QC Development
PO Box 916
Storrs, CT 06268
860-670-9068
Mark.Roberts@QCDevelopment.net

June 21, 2019

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

Notice of Exempt Modification – New Cingular Wireless PCS, LLC (AT&T) – CT1035
1291-1293 Bantam Road, Litchfield, CT 06759
N 41.71722222
W 73.26083333

Dear Ms. Bachman:

AT&T currently maintains nine (9) antennas at the 129-foot level of the existing 150-foot Monopole at 1291-1293 Bantam Road, Litchfield, CT. The tower is owned by SBA and the property is owned by Robert & Judith Hammer et al. AT&T now intends to remove three (3) Powerwave antennas and (3) KMW antennas and replace them with six (6) Kathrein 800-10965 antennas. AT&T will also swap (3) Ericsson RRUS-11 for (3) Ericsson 4449-B5/B12s and add (3) Ericsson 4478-B14 and (3) 8843 B2/B66 Remote Radio Units (RRU). The new antennas and RRUs will also be installed at the 129-foot level of the tower.

This facility was approved by the Siting Council in Docket # 258 on December 3, 2003. This approval included no condition(s) that could feasibly be violated by this modification, including total facility height or mounting restrictions. This modification therefore complies with the aforementioned approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the Honorable Leo Paul Jr., First Selectman for the Town of Litchfield, and the Litchfield Land Use

Department as well as the property and tower owner.

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

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

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

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

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

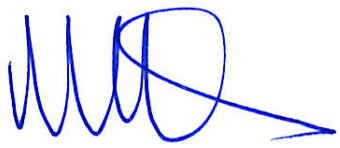
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading.

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

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

Sincerely,



Mark Roberts
QC Development
Consultant for AT&T

Attachments

Cc: The Honorable Leo Paul, Jr.- as Elected Official
Dennis Tobin, PhD – as Local Land Use Administrator
Robert & Judith Hammer et al – as Property Owner
SBA - as Tower Owner (via e-mail)

Power Density

Existing Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm^2)	Freq. Band (MHz**)	Limit S (mW /cm^2)	%MPE
Other Carriers*							4.48%
AT&T GSM	1	283	128.5	0.0068	880	0.5867	0.12%
AT&T UMTS	2	565	128.5	0.0271	880	0.5867	0.46%
AT&T UMTS	4	525	128.5	0.0503	1900	1.0000	0.50%
AT&T LTE	1	1313	128.5	0.0315	734	0.4893	0.64%
AT&T LTE	2	875	128.5	0.0419	1900	1.0000	0.42%
Site Total							6.98%

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

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

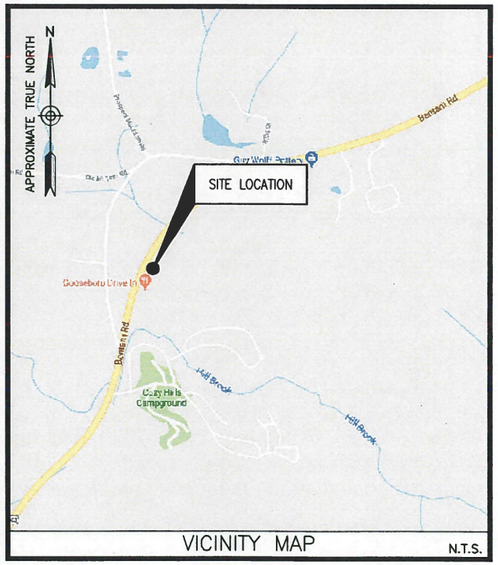
Proposed Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm^2)	Freq. Band (MHz**)	Limit S (mW /cm^2)	%MPE
Other Carriers*							4.48%
AT&T UMTS	1	283	129	0.0067	850	0.5667	0.11%
AT&T LTE	2	2951	129	0.1403	700	0.4667	0.76%
AT&T LTE	1	1000	129	0.0238	850	0.5667	0.43%
AT&T 5G	1	1000	129	0.0238	850	0.5667	0.43%
AT&T LTE	2	3664	129	0.1742	1900	1.0000	1.77%
AT&T LTE	1	3837	129	0.0912	2100	1.0000	0.31%
Site Total							10.55%

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

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

SITE NAME: LITCHFIELD BANTAM ROAD
SITE NUMBER: CT1035
1291 BANTAM ROAD
LITCHFIELD, CT 06759
FA CODE: 10087534
PACE ID: MRCTB035241, MRCTB035217, MRCTB035248, MRCTB035300, MRCTB035184
PROJECT: LTE 3C, 4C, 5C & 4T4R 700BC



VICINITY MAP N.T.S.

SITE COORDINATES:
LATITUDE: 41°-44'-10.179" N
LONGITUDE: 73°-13'-5.134" W
(PER EXISTING DRAWINGS PROVIDED)

ELEVATION DATA:
GRADE ELEVATION AT TOWER = 942'± A.M.S.L.
(PER EXISTING DRAWINGS PROVIDED)

SITE INFORMATION

- SWAP (3) EXISTING GSM ANTENNAS & (3) EXISTING LTE ANTENNAS FOR (6) 6' 800-10965 OCTO ANTENNAS
- SWAP (3) RRUS-11S FOR (3) 700/850 B5/B12-4449 RRUS AT TOWER TOP
- ADD (3) B14-4478 RRUS AT TOWER TOP
- ADD (3) B2/B66A 8843 RRUS AT TOWER TOP
- ADD (1) DC6-48-60-18-8C SQUID WITH (1) 2" CONDUIT FOR 2 DC/1 FIBER
- ADD (1) DC6-48-60-0-8C-EV DC ONLY SQUID W/ (1) 2" CONDUIT FOR 2 DC
- SWAP BB FOR RBS 6630, ADD XMU, ADD 5G RBS 6630

PROJECT DESCRIPTION

SITE NAME:
LITCHFIELD BANTAM ROAD

SITE NUMBER:
CT1035

SITE ADDRESS:
1291 BANTAM ROAD
LITCHFIELD, CT 06759

TOWER OWNER:
HAMMER ROBERT & JUDITH ET AL
1293 BANTAM ROAD
LITCHFIELD, CT 06759

APPLICANT/LESSEE:
AT&T MOBILITY
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

PROJECT INFORMATION

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

A.D.A. COMPLIANCE:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.

SHEET NUMBER	DESCRIPTION
T-1	TITLE SHEET
G-1	GENERAL NOTES
C-1	COMPOUND PLAN
C-2	EXISTING & PROPOSED EQUIPMENT LAYOUTS
C-3	EXISTING & PROPOSED WEST ELEVATIONS
C-4	EXISTING & PROPOSED ANTENNA LAYOUTS
C-5	CONSTRUCTION DETAILS I
C-6	CONSTRUCTION DETAILS II
C-7	PLUMBING DIAGRAM
E-1	GROUNDING NOTES & DETAILS

SHEET INDEX

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

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

CT1035
LITCHFIELD BANTAM ROAD

CONSTRUCTION DRAWINGS

0	03/27/19	ISSUED AS FINAL
A	02/06/19	ISSUED FOR REVIEW

Dewberry®
Dewberry Engineers Inc.
600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973.739.9400
FAX: 973.739.9710

STATE OF CONNECTICUT
JIANG YU
No. 23222
LICENSED PROFESSIONAL ENGINEER

JIANG YU, P.E.
CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	LED
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50055106
JOB NUMBER:	50093842
SITE ADDRESS:	

1291 BANTAM ROAD
LITCHFIELD, CT 06759

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   PROJECT MANAGEMENT – SAI COMMUNICATIONS, INC.
   CONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T MOBILITY
   OEM – ORIGINAL EQUIPMENT MANUFACTURER
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR 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 PROJECT MANAGEMENT.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR 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.
4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
5. DRAWINGS PROVIDED HERE ARE NOT TO SCALE UNLESS OTHERWISE NOTED AND ARE INTENDED TO SHOW OUTLINE ONLY.
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. THE CONTRACTOR 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 CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY PROJECT MANAGEMENT.
9. CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. CONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. CONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH PROJECT MANAGEMENT.
10. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
11. CONTRACTOR 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. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
14. CONTRACTOR SHALL NOTIFY DEWBERRY 48 HOURS IN ADVANCE OF POURING CONCRETE, OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS & POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEER REVIEW.
15. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. CONTRACTOR SHALL NOTIFY PROJECT MANAGEMENT OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
16. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY CONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH LAND LORD. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
17. 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.

SITE WORK GENERAL NOTES:

1. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO:
   A) FALL PROTECTION
   B) CONFINED SPACE
   C) ELECTRICAL SAFETY
   D) TRENCHING & EXCAVATION.
3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES, TOP SOIL AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
6. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE AT&T SPECIFICATION FOR SITE SIGNAGE.
8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE TRANSMISSION EQUIPMENT AND TOWER AREAS.
9. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION, SEE SOIL COMPACTION NOTES.
11. THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
12. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL JURISDICTION'S GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (4000 PSI) MAY BE USED. ALL CONCRETING WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE (UNO). SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER .....2 IN.
   #5 AND SMALLER & WWF.....1 1/2 IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....3/4 IN.
   BEAMS AND COLUMNS.....1 1/2 IN.
5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.
7. CONCRETE CYLINDER TEST IS NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC 1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
   (A) RESULTS OF CONCRETE CYLINDER TESTS PERFORMED AT THE SUPPLIER'S PLANT,
   (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
   FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.
8. AS AN ALTERNATIVE TO ITEM 7, TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.
9. EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS UNLESS NOTED OTHERWISE. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE PERFORMED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".
2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
3. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"Ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
4. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.
6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL.
7. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION & TOPSOIL EXPOSE UNDISTURBED NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
3. AS AN ALTERNATIVE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.
4. COMPACTED SUBBASE SHALL BE UNIFORM & LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING 1" SIEVE.
5. AS AN ALTERNATIVE TO ITEMS 2 AND 3 PROOFROLL THE SUBGRADE SOILS WITH 5 PASSES OF A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). ANY SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL, AND COMPACTED AS STATED ABOVE.

