.00000	0.00000
SUM	0.00000	0.12878	1.06850	0.00000	0.00000	0.00000

Condition **LC14=0.9D+W30**

5	-0.00221	0.04542	0.33556	0.00000	0.00000	0.00000
6	0.00221	0.08336	0.44655	0.00000	0.00000	0.00000
SUM	0.00000	0.12878	0.78211	0.00000	0.00000	0.00000

Condition **LC15=0.9D+W60**

5	0.01603	0.07452	0.17856	0.00000	0.00000	0.00000
6	0.01971	0.05426	0.28106	0.00000	0.00000	0.00000
SUM	0.03574	0.12878	0.45962	0.00000	0.00000	0.00000

Condition **LC16=0.9D+W90**

5	0.01170	0.06487	-0.03004	0.00000	0.00000	0.00000
6	0.02404	0.06391	0.03004	0.00000	0.00000	0.00000
SUM	0.03574	0.12878	0.00000	0.00000	0.00000	0.00000

Condition **LC17=0.9D+W120**

5	0.01603	0.05523	-0.23863	0.00000	0.00000	0.00000
6	0.01971	0.07355	-0.22099	0.00000	0.00000	0.00000
SUM	0.03574	0.12878	-0.45962	0.00000	0.00000	0.00000

Condition **LC18=0.9D+W150**

5	-0.00221	0.08433	-0.39564	0.00000	0.00000	0.00000
6	0.00221	0.04445	-0.38648	0.00000	0.00000	0.00000
SUM	0.00000	0.12878	-0.78211	0.00000	0.00000	0.00000

Condition **LC19=0.9D-Wo**

5	0.00000	0.07890	-0.53929	0.00000	0.00000	0.00000
6	0.00000	0.04988	-0.52921	0.00000	0.00000	0.00000
SUM	0.00000	0.12878	-1.06850	0.00000	0.00000	0.00000

Condition **LC20=0.9D-W30**

5	0.00221	0.08433	-0.39564	0.00000	0.00000	0.00000
6	-0.00221	0.04445	-0.38648	0.00000	0.00000	0.00000
SUM	0.00000	0.12878	-0.78211	0.00000	0.00000	0.00000

Condition **LC21=0.9D-W60**

5	-0.01603	0.05523	-0.23863	0.00000	0.00000	0.00000
6	-0.01971	0.07355	-0.22099	0.00000	0.00000	0.00000
SUM	-0.03574	0.12878	-0.45962	0.00000	0.00000	0.00000

Condition **LC22=0.9D-W90**

5	-0.01170	0.06487	-0.03004	0.00000	0.00000	0.00000
6	-0.02404	0.06391	0.03004	0.00000	0.00000	0.00000
SUM	-0.03574	0.12878	0.00000	0.00000	0.00000	0.00000

Condition **LC23=0.9D-W120**

5	-0.01603	0.07452	0.17856	0.00000	0.00000	0.00000
6	-0.01971	0.05426	0.28106	0.00000	0.00000	0.00000
SUM	-0.03574	0.12878	0.45962	0.00000	0.00000	0.00000

Condition **LC24=0.9D-W150**

5	0.00221	0.04542	0.33556	0.00000	0.00000	0.00000
6	-0.00221	0.08336	0.44655	0.00000	0.00000	0.00000
SUM	0.00000	0.12878	0.78211	0.00000	0.00000	0.00000

Condition **LC25=1.2D+Di+WI0**

5	0.00000	0.28431	-0.04041	0.00000	0.00000	0.00000
6	0.00000	0.27273	0.25041	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	0.21000	0.00000	0.00000	0.00000

Condition **LC26=1.2D+Di+WI30**

5	-0.00092	0.28286	-0.07579	0.00000	0.00000	0.00000
6	0.00092	0.27418	0.21226	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	0.13647	0.00000	0.00000	0.00000

Condition **LC27=1.2D+Di+WI60**

5	-0.00123	0.28275	-0.08604	0.00000	0.00000	0.00000
6	0.00123	0.27429	0.20908	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	0.12304	0.00000	0.00000	0.00000

Condition **LC28=1.2D+Di+WI90**

5	-0.00200	0.27981	-0.13341	0.00000	0.00000	0.00000
6	0.00200	0.27723	0.13341	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	0.00000	0.00000	0.00000	0.00000

Condition **LC29=1.2D+Di+WI120**

5	-0.00123	0.27686	-0.18079	0.00000	0.00000	0.00000
6	0.00123	0.28017	0.05775	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	-0.12304	0.00000	0.00000	0.00000

Condition **LC30=1.2D+Di+WI150**

5	-0.00092	0.27676	-0.19104	0.00000	0.00000	0.00000
6	0.00092	0.28028	0.05457	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	-0.13647	0.00000	0.00000	0.00000

Condition **LC31=1.2D+Di-WI0**

5	0.00000	0.27530	-0.22641	0.00000	0.00000	0.00000
6	0.00000	0.28173	0.01641	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	-0.21000	0.00000	0.00000	0.00000

Condition **LC32=1.2D+Di-WI30**

5	0.00092	0.27676	-0.19104	0.00000	0.00000	0.00000
6	-0.00092	0.28028	0.05457	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	-0.13647	0.00000	0.00000	0.00000

Condition **LC33=1.2D+Di-WI60**

5	0.00123	0.27686	-0.18079	0.00000	0.00000	0.00000
6	-0.00123	0.28017	0.05775	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	-0.12304	0.00000	0.00000	0.00000

Condition **LC34=1.2D+Di-WI90**

5	0.00200	0.27981	-0.13341	0.00000	0.00000	0.00000
6	-0.00200	0.27723	0.13341	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	0.00000	0.00000	0.00000	0.00000

Condition **LC35=1.2D+Di-WI120**

5	0.00123	0.28275	-0.08604	0.00000	0.00000	0.00000
6	-0.00123	0.27429	0.20908	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	0.12304	0.00000	0.00000	0.00000