COMPACTION EQUIPMENT:

1. HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONSTRUCTION NOTES:

1. FIELD VERIFICATION:
   CONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, AT&T ANTENNA PLATFORM LOCATION AND ANTENNAS TO BE REPLACED.
2. COORDINATION OF WORK:
   CONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH PROJECT MANAGEMENT.
3. CABLE LADDER RACK:
   CONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
2. CONTRACTOR SHALL MODIFY EXISTING CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. CONTRACTOR SHALL SUBMIT MODIFICATIONS TO PROJECT MANAGEMENT FOR APPROVAL.
3. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
4. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
5. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
6. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
7. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.
8. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
9. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
10. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
11. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
12. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL.) PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.
13. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (SIZE 6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
14. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
15. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
16. ALL POWER AND POWER GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
17. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
18. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
19. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
20. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
21. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
22. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
23. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
24. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
25. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
26. CABINETS, BOXES, AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
27. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
28. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
29. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
30. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
31. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM PROJECT MANAGEMENT BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
32. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

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CT1035
LITCHFIELD BANTAM ROAD

CONSTRUCTION DRAWINGS

0	03/27/19	ISSUED AS FINAL
A	02/06/19	ISSUED FOR REVIEW

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FAX: 973.739.9710

STATE OF CONNECTICUT
JIANG YU
No. 23222
LICENSED
PROFESSIONAL ENGINEER

JIANG YU, P.E.
CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	LED
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50055106
JOB NUMBER:	50093842
SITE ADDRESS:	

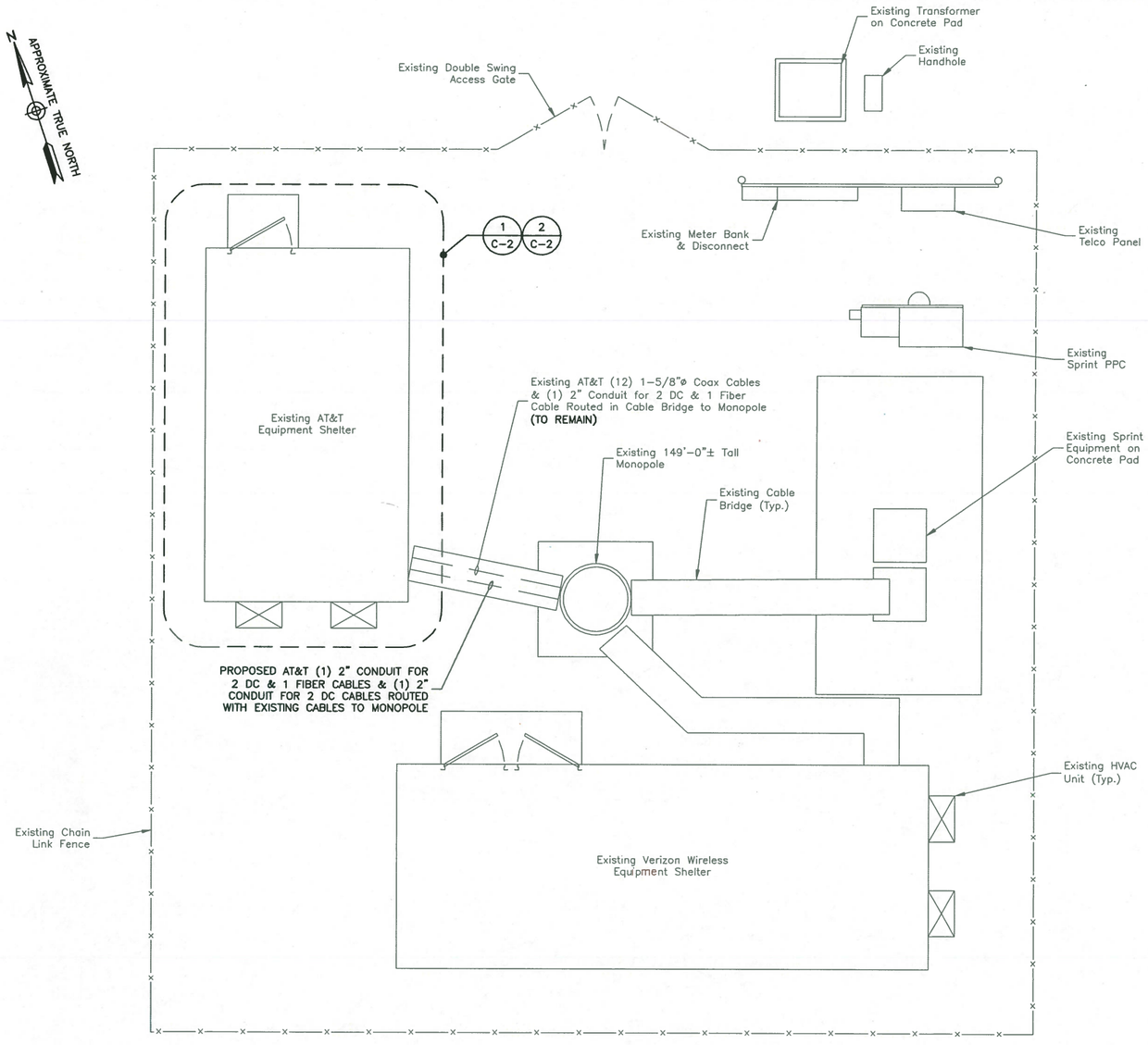
1291 BANTAM ROAD
LITCHFIELD, CT 06759

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

G-1



1 C-4

COMPOUND PLAN 1

SCALE: 1/8"=1' FOR 11"x17"
1/4"=1' FOR 22"x34"

0' 2' 4' 8'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. NOT ALL INFORMATION IS SHOWN FOR CLARITY.
3. ALL PROPOSED EQUIPMENT, INCLUDING ANTENNAS, COAX, SURGE ARRESTORS, TMA'S, RRU'S, ETC., SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS BY OTHERS.

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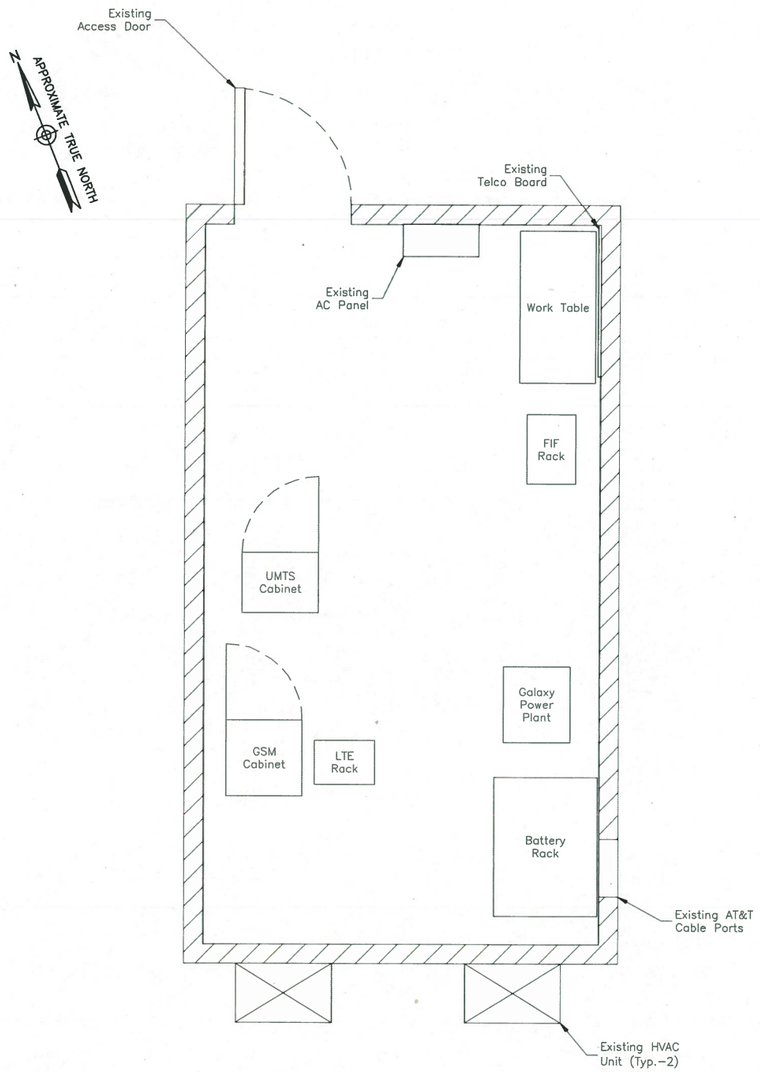
SHEET TITLE

COMPOUND PLAN

SHEET NUMBER

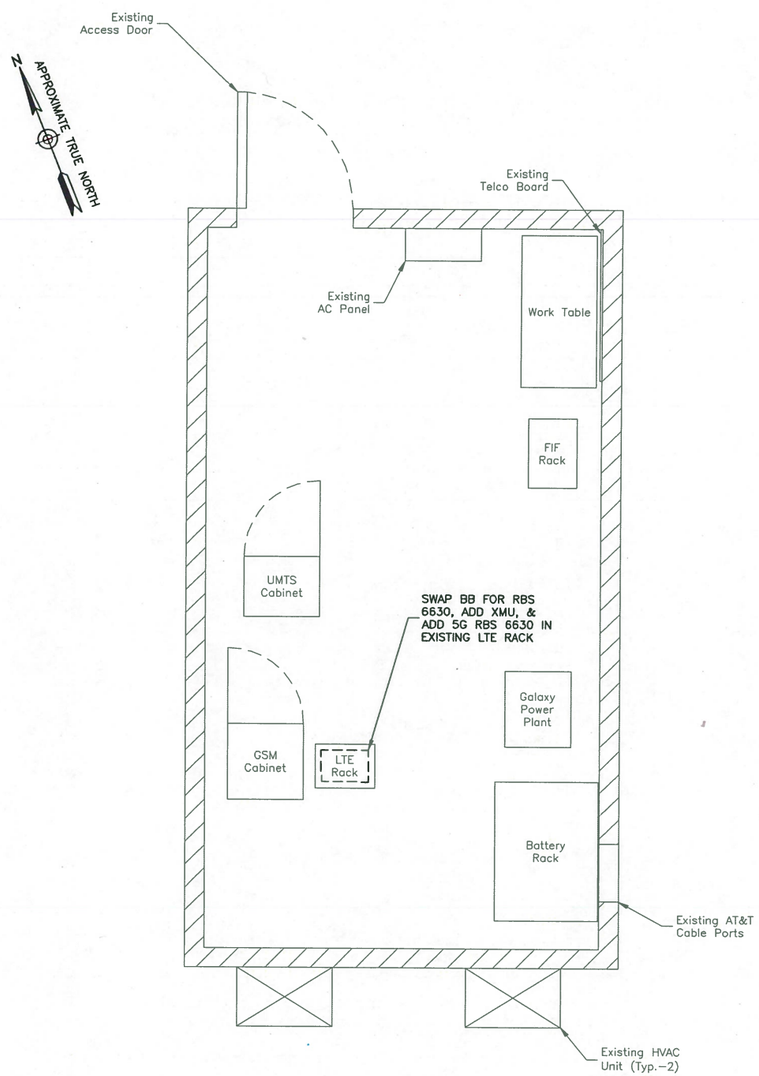
C-1



EXISTING SHELTER LAYOUT 1

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

0' 1' 2' 4'



PROPOSED SHELTER LAYOUT 2

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

0' 1' 2' 4'

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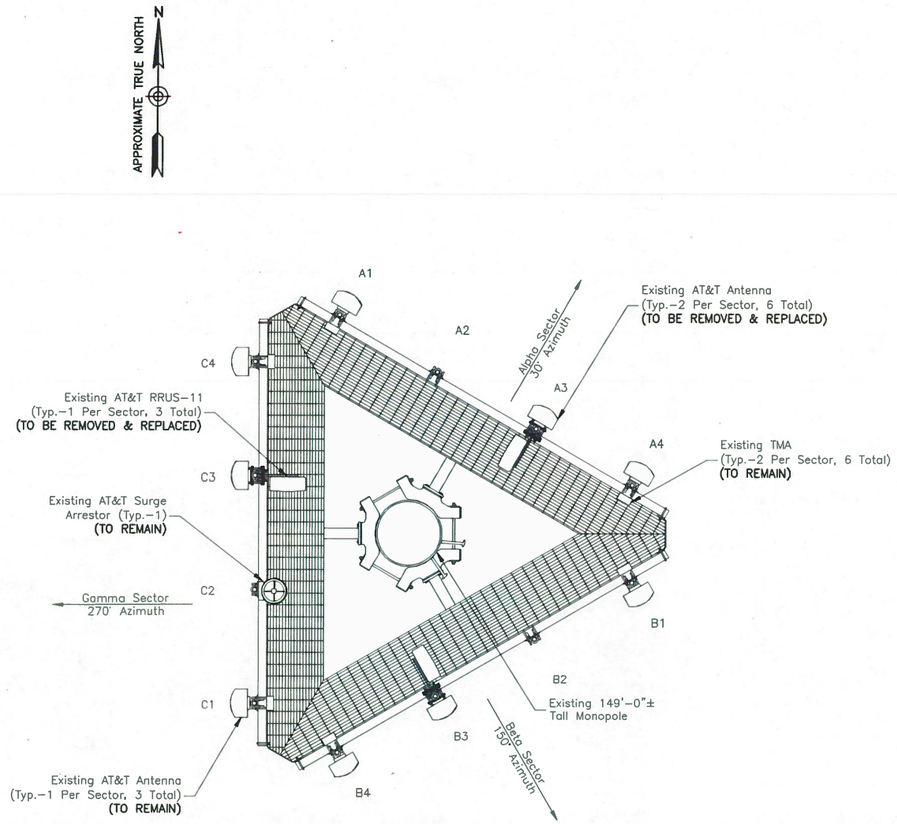
SHEET TITLE

EXISTING & PROPOSED EQUIPMENT LAYOUTS

SHEET NUMBER

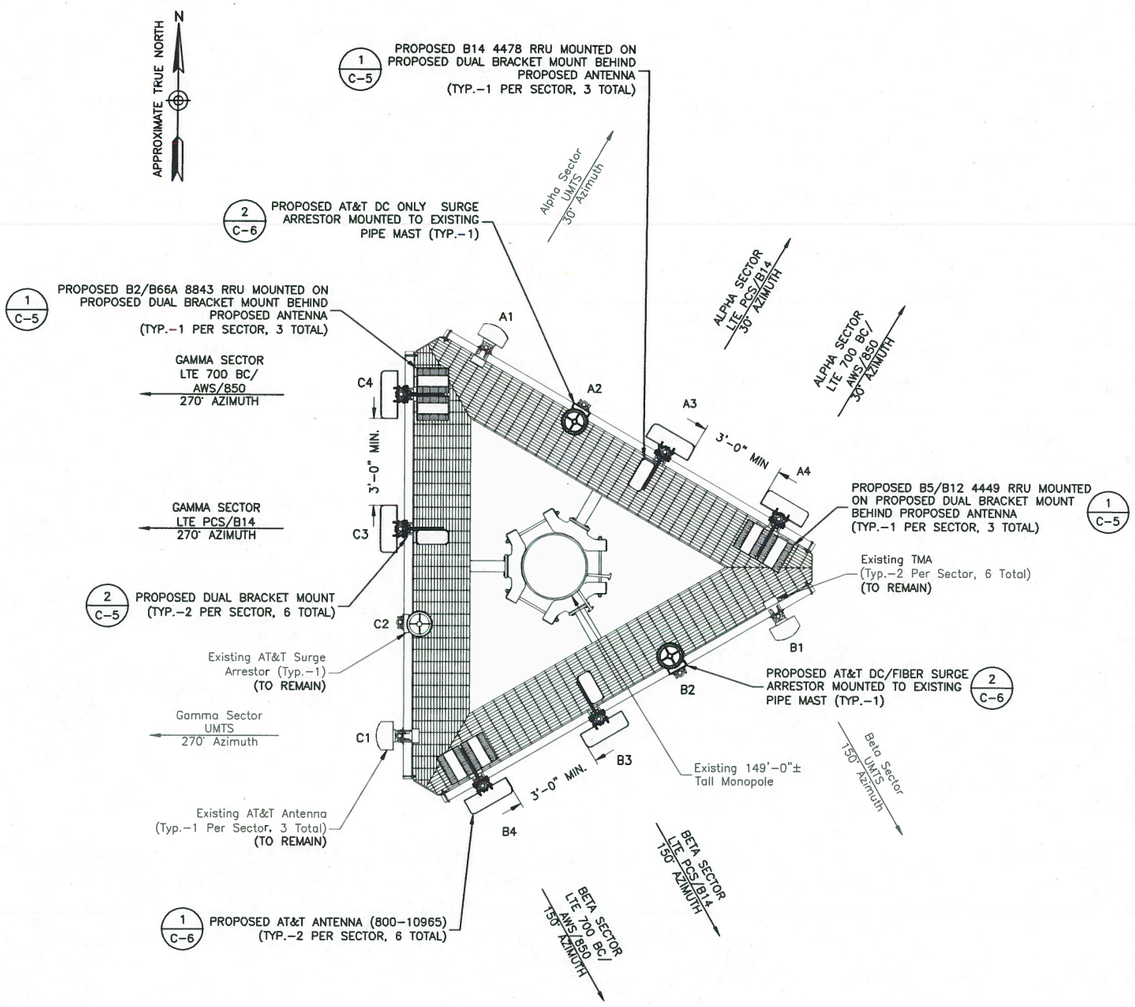
C-2



EXISTING ANTENNA LAYOUT 1

SCALE: 3/16"=1' FOR 11"x17"
3/8"=1' FOR 22"x34"

0' 2' 4' 6'



PROPOSED ANTENNA LAYOUT 2

SCALE: 3/16"=1' FOR 11"x17"
3/8"=1' FOR 22"x34"

0' 2' 4' 6'

NOTE:

1. ALL PROPOSED EQUIPMENT, INCLUDING ANTENNAS, COAX, SURGE ARRESTORS, TMA'S, RRU'S, ETC., SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS BY OTHERS, AND MOUNT ANALYSIS BY OTHERS.

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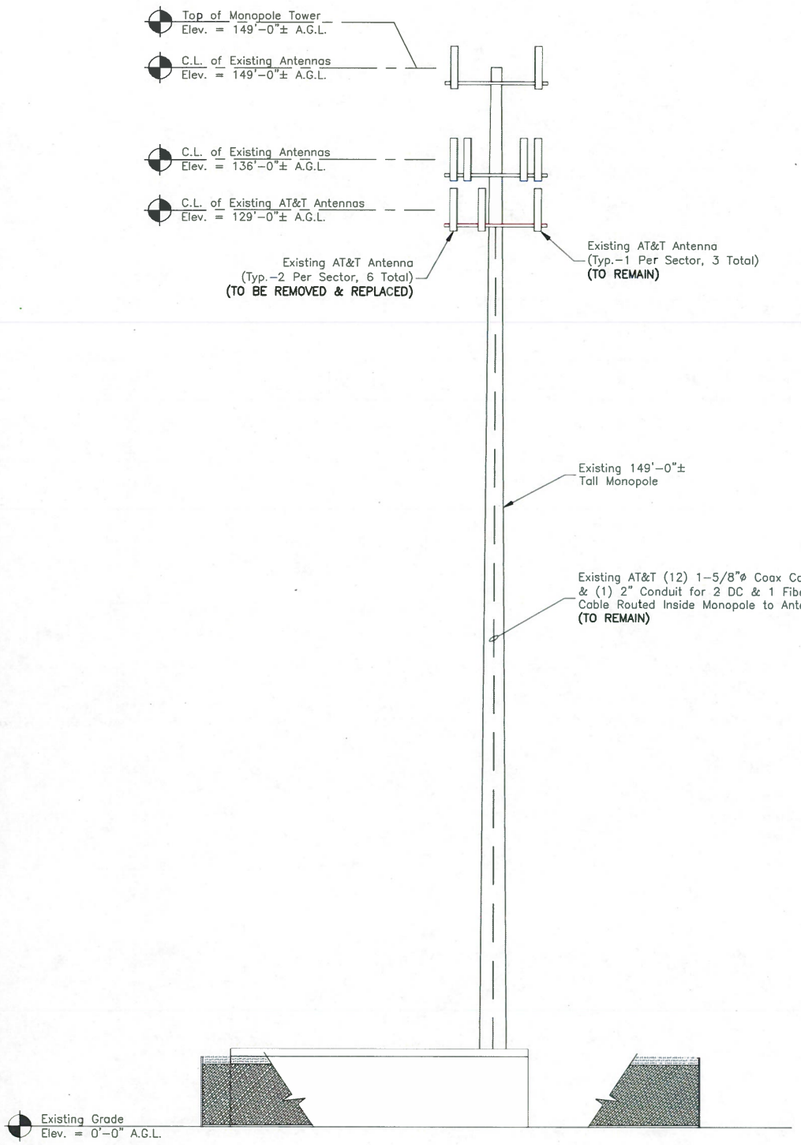
SHEET TITLE