Condition **LC36=1.2D+Di-WI150**

5	0.00092	0.28286	-0.07579	0.00000	0.00000	0.00000
6	-0.00092	0.27418	0.21226	0.00000	0.00000	0.00000
SUM	0.00000	0.55704	0.13647	0.00000	0.00000	0.00000

Condition **LC38=1.2D+1.5LL1**

5	0.00000	0.08650	-0.04005	0.00000	0.00000	0.00000
6	0.00000	0.08521	0.04005	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.00000	0.00000	0.00000	0.00000

Condition **LC39=1.2D+1.5LL2**

5	0.00000	0.08650	-0.04005	0.00000	0.00000	0.00000
6	0.00000	0.08521	0.04005	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.00000	0.00000	0.00000	0.00000

Condition **LC40=1.2D+1.5LL3**

5	0.00000	0.08650	-0.04005	0.00000	0.00000	0.00000
6	0.00000	0.08521	0.04005	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.00000	0.00000	0.00000	0.00000

Condition **LC41=1.2D+WL0+1.5LLa1**

5	0.00000	0.28316	-0.11326	0.00000	0.00000	0.00000
6	0.00000	0.26354	0.16726	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	0.05400	0.00000	0.00000	0.00000

Condition **LC42=1.2D+WL30+1.5LLa1**

5	-0.00012	0.28278	-0.12200	0.00000	0.00000	0.00000
6	0.00012	0.26392	0.15736	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	0.03536	0.00000	0.00000	0.00000

Condition **LC43=1.2D+WL60+1.5LLa1**

5	-0.00025	0.28276	-0.12554	0.00000	0.00000	0.00000
6	0.00025	0.26394	0.15665	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	0.03111	0.00000	0.00000	0.00000

Condition **LC44=1.2D+WL90+1.5LLa1**

5	-0.00035	0.28205	-0.13826	0.00000	0.00000	0.00000
6	0.00035	0.26465	0.13826	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	0.00000	0.00000	0.00000	0.00000

Condition **LC45=1.2D+WL120+1.5LLa1**

5	-0.00025	0.28134	-0.15099	0.00000	0.00000	0.00000
6	0.00025	0.26537	0.11988	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	-0.03111	0.00000	0.00000	0.00000

Condition **LC46=1.2D+WL150+1.5LLa1**

5	-0.00012	0.28132	-0.15453	0.00000	0.00000	0.00000
6	0.00012	0.26539	0.11917	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	-0.03536	0.00000	0.00000	0.00000

Condition **LC47=1.2D-WL0+1.5LLa1**

5	0.00000	0.28094	-0.16326	0.00000	0.00000	0.00000
6	0.00000	0.26577	0.10926	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	-0.05400	0.00000	0.00000	0.00000

Condition **LC48=1.2D-WL30+1.5LLa1**

5	0.00012	0.28132	-0.15453	0.00000	0.00000	0.00000
6	-0.00012	0.26539	0.11917	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	-0.03536	0.00000	0.00000	0.00000

Condition **LC49=1.2D-WL60+1.5LLa1**

5	0.00025	0.28134	-0.15099	0.00000	0.00000	0.00000
6	-0.00025	0.26537	0.11988	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	-0.03111	0.00000	0.00000	0.00000

Condition **LC50=1.2D-WL90+1.5LLa1**

5	0.00035	0.28205	-0.13826	0.00000	0.00000	0.00000
6	-0.00035	0.26465	0.13826	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	0.00000	0.00000	0.00000	0.00000

Condition **LC51=1.2D-WL120+1.5LLa1**

5	0.00025	0.28276	-0.12554	0.00000	0.00000	0.00000
6	-0.00025	0.26394	0.15665	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	0.03111	0.00000	0.00000	0.00000

Condition **LC52=1.2D-WL150+1.5LLa1**

5	0.00012	0.28278	-0.12200	0.00000	0.00000	0.00000
6	-0.00012	0.26392	0.15736	0.00000	0.00000	0.00000
SUM	0.00000	0.54671	0.03536	0.00000	0.00000	0.00000

Condition **LC53=1.2D+WL0+1.5LLa2**

5	0.00000	0.08761	-0.01505	0.00000	0.00000	0.00000
6	0.00000	0.08410	0.06905	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.05400	0.00000	0.00000	0.00000

Condition **LC54=1.2D+WL30+1.5LLa2**

5	-0.00012	0.08723	-0.02379	0.00000	0.00000	0.00000
6	0.00012	0.08448	0.05914	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03536	0.00000	0.00000	0.00000

Condition **LC55=1.2D+WL60+1.5LLa2**

5	-0.00025	0.08721	-0.02732	0.00000	0.00000	0.00000
6	0.00025	0.08450	0.05843	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03111	0.00000	0.00000	0.00000

Condition **LC56=1.2D+WL90+1.5LLa2**

5	-0.00035	0.08650	-0.04005	0.00000	0.00000	0.00000
6	0.00035	0.08521	0.04005	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.00000	0.00000	0.00000	0.00000

Condition **LC57=1.2D+WL120+1.5LLa2**

5	-0.00025	0.08578	-0.05278	0.00000	0.00000	0.00000
6	0.00025	0.08592	0.02166	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03111	0.00000	0.00000	0.00000

Condition **LC58=1.2D+WL150+1.5LLa2**

5	-0.00012	0.08576	-0.05631	0.00000	0.00000	0.00000
6	0.00012	0.08594	0.02096	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03536	0.00000	0.00000	0.00000

Condition **LC59=1.2D-WL0+1.5LLa2**

5	0.00000	0.08539	-0.06505	0.00000	0.00000	0.00000
6	0.00000	0.08632	0.01105	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.05400	0.00000	0.00000	0.00000

Condition **LC60=1.2D-WL30+1.5LLa2**

5	0.00012	0.08576	-0.05631	0.00000	0.00000	0.00000
6	-0.00012	0.08594	0.02096	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03536	0.00000	0.00000	0.00000