EXISTING & PROPOSED ANTENNA LAYOUTS

SHEET NUMBER

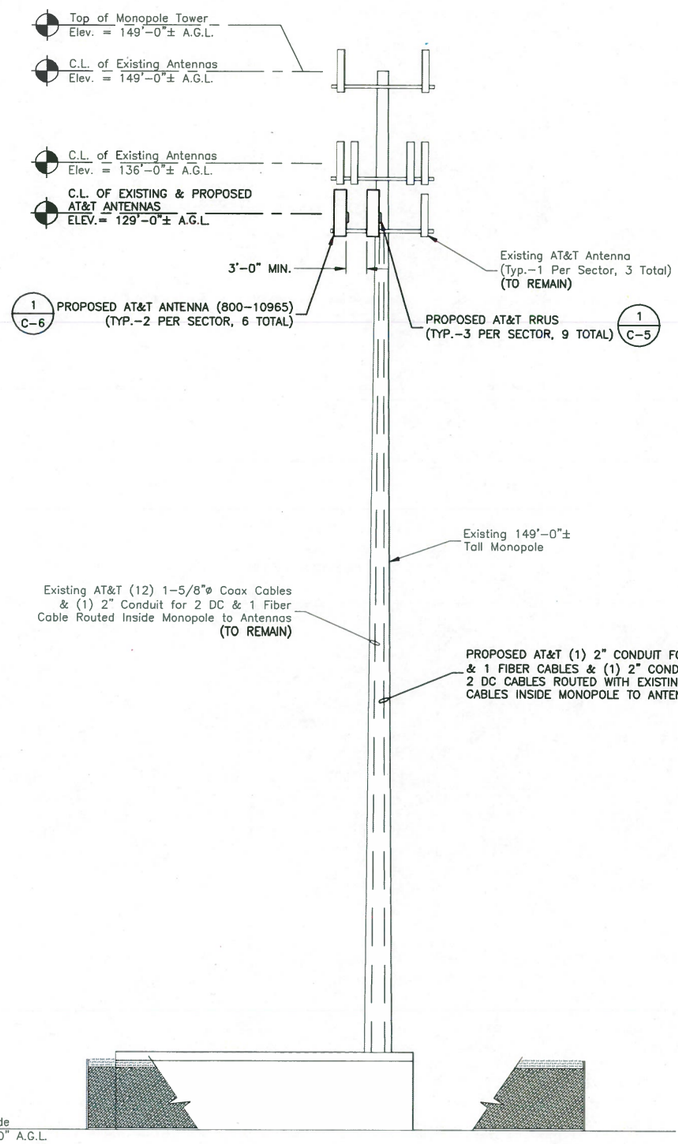
C–3



EXISTING WEST ELEVATION 1

SCALE: 3/64"=1' FOR 11"x17"
3/32"=1' FOR 22"x34"

0' 8' 16' 24'



PROPOSED WEST ELEVATION 2

SCALE: 3/64"=1' FOR 11"x17"
3/32"=1' FOR 22"x34"

0' 8' 16' 24'

NOTE:

1. ALL PROPOSED EQUIPMENT, INCLUDING ANTENNAS, COAX, SURGE ARRESTORS, TMA'S, RRU'S, ETC., SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS BY OTHERS, AND MOUNT ANALYSIS BY OTHERS.

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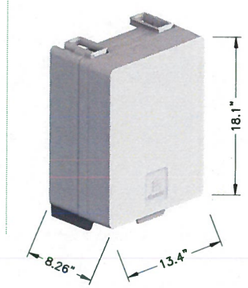
SHEET TITLE

EXISTING & PROPOSED WEST ELEVATIONS

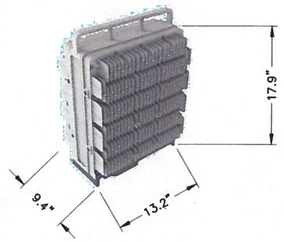
SHEET NUMBER

C-4



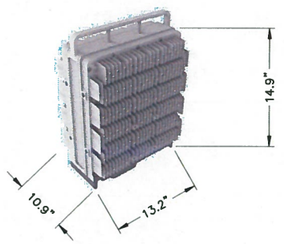
ERICSSON RRUS B14 4478

SPECIFICATIONS:
HEIGHT: 18.1"
WIDTH: 13.4"
DEPTH: 8.26"
WEIGHT: 59.4 LBS



ERICSSON RRUS B5/B12 4449

SPECIFICATIONS:
HEIGHT: 17.9"
WIDTH: 13.2"
DEPTH: 9.4"
WEIGHT: 70.4 LBS



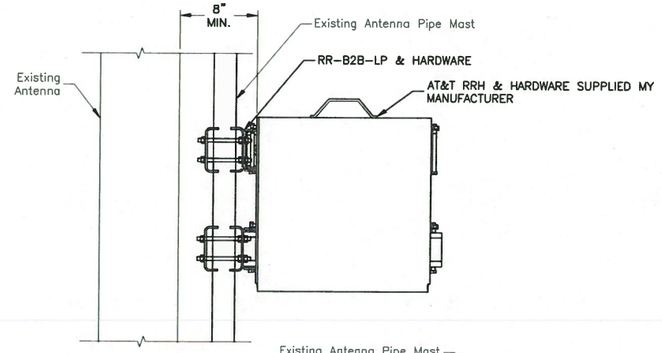
ERICSSON RRUS B2/B66a 8843

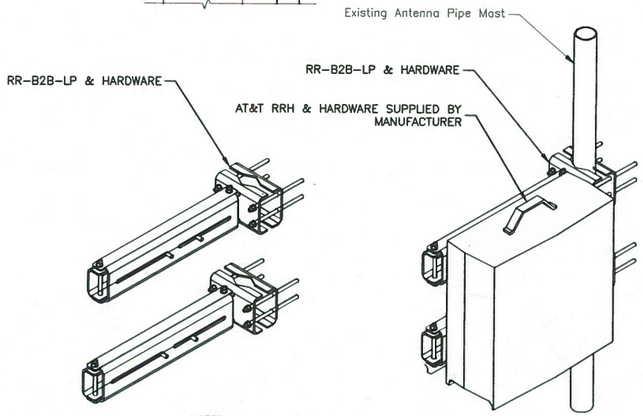
SPECIFICATIONS:
HEIGHT: 14.9"
WIDTH: 13.2"
DEPTH: 10.9"
WEIGHT: 72.0 LBS

RRU NOTES:

1. MOUNT EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
2. GROUND EQUIPMENT AND MOUNTS PER MANUFACTURER'S RECOMMENDATIONS AND AT&T STANDARDS.
3. CONFIRM REQUIRED EQUIPMENT WITH THE LATEST RFDS.

REMOTE RADIO UNIT DETAILS (1)
SCALE: N.T.S.





NOTES:

1. 8" MIN. BETWEEN BACK OF ANTENNA & RRH UNIT.
2. CONTRACTOR TO COMPLY WITH MANUFACTURER'S INSTRUCTIONS TO ENSURE THAT ALL RRH UNITS RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRH UNITS IN THE RAIN.

RRH DUAL BRACKET MOUNT DETAIL (2)
SCALE: N.T.S.

ANTENNA SCHEDULE

SECTOR	EXISTING/PROPOSED	BAND	ANTENNA	ANTENNA CENTERLINE	AZIMUTH	TMA/DIPLEXERS ON TOWER	RRU'S ON TOWER	FEEDER	SURGE ARRESTORS ON TOWER
A1	EXISTING	UMTS	POWERWAVE 7770	129'-0"±	30°	(2) POWERWAVE/LGP 13519 (1) 21401 (DB - 850 BYPASS)	-	(2) 1-5/8" COAX	(E) (1) RAYCAP DC6-48-60-18-8F (P) (1) RAYCAP DC6-48-60-18-8C (P) (1) RAYCAP DC6-48-60-0-8C-EV
A2	-	-	-	-	-	-	-	(2) 1-5/8" COAX (SPARE)	
A3	PROPOSED	LTE PCS/B14	KATHREIN 800-10965	129'-0"±	30°	-	(P) ERICSSON RRUS B14 4478	FIBER	
A4	PROPOSED	LTE 700 BC/AWS/850	KATHREIN 800-10965	129'-0"±	30°	-	(P) ERICSSON RRUS B5/B12 4449 (P) ERICSSON RRUS B2/B66A 8843	FIBER	
B1	EXISTING	UMTS	POWERWAVE 7770	129'-0"±	150°	(2) POWERWAVE/LGP 13519 (1) 21401 (DB - 850 BYPASS)	-	(2) 1-5/8" COAX	
B2	-	-	-	-	-	-	-	(2) 1-5/8" COAX (SPARE)	
B3	PROPOSED	LTE PCS/B14	KATHREIN 800-10965	129'-0"±	150°	-	(P) ERICSSON RRUS B14 4478	FIBER	
B4	PROPOSED	LTE 700 BC/AWS/850	KATHREIN 800-10965	129'-0"±	150°	-	(P) ERICSSON RRUS B5/B12 4449 (P) ERICSSON RRUS B2/B66A 8843	FIBER	
C1	EXISTING	UMTS	POWERWAVE 7770	129'-0"±	270°	(2) POWERWAVE/LGP 13519 (1) 21401 (DB - 850 BYPASS)	-	(2) 1-5/8" COAX	
C2	-	-	-	-	-	-	-	(2) 1-5/8" COAX (SPARE)	
C3	PROPOSED	LTE PCS/B14	KATHREIN 800-10965	129'-0"±	270°	-	(P) ERICSSON RRUS B14 4478	FIBER	
C4	PROPOSED	LTE 700 BC/AWS/850	KATHREIN 800-10965	129'-0"±	270°	-	(P) ERICSSON RRUS B5/B12 4449 (P) ERICSSON RRUS B2/B66A 8843	FIBER	

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CONNECTICUT LICENSE NO. 0023222

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CHECKED BY:	GHN
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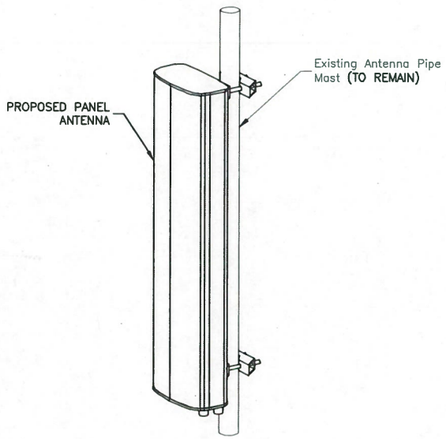
LITCHFIELD, CT 06759

SHEET TITLE

CONSTRUCTION DETAILS I

SHEET NUMBER

C-5



ANTENNA SPECIFICATIONS	
MANUFACTURER	KATHREIN
MODEL NUMBER	800-10965
DIMENSIONS (HxWxD)	78.7" x 20.0" x 6.9"
WEIGHT	108.6 LBS