Condition **LC61=1.2D-WL60+1.5LLa2**

5	0.00025	0.08578	-0.05278	0.00000	0.00000	0.00000
6	-0.00025	0.08592	0.02166	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03111	0.00000	0.00000	0.00000

Condition **LC62=1.2D-WL90+1.5LLa2**

5	0.00035	0.08650	-0.04005	0.00000	0.00000	0.00000
6	-0.00035	0.08521	0.04005	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.00000	0.00000	0.00000	0.00000

Condition **LC63=1.2D-WL120+1.5LLa2**

5	0.00025	0.08721	-0.02732	0.00000	0.00000	0.00000
6	-0.00025	0.08450	0.05843	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03111	0.00000	0.00000	0.00000

Condition **LC64=1.2D-WL150+1.5LLa2**

5	0.00012	0.08723	-0.02379	0.00000	0.00000	0.00000
6	-0.00012	0.08448	0.05914	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03536	0.00000	0.00000	0.00000

Condition **LC65=1.2D+WL0+1.5LLa3**

5	0.00000	0.08761	-0.01505	0.00000	0.00000	0.00000
6	0.00000	0.08410	0.06905	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.05400	0.00000	0.00000	0.00000

Condition **LC66=1.2D+WL30+1.5LLa3**

5	-0.00012	0.08723	-0.02379	0.00000	0.00000	0.00000
6	0.00012	0.08448	0.05914	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03536	0.00000	0.00000	0.00000

Condition **LC67=1.2D+WL60+1.5LLa3**

5	-0.00025	0.08721	-0.02732	0.00000	0.00000	0.00000
6	0.00025	0.08450	0.05843	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03111	0.00000	0.00000	0.00000

Condition **LC68=1.2D+WL90+1.5LLa3**

5	-0.00035	0.08650	-0.04005	0.00000	0.00000	0.00000
6	0.00035	0.08521	0.04005	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.00000	0.00000	0.00000	0.00000

Condition **LC69=1.2D+WL120+1.5LLa3**

5	-0.00025	0.08578	-0.05278	0.00000	0.00000	0.00000
6	0.00025	0.08592	0.02166	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03111	0.00000	0.00000	0.00000

Condition **LC70=1.2D+WL150+1.5LLa3**

5	-0.00012	0.08576	-0.05631	0.00000	0.00000	0.00000
6	0.00012	0.08594	0.02096	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03536	0.00000	0.00000	0.00000

Condition **LC71=1.2D-WL0+1.5LLa3**

5	0.00000	0.08539	-0.06505	0.00000	0.00000	0.00000
6	0.00000	0.08632	0.01105	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.05400	0.00000	0.00000	0.00000

Condition **LC72=1.2D-WL30+1.5LLa3**

5	0.00012	0.08576	-0.05631	0.00000	0.00000	0.00000
6	-0.00012	0.08594	0.02096	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03536	0.00000	0.00000	0.00000

Condition **LC73=1.2D-WL60+1.5LLa3**

5	0.00025	0.08578	-0.05278	0.00000	0.00000	0.00000
6	-0.00025	0.08592	0.02166	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03111	0.00000	0.00000	0.00000

Condition **LC74=1.2D-WL90+1.5LLa3**

5	0.00035	0.08650	-0.04005	0.00000	0.00000	0.00000
6	-0.00035	0.08521	0.04005	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.00000	0.00000	0.00000	0.00000

Condition **LC75=1.2D-WL120+1.5LLa3**

5	0.00025	0.08721	-0.02732	0.00000	0.00000	0.00000
6	-0.00025	0.08450	0.05843	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03111	0.00000	0.00000	0.00000

Condition **LC76=1.2D-WL150+1.5LLa3**

5	0.00012	0.08723	-0.02379	0.00000	0.00000	0.00000
6	-0.00012	0.08448	0.05914	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03536	0.00000	0.00000	0.00000

Condition **LC77=1.2D+WL0+1.5LLa4**

5	0.00000	0.08761	-0.01505	0.00000	0.00000	0.00000
6	0.00000	0.08410	0.06905	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.05400	0.00000	0.00000	0.00000

Condition **LC78=1.2D+WL30+1.5LLa4**

5	-0.00012	0.08723	-0.02379	0.00000	0.00000	0.00000
6	0.00012	0.08448	0.05914	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03536	0.00000	0.00000	0.00000

Condition **LC79=1.2D+WL60+1.5LLa4**

5	-0.00025	0.08721	-0.02732	0.00000	0.00000	0.00000
6	0.00025	0.08450	0.05843	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03111	0.00000	0.00000	0.00000

Condition **LC80=1.2D+WL90+1.5LLa4**

5	-0.00035	0.08650	-0.04005	0.00000	0.00000	0.00000
6	0.00035	0.08521	0.04005	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.00000	0.00000	0.00000	0.00000

Condition **LC81=1.2D+WL120+1.5LLa4**

5	-0.00025	0.08578	-0.05278	0.00000	0.00000	0.00000
6	0.00025	0.08592	0.02166	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03111	0.00000	0.00000	0.00000

Condition **LC82=1.2D+WL150+1.5LLa4**

5	-0.00012	0.08576	-0.05631	0.00000	0.00000	0.00000
6	0.00012	0.08594	0.02096	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03536	0.00000	0.00000	0.00000

Condition **LC83=1.2D-WL0+1.5LLa4**

5	0.00000	0.08539	-0.06505	0.00000	0.00000	0.00000
6	0.00000	0.08632	0.01105	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.05400	0.00000	0.00000	0.00000

Condition **LC84=1.2D-WL30+1.5LLa4**

5	0.00012	0.08576	-0.05631	0.00000	0.00000	0.00000
6	-0.00012	0.08594	0.02096	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03536	0.00000	0.00000	0.00000