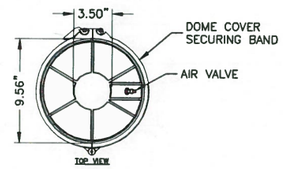
NOTES:

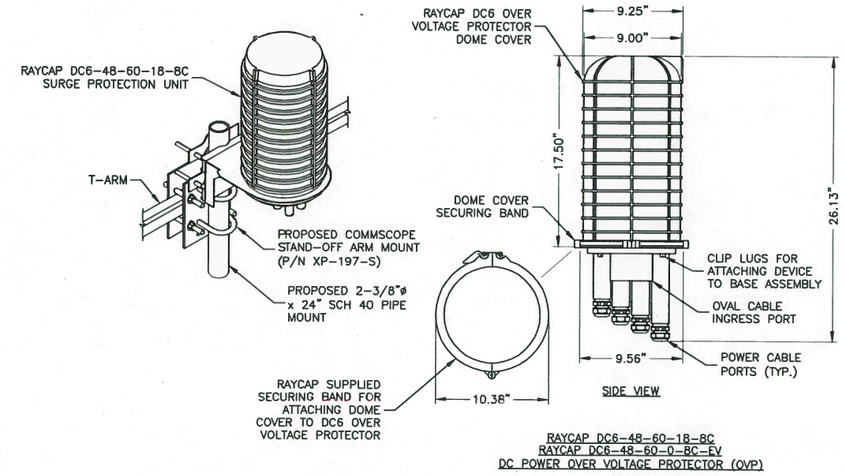
1. MOUNT ANTENNA PER MANUFACTURER'S RECOMMENDATIONS.
2. WEIGHT INCLUDES MOUNTING BRACKETS.

ANTENNA DETAIL 1
SCALE: N.T.S.

WEIGHT:
SYSTEM: 16.0 LBS (84.07 N)
MOUNT: 10.2 LBS (57.38 N)
TOTAL: 26.2 LBS (141.45 N)

COMBINED WIND LOADING:
150 MPH (SUSTAINED): 105.7 LBS (470 N)
195 MPH (GUST): 213.6 LBS (950 N)





RAYCAP DC6-48-60-18-8C
RAYCAP DC6-48-60-0-8C-EV
DC POWER OVER VOLTAGE PROTECTOR (OVP)

TOWER MOUNTED SURGE ARRESTOR DETAIL 2
SCALE: N.T.S.

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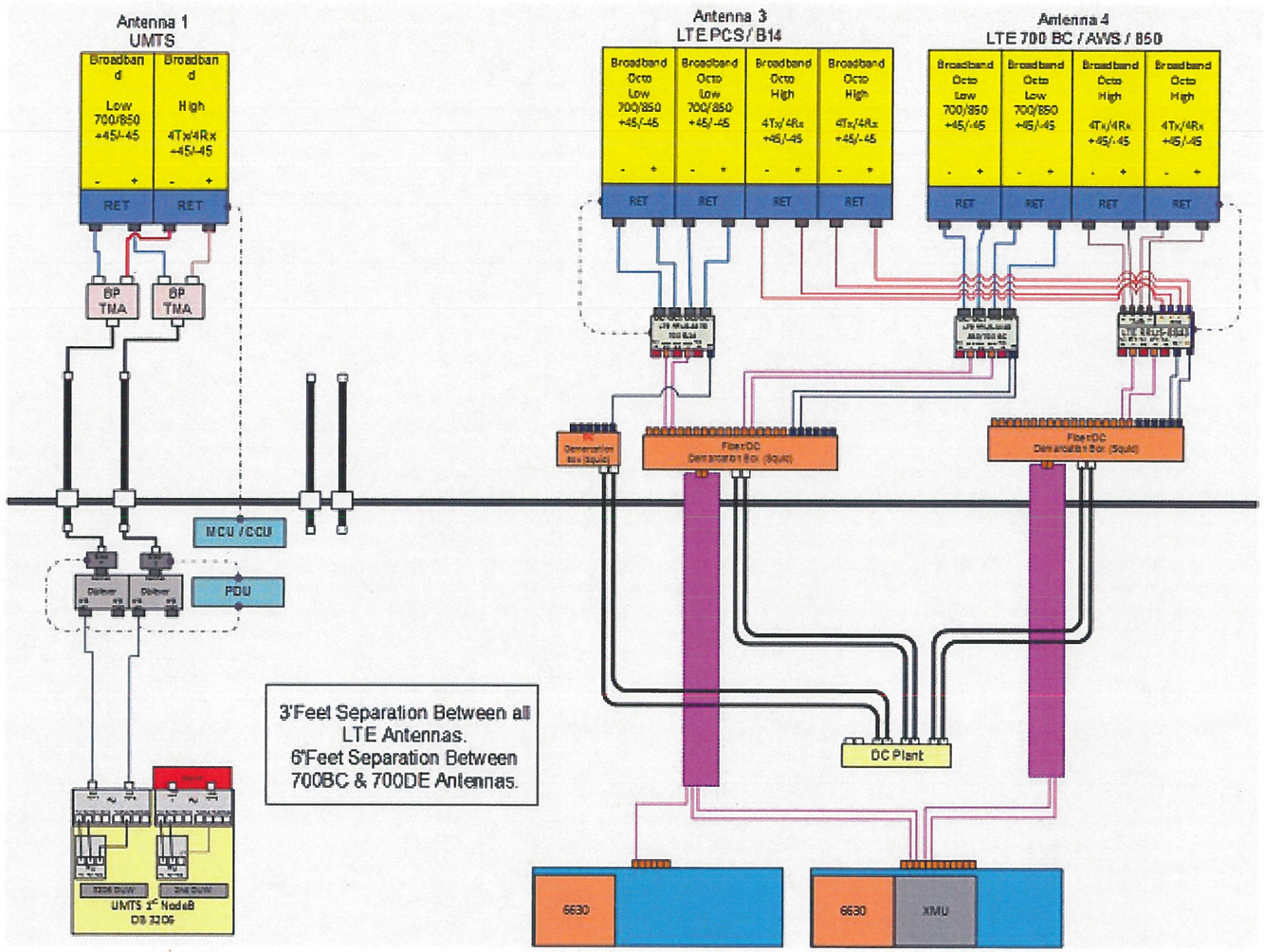
SHEET TITLE
CONSTRUCTION DETAILS II

SHEET NUMBER
C-6



PLUMBING DIAGRAM
SCALE: N.T.S.

1

NOTE:

1. PLUMBING DIAGRAM BASED ON RFDS V2.00 DATED 10/01/2018. CONFIRM FINAL PLUMBING DIAGRAM WITH THE LATEST RFDS.

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600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973.739.9400
FAX: 973.739.9710

STATE OF CONNECTICUT
JIANG XU
No. 23223
LICENSED PROFESSIONAL ENGINEER

JIANG XU, P.E.
CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	LED
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50055106
JOB NUMBER:	50093842
SITE ADDRESS:	

1291 BANTAM ROAD
LITCHFIELD, CT 06759

SHEET TITLE

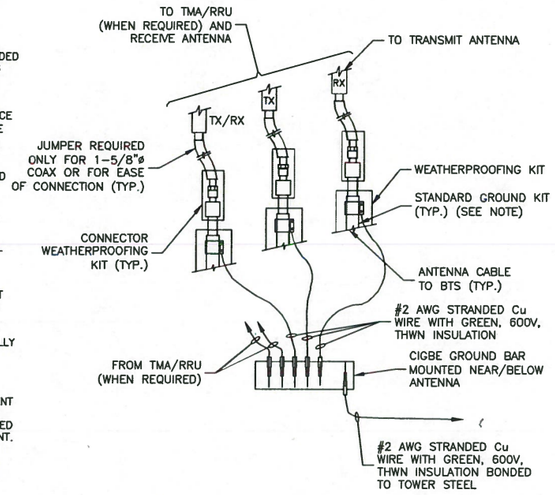
PLUMBING DIAGRAM

SHEET NUMBER

C-7

GROUNDING NOTES:

1. THE CONTRACTOR 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 CONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE ENGINEER 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. ALL AVAILABLE GROUNDING ELECTRODES SHALL BE CONNECTED TOGETHER IN ACCORDANCE WITH THE NEC.
3. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. USE OF OTHER METHODS MUST BE PRE-APPROVED BY THE ENGINEER IN WRITING.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS ON TOWER SITES AND 10 OHMS OR LESS ON ROOFTOP SITES. WHEN ADDING ELECTRODES, CONTRACTOR SHALL MAINTAIN A MINIMUM DISTANCE BETWEEN THE ADDED ELECTRODE AND ANY OTHER EXISTING ELECTRODE EQUAL TO THE BURIED LENGTH OF THE ROD. IDEALLY, CONTRACTOR SHALL STRIVE TO KEEP THE SEPARATION DISTANCE EQUAL TO TWICE THE BURIED LENGTH OF THE RODS.
5. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
6. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWG COPPER WIRE AND UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
7. 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 TRANSMISSION EQUIPMENT.
8. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK-TO-BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED. IN ALL CASES, BENDS SHALL BE MADE WITH A MINIMUM BEND RADIUS OF 8 INCHES.
11. EACH INTERIOR TRANSMISSION CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH 6 AWG STRANDED, GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRE UNLESS NOTED OTHERWISE IN THE DETAILS. EACH OUTDOOR CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE BURIED GROUND RING WITH 2 AWG SOLID TIN-PLATED COPPER WIRE UNLESS NOTED OTHERWISE IN THE DETAILS.
12. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE 2 AWG SOLID TIN-PLATED COPPER UNLESS OTHERWISE INDICATED.
13. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE. CONNECTIONS TO ABOVE GRADE UNITS SHALL BE MADE WITH EXOTHERMIC WELDS WHERE PRACTICAL OR WITH 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS. HIGH PRESSURE CRIMP CONNECTORS MAY ONLY BE USED WITH WRITTEN PERMISSION FROM SAI MARKET REPRESENTATIVE.
14. EXOTHERMIC WELDS SHALL BE PERMITTED ON TOWERS ONLY WITH THE EXPRESS APPROVAL OF THE TOWER MANUFACTURER OR THE CONTRACTORS STRUCTURAL ENGINEER.
15. ALL WIRE TO WIRE GROUND CONNECTIONS TO THE INTERIOR GROUND RING SHALL BE FORMED USING HIGH PRESS CRIMPS OR SPLIT BOLT CONNECTORS WHERE INDICATED IN THE DETAILS.
16. ON ROOFTOP SITES WHERE EXOTHERMIC WELDS ARE A FIRE HAZARD COPPER COMPRESSION CAP CONNECTORS MAY BE USED FOR WIRE TO WIRE CONNECTORS. 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS SHALL BE USED FOR CONNECTION TO ALL ROOFTOP TRANSMISSION EQUIPMENT AND STRUCTURAL STEEL.
17. COAX BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR USING TWO-HOLE MECHANICAL TYPE BRASS CONNECTORS AND STAINLESS STEEL HARDWARE.
18. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
19. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
20. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
21. BOND ALL METALLIC OBJECTS WITHIN 6 FT OF THE BURIED GROUND RING WITH 2 AWG SOLID TIN-PLATED COPPER GROUND CONDUCTOR. DURING EXCAVATION FOR NEW GROUND CONDUCTORS, IF EXISTING GROUND CONDUCTORS ARE ENCOUNTERED, BOND EXISTING GROUND CONDUCTORS TO NEW CONDUCTORS.
22. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT WITH LISTED BONDING FITTINGS.

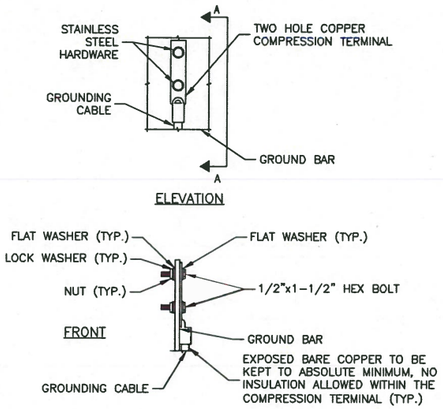


NOTE:

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

CONNECTION OF GROUND WIRES TO GROUNDING BAR (CIGBE) 1

SCALE: N.T.S.

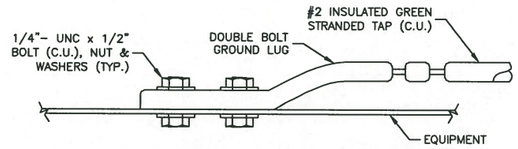


NOTES:

1. DOUBLING UP OR STACKING OF CONNECTIONS IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

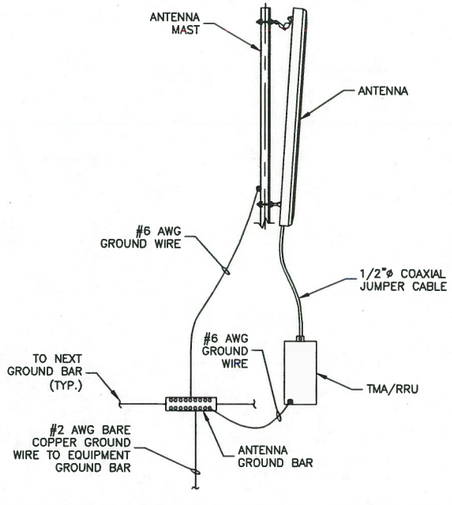
TYPICAL GROUND BAR MECHANICAL CONNECTION DETAIL 2

SCALE: N.T.S.



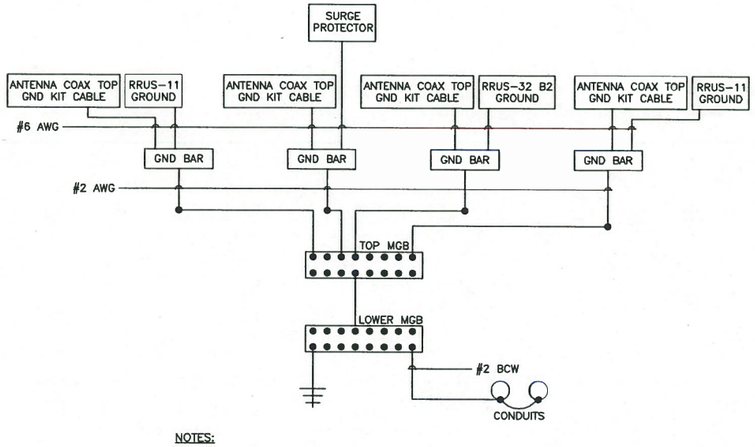
CONNECTION TO EQUIPMENT DETAIL 3

SCALE: N.T.S.



TYPICAL ANTENNA GROUNDING DETAIL 4

SCALE: N.T.S



NOTES:

1. BOND ANTENNA GROUNDING KIT CABLE TO TOP CIGBE
2. BOND ANTENNA GROUNDING KIT CABLE TO BOTTOM CIGBE.
3. SCHEMATIC GROUNDING DIAGRAM IS TYPICAL FOR EACH SECTOR.
4. GROUND ALL EQUIPMENT PER MANUFACTURER RECOMMENDATIONS.

SCHEMATIC GROUNDING DIAGRAM 5

SCALE: N.T.S.

at&t

500 ENTERPRISE DRIVE SUITE 3A
ROCKY HILL, CT 06067

SAI

12 INDUSTRIAL WAY
SALEM, NH 03079

CT1035
LITCHFIELD BANTAM ROAD

CONSTRUCTION DRAWINGS

0	03/27/19	ISSUED AS FINAL
A	02/06/19	ISSUED FOR REVIEW

Dewberry®

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STATE OF CONNECTICUT
JIANG YU
No. 23222
LICENSED PROFESSIONAL ENGINEER

JIANG YU, P.E.
CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	LED
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50055106
JOB NUMBER:	50093842
SITE ADDRESS:	

1291 BANTAM ROAD
LITCHFIELD, CT 06759

SHEET TITLE

GROUNDING NOTES & DETAILS

SHEET NUMBER

E-1

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

Post-Mod Structural Analysis Report

Existing 149 ft. EEI Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT12215-A

Customer Site Name: Litchfield 3, CT

Carrier Name: AT&T (App#: 106695 V1)

Carrier Site ID / Name: CT1035 / LITCHFIELD, BANTAM RD

Site Location: 1291 Bantam Road

Bantam, Connecticut

Litchfield County

Latitude: 41.717183

Longitude: -73.260928

5/21/19

Analysis Result:

Max Structural Usage: 99.0% [Pass]

Max Foundation Usage: 80.0% [Pass]

Report Prepared By : Billy Davis

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
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Latitude: 41.717183

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Analysis Result:

Max Structural Usage: 99.0% [Pass]

Max Foundation Usage: 80.0% [Pass]

Report Prepared By : Billy Davis

Introduction

The purpose of this report is to summarize the analysis results on the 149 ft EEI Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any existing modification listed under Sources of Information was assumed completed and was included in this analysis.

The proposed modification by **TES** listed under Sources of Information was considered completed and was included in this analysis.

Sources of Information

Tower Drawings	Engineered Endeavors, Inc. (Job No. 12278) Structure and Foundation Design Calculations dated January 26, 2004
Foundation Drawing	Engineered Endeavors, Inc. (Job No. 12278) Design Calculations for a Spread Footer Foundation dated January 27, 2004
Geotechnical Report	Clarence Welti Associates, Inc. (Project Name: Sprint Site CT33XC204) Geotechnical Study dated January 24, 2004
Existing Modification	FDH Engineering, Inc. (Project No. 12-06691E S3) Modification Drawings for a 149' Monopole dated February 6, 2013
Proposed Modification	TES Job # 75424

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 **TESPoles,** a proprietary analysis software. 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} = 120.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 93.0 mph (3-Sec. Gust)
Basic Wind Speed with Ice:	40 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.
Seismic Parameters:	S_S = 0.187, S_1 = 0.065

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	150.0	3	RFS APXVSPP18-C-A20 - Panel	Low Profile Platform	(4) 1-1/4" Fiber* Outside	Sprint Nextel
2		3	RFS APXVTM14-C-I20 - Panel			
3		4	RFS ACU-A20-N RET			
4		3	Alcatel Lucent 1900 MHz RRH			
5		3	Alcatel Lucent 800 MHz RRH			
6		3	Alcatel Lucent TD-RRH8x20-25			
7		3	Alcatel Lucent 800 MHz Filter			
8	138.0	3	Antel LPA-80080/6CF - Panel	Low Profile Platform	(12) 1 5/8" (1) 1/2"	Verizon
9		3	Antel BXA-70063-6CF_2 - Panel			
10		3	Antel BXA-171085-12B_2 - Panel			
11		1	GPS Receiver			
12		6	RFS FD9R6004/2C-3L Diplexer			
-	128.0	6	Powerwave 7770.00 - Panel	Low Profile Platform	(12) 1 5/8" (2) 3/4" DC (1) 7/16" Fiber	AT&T
-		3	KMW AM-X-CD-16-65-00T-RET - Panel			
-		12	Powerwave LGP 21401			
-		6	Ericsson RRUS-11			
-		1	Raycap DC6-48-60-18-8F			
-		1	Commscope ABT-DF-DM-ADBH			
19	115.0	3	Commscope LNX-6515DS-A1M - Panel	(3) T-Arm (Site Pro 1 #RMV12-3XX)	(2) 1 5/8" Hybrid	T-Mobile
20		3	RFS APX16DWV-16DWVS-E-A20 - Panel			
21		3	Ericsson RRUS 11 (Band 4)			
22		3	Ericsson RRUS 11 (Band 12)			
23		3	Ericsson RRUS 11			
24	73.0	1	GPS Receiver	-	(1) 1/2"	Sprint Nextel
25	50	1	Symmetricom 58532A	-	(1) 1/2"	T-Mobile

*Sprint Nextel coax outside the pole.

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
13	130.0	3	Powerwave 7770.00 - Panel	Low Profile Platform w/ (2) Commscope VSR-MS-B Reinforcement Kit (24) Commscope XP-2020 Crossover Plate	(12) 1 5/8" ** (1) 3" Conduit (2) 2" Conduit (2) 7/16" Fiber (6) 3/4" DC	AT&T
14		6	Kathrein 80010965 - Panel			
15		12	Powerwave LGP 21401 TMA			
16		3	Ericsson RRUS 4478 B14 RRU			
17		3	Ericsson 4449 B5/B12 RRU			
18		3	Ericsson 8843 B2/B66A RRU			
19		1	Raycap DC6-48-60-18-8F			
20		1	Raycap DC6-48-60-18-8C			
21		1	Raycap DC6-48-60-0-8C-EV			
22		1	Commscope ABT-DF-DM-ADBH			

**AT&T coax inside the pole. (1) 3" conduit housing (1) 7/16" fiber and (2) 3/4" DC
(1) 2" conduit housing (1) 7/16" fiber and (2) 3/4" DC
(1) 2" conduit housing (2) 3/4" DC

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	Anchor Bolts	Base Plate
Max. Usage:	**99.0%**	**82.0%**	**72.5%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Original Design Reactions	1855.0	17.7	19.6
Analysis Reactions	2910.3	25.9	34.6
Factored Reactions*	2504.3	23.9	26.5

* Per section 15.5.1 of the TIA-222-G standard, factored reactions were obtained by multiplying a 1.35 factor to the original design reactions.