Condition **LC85=1.2D-WL60+1.5LLa4**

5	0.00025	0.08578	-0.05278	0.00000	0.00000	0.00000
6	-0.00025	0.08592	0.02166	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	-0.03111	0.00000	0.00000	0.00000

Condition **LC86=1.2D-WL90+1.5LLa4**

5	0.00035	0.08650	-0.04005	0.00000	0.00000	0.00000
6	-0.00035	0.08521	0.04005	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.00000	0.00000	0.00000	0.00000

Condition **LC87=1.2D-WL120+1.5LLa4**

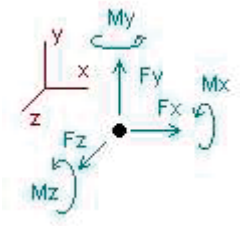
5	0.00025	0.08721	-0.02732	0.00000	0.00000	0.00000
6	-0.00025	0.08450	0.05843	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03111	0.00000	0.00000	0.00000

Condition **LC88=1.2D-WL150+1.5LLa4**

5	0.00012	0.08723	-0.02379	0.00000	0.00000	0.00000
6	-0.00012	0.08448	0.05914	0.00000	0.00000	0.00000
SUM	0.00000	0.17171	0.03536	0.00000	0.00000	0.00000

Envelope for nodal reactions

Note.- **Ic** is the controlling load condition



Direction of positive forces and moments

Envelope of nodal reactions for :

D=Dead Load
Wo=Wind Load (NO ICE)
W30=WL 30deg
W60=WL 60deg
W90=WL 90deg
W120=WL 120deg
W150=WL 150deg

Di=Ice Load
WI0=WL ICE 0deg
WI30=WL ICE 30deg
WI60=WL ICE 60deg
WI90=WL ICE 90deg
WI120=WL ICE 120deg
WI150=WL ICE 150deg
WL0=WL 30 mph 0deg
WL30=WL 30 mph 30deg
WL60=WL 30 mph 60deg
WL90=WL 30 mph 90deg
WL120=WL 30 mph 120deg
WL150=WL 30 mph 150deg
LL1=250 lb Live Load Center of Mount
LL2=250 lb Live Load Right End of Mount
LL3=250 lb Live Load Left End of Mount
LLa1=250 lb Live Load Antenna 1
LLa2=250 lb Live Load Antenna 2
LLa3=250 lb Live Load Antenna 3
LLa4=250 lb Live Load Antenna 4
LC1=1.2D+Wo
LC2=1.2D+W30
LC3=1.2D+W60
LC4=1.2D+W90
LC5=1.2D+W120
LC6=1.2D+W150
LC7=1.2D-Wo
LC8=1.2D-W30
LC9=1.2D-W60
LC10=1.2D-W90
LC11=1.2D-W120
LC12=1.2D-W150
LC13=0.9D+Wo
LC14=0.9D+W30
LC15=0.9D+W60
LC16=0.9D+W90
LC17=0.9D+W120
LC18=0.9D+W150
LC19=0.9D-Wo
LC20=0.9D-W30
LC21=0.9D-W60
LC22=0.9D-W90
LC23=0.9D-W120
LC24=0.9D-W150
LC25=1.2D+Di+WI0
LC26=1.2D+Di+WI30
LC27=1.2D+Di+WI60
LC28=1.2D+Di+WI90
LC29=1.2D+Di+WI120
LC30=1.2D+Di+WI150
LC31=1.2D+Di-WI0
LC32=1.2D+Di-WI30
LC33=1.2D+Di-WI60
LC34=1.2D+Di-WI90
LC35=1.2D+Di-WI120
LC36=1.2D+Di-WI150
LC38=1.2D+1.5LL1
LC39=1.2D+1.5LL2
LC40=1.2D+1.5LL3
LC41=1.2D+WL0+1.5LLa1
LC42=1.2D+WL30+1.5LLa1
LC43=1.2D+WL60+1.5LLa1
LC44=1.2D+WL90+1.5LLa1
LC45=1.2D+WL120+1.5LLa1

LC46=1.2D+WL150+1.5LLa1
LC47=1.2D-WL0+1.5LLa1
LC48=1.2D-WL30+1.5LLa1
LC49=1.2D-WL60+1.5LLa1
LC50=1.2D-WL90+1.5LLa1
LC51=1.2D-WL120+1.5LLa1
LC52=1.2D-WL150+1.5LLa1
LC53=1.2D+WL0+1.5LLa2
LC54=1.2D+WL30+1.5LLa2
LC55=1.2D+WL60+1.5LLa2
LC56=1.2D+WL90+1.5LLa2
LC57=1.2D+WL120+1.5LLa2
LC58=1.2D+WL150+1.5LLa2
LC59=1.2D-WL0+1.5LLa2
LC60=1.2D-WL30+1.5LLa2
LC61=1.2D-WL60+1.5LLa2
LC62=1.2D-WL90+1.5LLa2
LC63=1.2D-WL120+1.5LLa2
LC64=1.2D-WL150+1.5LLa2
LC65=1.2D+WL0+1.5LLa3
LC66=1.2D+WL30+1.5LLa3
LC67=1.2D+WL60+1.5LLa3
LC68=1.2D+WL90+1.5LLa3
LC69=1.2D+WL120+1.5LLa3
LC70=1.2D+WL150+1.5LLa3
LC71=1.2D-WL0+1.5LLa3
LC72=1.2D-WL30+1.5LLa3
LC73=1.2D-WL60+1.5LLa3
LC74=1.2D-WL90+1.5LLa3
LC75=1.2D-WL120+1.5LLa3
LC76=1.2D-WL150+1.5LLa3
LC77=1.2D+WL0+1.5LLa4
LC78=1.2D+WL30+1.5LLa4
LC79=1.2D+WL60+1.5LLa4
LC80=1.2D+WL90+1.5LLa4
LC81=1.2D+WL120+1.5LLa4
LC82=1.2D+WL150+1.5LLa4
LC83=1.2D-WL0+1.5LLa4
LC84=1.2D-WL30+1.5LLa4
LC85=1.2D-WL60+1.5LLa4
LC86=1.2D-WL90+1.5LLa4
LC87=1.2D-WL120+1.5LLa4
LC88=1.2D-WL150+1.5LLa4