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.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 2.2825 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the structure and its foundation will be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the design ANSI/TIA/EIA 222-G standards under a basic wind speed of 93 mph no ice and 40 mph with 1" radial ice after the following proposed modification is successfully completed.

- Proposed modification design drawing by **TES** Job # 75424

Pre-Mod Installation Determination

We have also checked this tower to determine if the proposed AT&T equipment loading can be installed prior to the completion of the required modifications. We ran a reduced wind loading case as required by TIA-322 considering a construction period of no more than 6 months.

The tower and foundations passed, so the Carrier can proceed and install their proposed loading prior to the mods completion. Please be aware that this approval is being provided and is based on the method outlined in TIA-322. This approval is not a blanket approval and there is still a risk that the tower will experience a wind event that cannot be predicted by TIA-322 or our Engineers. In the event of an unforeseen wind event, Tower Engineering Solutions will not be liable nor responsible for damage to the tower or the Carriers equipment. Additionally, the tower cannot go beyond the 6 month construction period without the modifications being completed. If the modifications cannot be completed within 6 months from the completed installation of the Carrier's proposed equipment, TES must be notified immediately for further review.

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.

Usage Diagram - Max Ratio 98.90% at 0.0ft

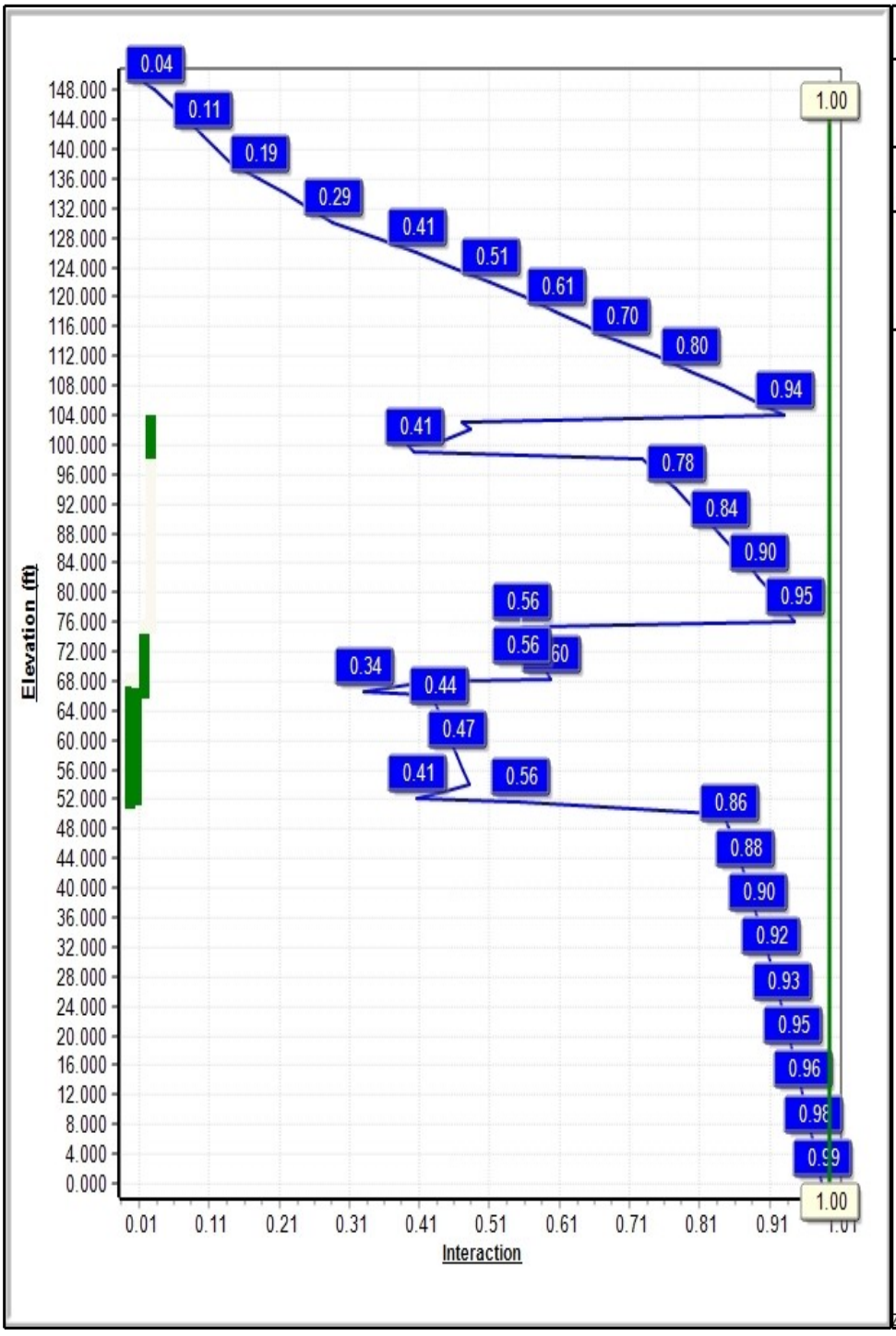
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019
Site Name:	Litchfield 3, CT	**Exposure:**	C	
Height:	149.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

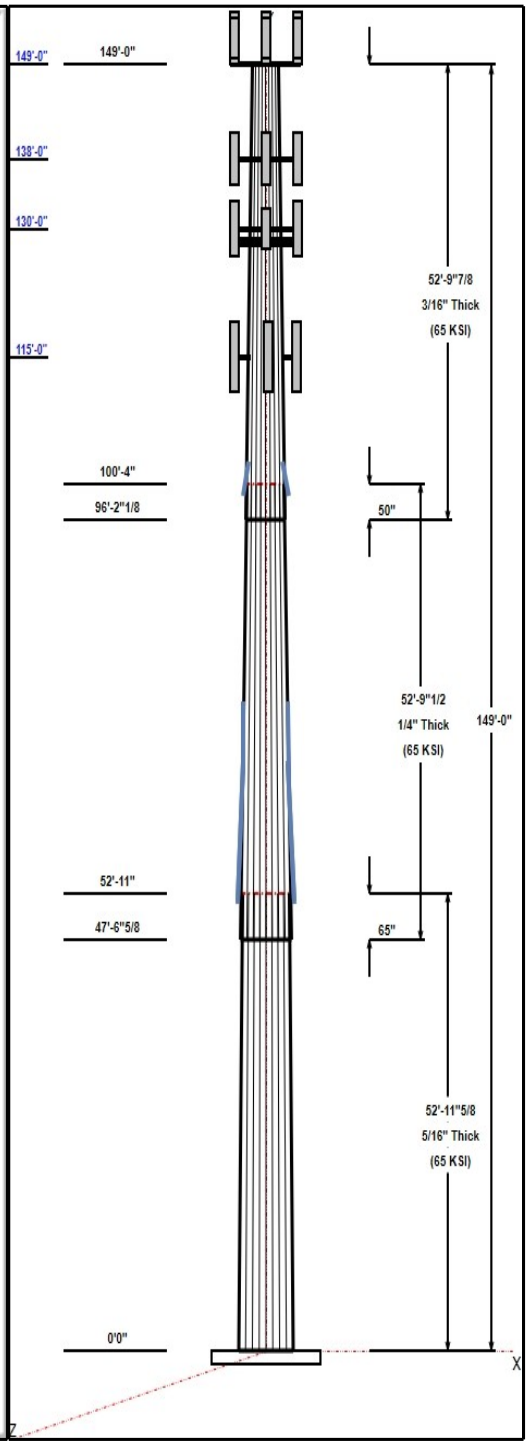
Tower Engineering Solutions

Dead Load Factor:	1.20
Wind Load Factor:	1.60

Load Case : 1.2D + 1.6W 93 mph Wind

Iterations: 31





Structure: CT12215-A-SBA

Type: Tapered
Site Name: Litchfield 3, CT
Height: 149.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.20721