		Forces						Moments					
Node		**Fx** [Kip]	**lc**	**Fy** [Kip]	**lc**	**Fz** [Kip]	**lc**	**Mx** [Kip*ft]	**lc**	**My** [Kip*ft]	**lc**	**Mz** [Kip*ft]	**lc**
5	Max	0.016	W120	0.284	LC25	0.509	Wo	0.00000	D	0.00000	D	0.00000	D
	Min	-0.016	LC11	-0.019	W30	-0.549	LC7	0.00000	D	0.00000	D	0.00000	D
6	Max	0.024	W90	0.282	LC31	0.599	LC1	0.00000	D	0.00000	D	0.00000	D
	Min	-0.024	LC10	-0.019	W150	-0.529	LC19	0.00000	D	0.00000	D	0.00000	D

Date: 4/3/2020
Project Name: AVON HUCKLEBERRY HILL ROAD
Project No.: CT1175
Designed By: CL **Checked By:** MSC

HUDSON Design Group LLC

CHECK CONNECTION CAPACITY (Worst Case)

Reference: National Design Specification

Bolt Type = 5/8" Lag Screw

Allowable Tensile Load =

F_{Tall} = 756 lbs.

Allowable Shear Load =

F_{Vall} = 546 lbs.

TENSILE FORCES

Reaction **F =** 599 lbs.

SHEAR FORCES

Reactions in X direction: 24 lbs.
Reactions in Y direction: 282 lbs.

Resultant: 283 lbs.

No. of Supports = 1
No. of Bolts / Support = 4

Tension Design Load /Bolts =

f_t = 149.75 lbs. < 756 lbs. **Therefore, OK !**

Shear Design Load / Bolts=

f_v = 70.75 lbs. < 546 lbs. **Therefore, OK !**

CHECK COMBINED TENSION AND SHEAR

f_t / F_T	+	f_v / F_V	≤	1.0			
0.198	+	0.130	=	0.328	<	1.0	**Therefore, OK !**

EXHIBIT 5

Radio Frequency Emissions Analysis Report

AT&T

Site Name: **Avon Huckleberry Hill Road**

277 Huckleberry Hill Road
Avon, CT 06001

June 15, 2020

Centerline Communications Project Number: 950010-203

Site Compliance Summary	
Compliance Status:	**Compliant**
Site total MPE% of FCC general population allowable limit:	**0.12%**

750 West Center St. Suite 301 | West Bridgewater, MA 02379

June 15, 2020

AT&T Mobility – New England
Attn: John Benedetto, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 01701

Emissions Analysis for Site: **Avon Huckleberry Hill Road**

Centerline Communications, LLC ("Centerline") was directed to analyze the proposed AT&T facility to be located on a **Wood Pole** near **277 Huckleberry Hill Road, Avon CT 06001** for the purpose of determining whether the emissions from the proposed facility 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 MHz (LTE) is 466.67 μW/cm2 and 850 MHz (UMTS & LTE) is 566.67 $\mu W/cm^2$ and 1900 MHz (PCS) and 2100 (AWS) is 1000 $\mu W/cm^2$.

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, 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.

CALCULATION FORMULAS

MODELING

RoofMasterTM employs several power density prediction models based on the computational approaches set forth in the Federal Communications Commission's Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, OET Bulletin 65. This guideline utilizes several antenna and operational parameters in calculating the power density contributions from each emitter at specified points throughout the study space. RoofMasterTM enables antennas to be fully defined in site-specific aspects as well as through the use of a library of manufacturer data. The parameters include:

- Antenna model
- Radiation patterns
- Aperture length
- Gain
- Beam width
- Antenna radiation center
- Azimuth
- Mechanical downtilt
- Location Frequency
- Power into antenna

THE CYLINDRICAL MODEL IMPLEMENTATION (Sula9)

In OET-65, the Cylindrical Model is presented as an approach to determine the spatially averaged power density in the near field directly in front of an antenna. In order to implement this model in all directions, RoofMasterTM utilizes the antenna manufacturer horizontal pattern data. Additionally, RoofMasterTM incorporates factors that reduce the power density by the inverse square of horizontal and vertical distance beyond the near field region.

Power density is calculated as follows:

$$S = \left(\left(\frac{360}{Beamwidth} \right) \frac{P_{in} G_H H_r V_r}{2\pi Rh} \right) \frac{\mu W}{cm^2}$$

- S is the spatially averaged power density value
- R is the horizontal distance meters to the study point
- h is the aperture length in meters
- Pin is power into the antenna input port in Watts
- RoofMasterTM Implementation:
  - GH is gain offset to study point as specified in manufacturer horizontal pattern
  - Pin is adjusted by the portion of the antenna aperture in the 0-6 ft vertical study zone
  - Hr accounts for 1/R2 Far Field roll off which starts at 2xh
  - Vr accounts for 1/ (vertical distance)2 roll off from antenna bottom to the top of the 0- 6ft study zone (or antenna top to bottom of 0-6ft study zone)

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

RRH #	Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
1	UMTS	850	1	40
1	LTE	700	4	40
1	PCS	1900	4	40
1	LTE	850	2	40
1	5G	850	2	40
1	AWS	2100	4	40
2	UMTS	850	1	40
2	LTE	700	4	40
2	PCS	1900	4	40
2	LTE	850	2	40
2	5G	850	2	40
2	AWS	2100	4	40
3	UMTS	850	1	40
3	LTE	700	4	40
3	PCS	1900	4	40
3	LTE	850	2	40
3	5G	850	2	40
3	AWS	2100	4	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, 1900 MHz (PCS), 2100 MHz (AWS) and 5 GHz (Band 46) frequency bands. This is based on information from the carrier with regard to anticipated antenna selection.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Commscope SBNHH-1D65C	90
A	1	Commscope SBNHH-1D65C	90
A	1	Commscope SBNHH-1D65C	90
A	1	Commscope SBNHH-1D65C	90
A	1	Commscope SBNHH-1D65C	90
A	1	Commscope SBNHH-1D65C	90
B	2	Commscope SBNHH-1D65C	90
B	2	Commscope SBNHH-1D65C	90
B	2	Commscope SBNHH-1D65C	90
B	2	Commscope SBNHH-1D65C	90
B	2	Commscope SBNHH-1D65C	90
B	2	Commscope SBNHH-1D65C	90
C	3	Commscope SBNHH-1D65C	90
C	3	Commscope SBNHH-1D65C	90
C	3	Commscope SBNHH-1D65C	90
C	3	Commscope SBNHH-1D65C	90
C	3	Commscope SBNHH-1D65C	90
C	3	Commscope SBNHH-1D65C	90

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)	Antenna Centerline (ft)	Channel Count	TX Power (W)	ERP (W)	MPE %
ATT A1	Commscope SBNHH-1D65C	850	13.72	90	1	40	942.02	0.000006055
ATT A1	Commscope SBNHH-1D65C	700	13.62	90	4	40	3682.3	0.000040530
ATT A1	Commscope SBNHH-1D65C	1900	15.58	90	4	40	5782.5	0.000008831
ATT A1	Commscope SBNHH-1D65C	850	13.89	90	2	40	1959.2	0.000016161
ATT A1	Commscope SBNHH-1D65C	850	13.89	90	2	40	1959.2	0.000016161
ATT A1	Commscope SBNHH-1D65C	2100	16.44	90	4	40	7048.8	0.000003711
ATT A2	Commscope SBNHH-1D65C	850	13.72	90	1	40	942.02	0.000004827
ATT A2	Commscope SBNHH-1D65C	700	13.62	90	4	40	3682.3	0.000023957
ATT A2	Commscope SBNHH-1D65C	1900	15.58	90	4	40	5782.5	0.000022273
ATT A2	Commscope SBNHH-1D65C	850	13.89	90	2	40	1959.2	0.000010970
ATT A2	Commscope SBNHH-1D65C	850	13.89	90	2	40	1959.2	0.000010970
ATT A2	Commscope SBNHH-1D65C	2100	16.44	90	4	40	7048.8	0.000032456
ATT A3	Commscope SBNHH-1D65C	850	13.72	90	1	40	942.02	0.008486711
ATT A3	Commscope SBNHH-1D65C	700	13.62	90	4	40	3682.3	0.040155372
ATT A3	Commscope SBNHH-1D65C	1900	15.58	90	4	40	5782.5	0.019112688
ATT A3	Commscope SBNHH-1D65C	850	13.89	90	2	40	1959.2	0.017130062
ATT A3	Commscope SBNHH-1D65C	850	13.89	90	2	40	1959.2	0.017130062
ATT A3	Commscope SBNHH-1D65C	2100	16.44	90	4	40	7048.8	0.019716700
	Site Total Composite MPE%							**0.12 %**

Table 3: AT&T Antenna Inventory & Power Levels

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 4* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s).

Frequency Band	# of Channels	ERP W (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Technology	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
850	1	942.02	90	0.000034312	UMTS	567	0.000006055
700	4	3682.31	90	0.000189141	LTE	467	0.000040530
1900	4	5782.56	90	0.000088312	PCS	1000	0.000008831
850	2	1959.25	90	0.000091577	LTE	567	0.000016161
850	2	1959.25	90	0.000091577	5G	567	0.000016161
2100	4	7048.88	90	0.000037114	AWS	1000	0.000003711
850	1	942.02	90	0.000027351	UMTS	567	0.000004827
700	4	3682.31	90	0.000111798	LTE	467	0.000023957
1900	4	5782.56	90	0.000222733	PCS	1000	0.000022273
850	2	1959.25	90	0.000062165	LTE	567	0.000010970
850	2	1959.25	90	0.000062165	5G	567	0.000010970
2100	4	7048.88	90	0.000324561	AWS	1000	0.000032456
850	1	942.02	90	0.048091365	UMTS	567	0.008486711
700	4	3682.31	90	0.187391737	LTE	467	0.040155372
1900	4	5782.56	90	0.191126876	PCS	1000	0.019112688
850	2	1959.25	90	0.097070353	LTE	567	0.017130062
850	2	1959.25	90	0.097070353	5G	567	0.017130062
2100	4	7048.88	90	0.197167005	AWS	1000	0.019716700
						AT&T Total:	**0.12%**

Table 4: 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:

Carrier	Power Density Value (%)
AT&T Maximum Site Total:	0.12%

Site Total:	**0.12%**
Site Compliance Status:	**Compliant**

The anticipated composite MPE value for this site assuming all carriers present is **0.12%** of the allowable FCC established general population limit sampled at the ground level.

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.

Michelle Stone
RF Compliance Consultant
Centerline Communications, LLC
750 West Center St. Suite 301
West Bridgewater, MA 02379

EXHIBIT 6

Jennifer Iliades

From: John McCahill <JMCCAHILL@avonct.gov>
Sent: Tuesday, June 30, 2020 9:36 AM
To: Jennifer Iliades
Cc: Hiram Peck; Linda Sadlon; Grace Tiezzi
Subject: RE: [External] [Avon CT] 277 Huckleberry Hill Rd (Sent by Jennifer Iliades, jiliades@clinellc.com)

Greetings Jennifer,

This tower was subject to a Connecticut Siting Council process and approval.
There is no Planning and Zoning approval/decision on file.

Please provide the Town of Avon with copies of any proposed upgrades.

Best Regards,
John McC

-----Original Message-----
From: cmsmailer@civicplus.com [mailto:cmsmailer@civicplus.com]
Sent: Monday, June 29, 2020 5:52 PM
To: John McCahill <JMCCAHILL@avonct.gov>
Subject: [External] [Avon CT] 277 Huckleberry Hill Rd (Sent by Jennifer Iliades, jiliades@clinellc.com)

Hello JMccahill,

Jennifer Iliades (jiliades@clinellc.com) has sent you a message via your contact form (https://urldefense.proofpoint.com/v2/url?u=https-3A__www.avonct.gov_users_jmccahill_contact&d=DwIDaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=3MeCnRmQOHYmMd5P3qPuS33qXMG6cVBSGYuf0Glg9cY&m=W-XUEVlZKnYTJX7bYlfZzBoIJSW_EhWEsmhOM1B6KaI&s=ifG_DoQo3PITUrxUz42aGiwV3KJl-dGcoRylptRMnt0&e=) at Avon CT.

If you don't want to receive such e-mails, you can change your settings at https://urldefense.proofpoint.com/v2/url?u=https-3A__www.avonct.gov_user_316_edit&d=DwIDaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=3MeCnRmQOHYmMd5P3qPuS33qXMG6cVBSGYuf0Glg9cY&m=W-XUEVlZKnYTJX7bYlfZzBoIJSW_EhWEsmhOM1B6KaI&s=WC56UUH6iseTR35ytIZPYqCbr7vFXBvlAidZvw1vVF4&e=.

Message:

Good afternoon,

Centerline Communications is a vendor of AT&T's and we are assisting them with their upcoming equipment upgrades at the above-referenced tower. We will be filing a notice of exempt modifications approval with the Connecticut Siting Council shortly before submitting for any required permitting with the Town of Avon. For our CSC application, we are being asked to supply the original Zoning/Planning decision for the tower for AT&T. Would this be something you would have on file for the site and be able to provide?

EXHIBIT 7

UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

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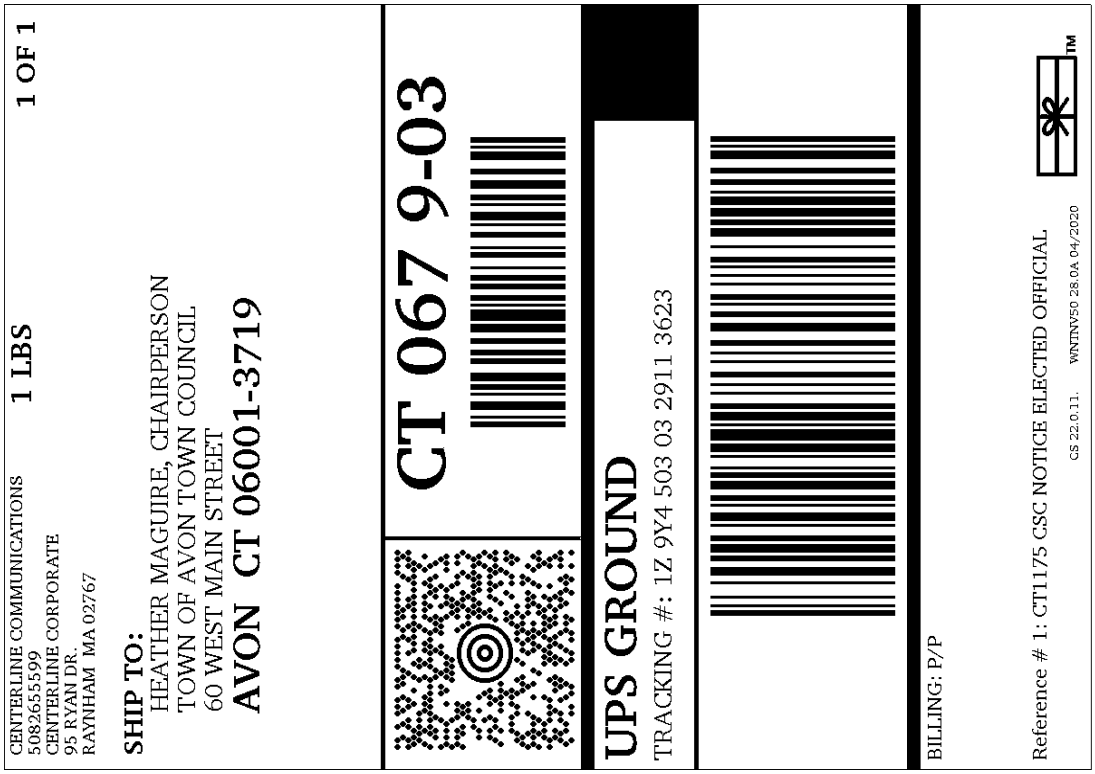
NORTH EASTON ,MA 02356

UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE



Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Monday, July 13, 2020 11:19 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030329113623

Hello, your package has been delivered.

Delivery Date: Monday, 07/13/2020
Delivery Time: 11:17 AM
Left At: INSIDE DELIV
Signed by: ANNE

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030329113623
Ship To:	TOWN OF AVON TOWN COUNCIL 60 WEST MAIN STREET AVON, CT 060013719 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	0.2 LBS
Reference Number:	CT1175 CSC NOTICE ELECTED OFFICIAL

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3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

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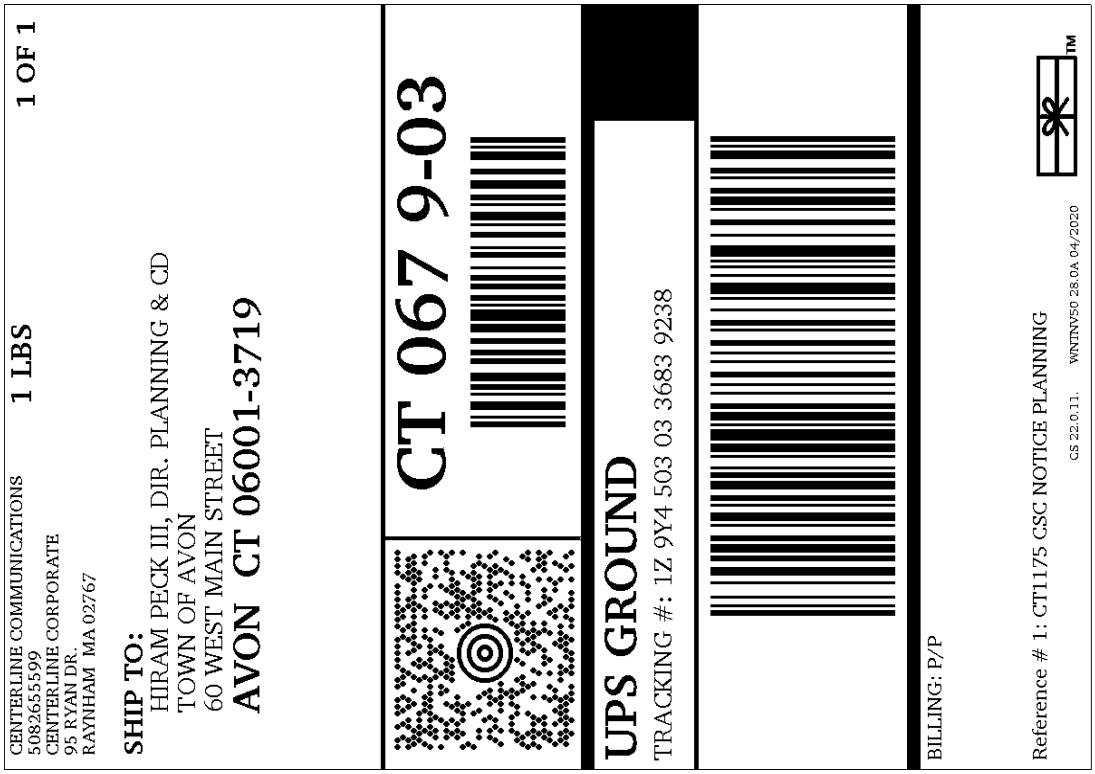
FOLD HERE



Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Monday, July 13, 2020 11:19 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030336839238

Hello, your package has been delivered.

Delivery Date: Monday, 07/13/2020
Delivery Time: 11:17 AM
Left At: INSIDE DELIV
Signed by: ANNE

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030336839238
Ship To:	TOWN OF AVON 60 WEST MAIN STREET AVON, CT 060013719 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	0.2 LBS
Reference Number:	CT1175 CSC NOTICE PLANNING

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UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

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   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

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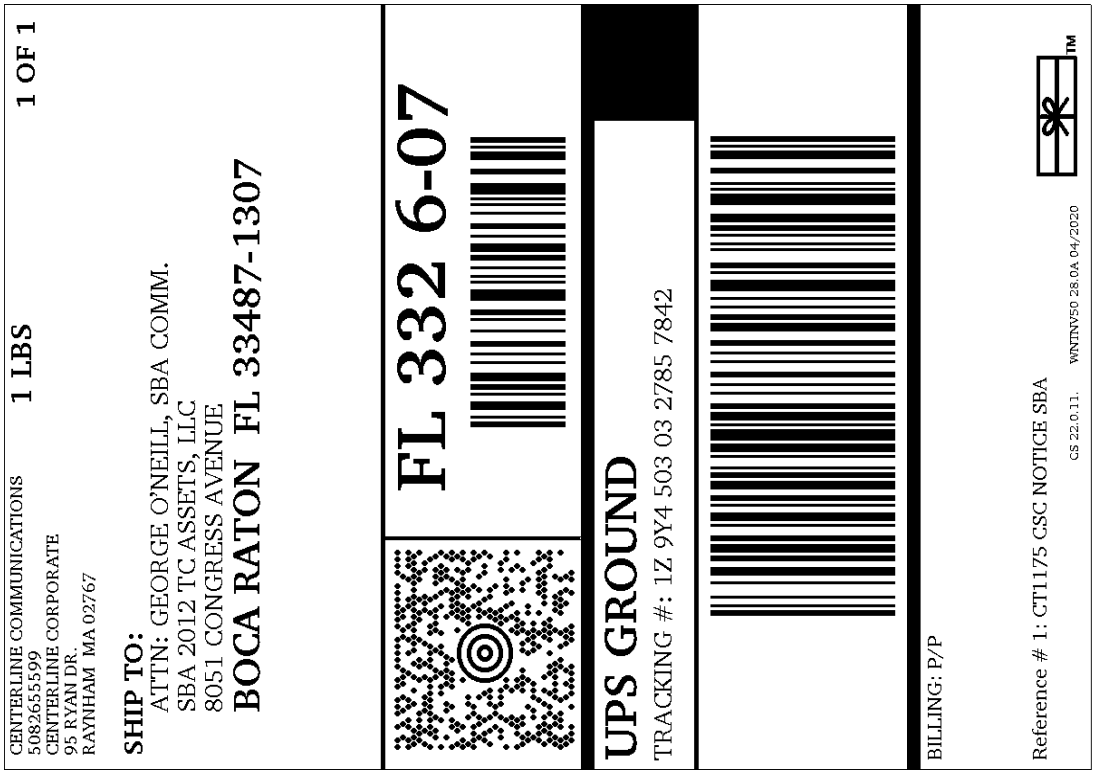

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number
1Z9Y45030327857842

Weight
0.20 LBS

Service

UPS Ground

Shipped / Billed On
07/10/2020

Delivered On

07/15/2020 12:26 P.M.

Delivered To
8051 CONGRESS AVE
BOCA RATON, FL, 33487, US

Received By

MILLER

Left At
Office

Reference Number(s)
CT1175 CSC NOTICE SBA

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 07/15/2020 4:14 P.M. EST