5/21/2019

Tower Engineering Solutions

Shaft Properties

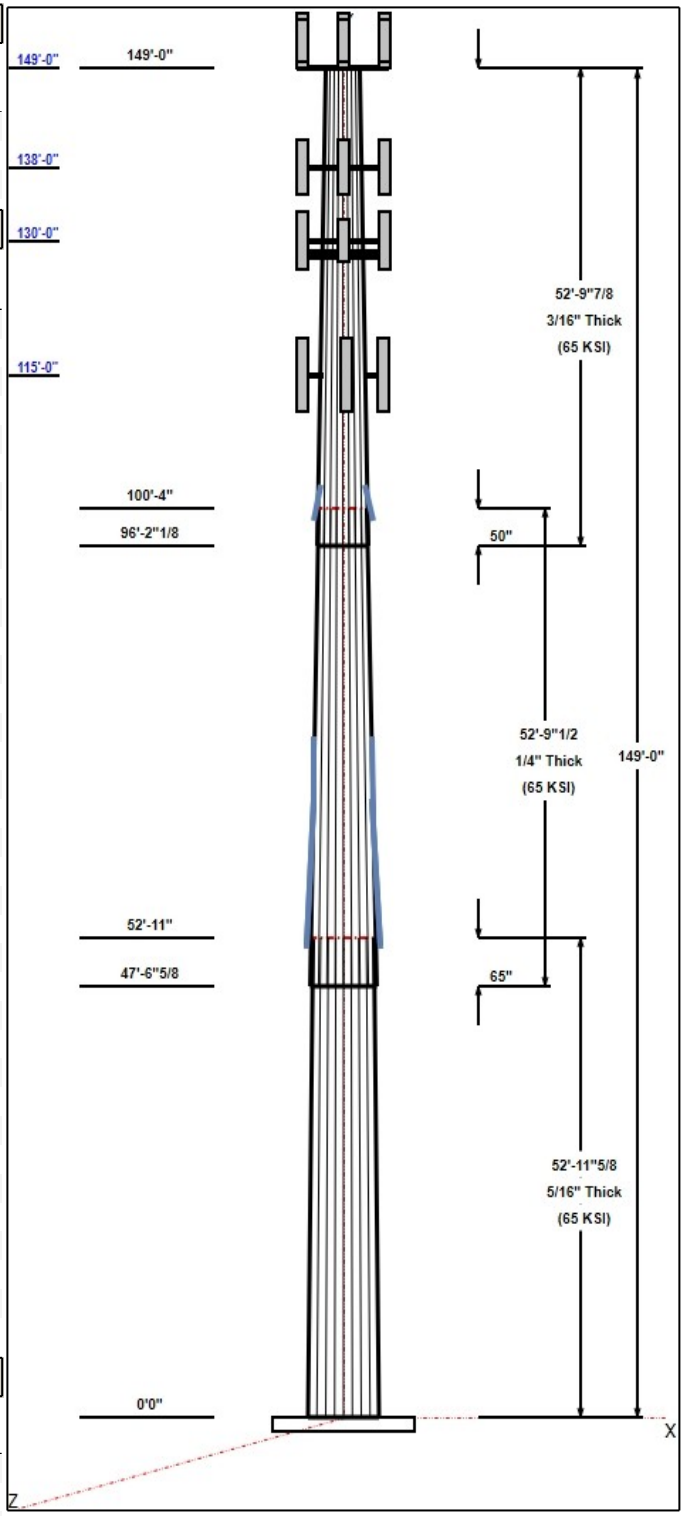
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	52.97	37.02	48.00	0.313		0.20721	65
2	52.79	27.71	38.65	0.250	Slip	0.20721	65
3	52.82	18.00	28.95	0.188	Slip	0.20721	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
149.00	152.00	3	APXVSPP18-C-A20	Sprint Nextel
149.00	152.00	3	APXVTM14-C-I20	Sprint Nextel
149.00	152.00	3	1900MHz	Sprint Nextel
149.00	152.00	3	800MHZ	Sprint Nextel
149.00	152.00	3	TD-RRH8x20-25	Sprint Nextel
149.00	152.00	3	800MHz Filter	Sprint Nextel
149.00	152.00	4	ACU-A20-N	Sprint Nextel
149.00	149.00	1	Low Profile Platform	Sprint Nextel
138.00	138.00	3	LPA-80080/6CF	Verizon
138.00	138.00	3	BXA-70063-6CF_2	Verizon
138.00	138.00	3	BXA-171085-12B_2	Verizon
138.00	138.00	1	GPS Receiver	Verizon
138.00	138.00	6	FD9R6004/2C-3L	Verizon
138.00	138.00	1	Low Profile Platform	Verizon
130.00	130.00	3	7770.00	AT&T
130.00	130.00	12	LGP 21401	AT&T
130.00	130.00	1	DC6-48-60-18-8F	AT&T
130.00	130.00	1	ABT-DF-DM-ADBH	AT&T
130.00	130.00	1	Low Profile Platform	AT&T
130.00	130.00	6	80010965	AT&T
130.00	130.00	3	RRUS 4478 B14	AT&T
130.00	130.00	3	4449 B5/B12	AT&T
130.00	130.00	3	8843 B2/B66A	AT&T
130.00	130.00	1	DC6-48-60-18-8C	AT&T
130.00	130.00	1	DC6-48-60-0-8C-EV	AT&T
130.00	130.00	2	VSRDual-TS-B-HD	AT&T
130.00	130.00	24	XP-2020	AT&T
130.00	130.00	1	(3) 12.5' - 2" Horizontal	AT&T
115.00	115.00	3	LNX-6515DS-A1M	T-Mobile
115.00	115.00	3	APX16DWV-16DWVS-E-A	T-Mobile
115.00	115.00	3	RRUS 11 (Band 4)	T-Mobile
115.00	115.00	3	RRUS 11 (Band 12)	T-Mobile
115.00	115.00	3	RRUS 11	T-Mobile
115.00	115.00	3	T-Arm	T-Mobile
73.00	73.00	1	GPS Receiver	Sprint
50.00	50.00	1	58532A	T-Mobile

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	149.00	Inside	1-1/4" Fiber	Sprint
0.00	138.00	Inside	1 5/8" Coax	Verizon
0.00	138.00	Inside	1/2" Coax	Verizon
0.00	130.00	Inside	1 5/8" Coax	AT&T
0.00	130.00	Inside	2" Conduit	AT&T
0.00	130.00	Inside	3" Conduit	AT&T
0.00	130.00	Inside	3/4" DC	AT&T



0.00	130.00	Inside	7/16" Fiber	AT&T
0.00	115.00	Outside	1 5/8" Hybrid	T-Mobile
97.00	105.00	Outside	1.25" Reinforcing plate	
50.00	77.00	Outside	1.25" Reinforcing plate	
0.00	73.00	Inside	1/2" Coax	Sprint
0.00	50.00	Outside	1/2" Coax	T-Mobile

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
12	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.7500	63.0	60.0	Round

Reactions

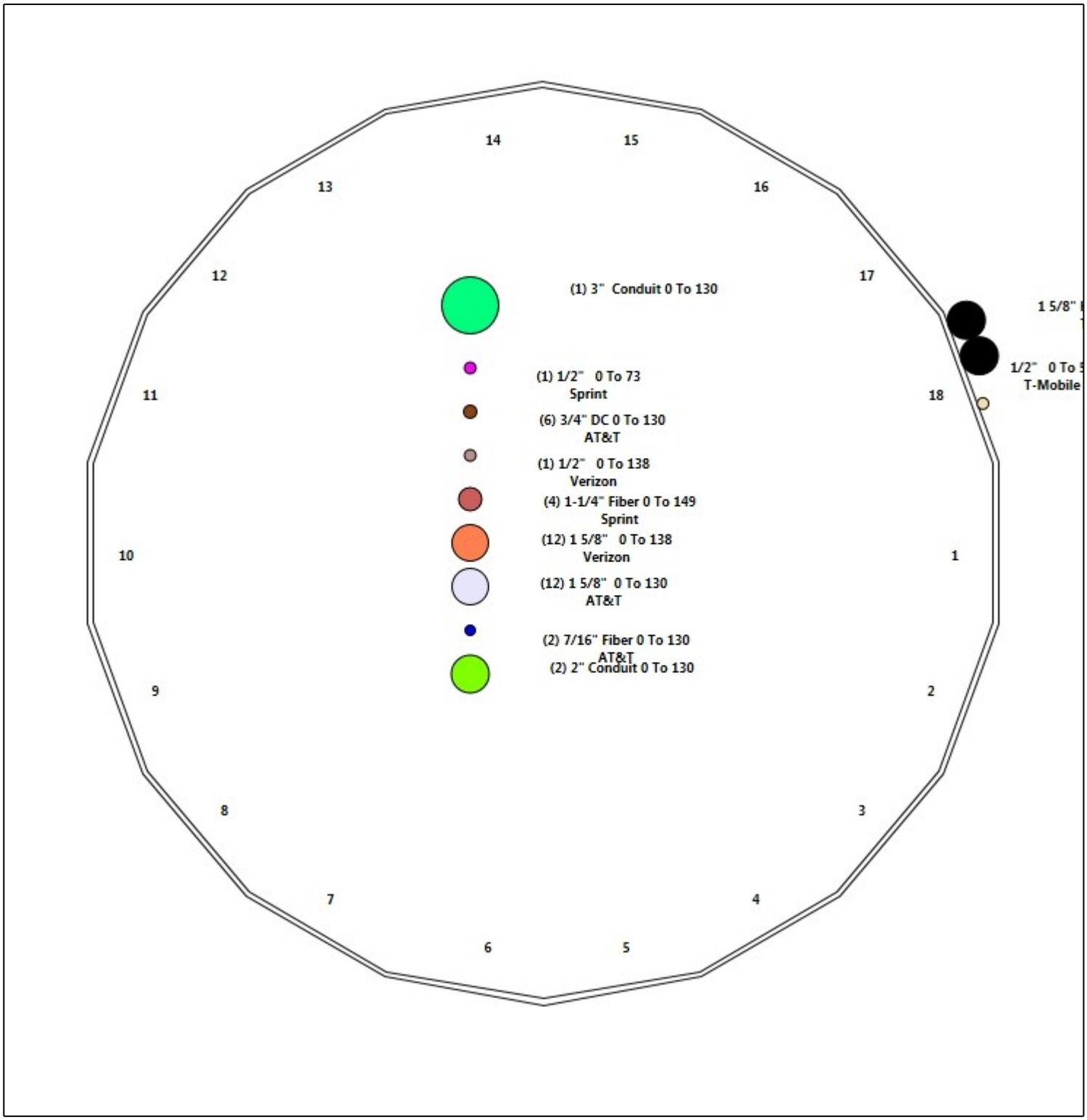
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 93 mph Wind	2910.3	25.9	34.6
0.9D + 1.6W 93 mph Wind	2864.6	25.9	25.9
1.2D + 1.0Di + 1.0Wi 40 mph Wind	656.4	5.5	65.1
1.2D + 1.0E	114.5	0.9	34.6
0.9D + 1.0E	112.6	0.9	25.9
1.0D + 1.0W 60 mph Wind	751.4	6.7	28.8

Structure: CT12215-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Litchfield 3, CT
Height: 149.00 (ft)

5/21/2019

Tower Engineering Solutions



Shaft Properties

Structure:	CT12215-A-SBA		**Code:**	EIA/TIA-222-G	5/21/2019
Site Name:	Litchfield 3, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

Tower Engineering Solutions

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	52.970	0.3125	65		0.00	7,544
2	18	52.790	0.2500	65	Slip	65.00	4,693
3	18	52.823	0.1875	65	Slip	50.00	2,491
					Total Shaft Weight:		**14,728**

	Bottom						Top						
Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	48.00	0.00	47.30	13589.64	25.67	153.60	37.02	52.97	36.41	6200.05	19.48	118.4	0.207215
2	38.65	47.55	30.47	5674.80	25.85	154.58	27.71	100.34	21.79	2075.21	18.13	110.8	0.207215
3	28.95	96.18	17.11	1788.27	25.81	154.38	18.00	149.00	10.60	424.93	15.52	96.00	0.207215

Additional Steel

							Intermediate Connectors		Termination Connectors			
Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Fu (ksi)	Offset (in)	Description	Spacing (in)	Description	Spacing (in)	Lower Qty	Upper Qty
51.75	68.25	3	PLT 4.5"x 1-1/4"(1.25"ho	65	80	0.00	AJM20&sleeve	24.00	AJM20&sleeve	3.00	8	8
52.00	68.00	3	LNP LP6X100-G-20TT	65	80	0.00	5/8" Hollo Bolt	24.00	5/8" Hollo Bolt	3.00	8	8
66.67	75.25	3	PLT 4.5"x 1-1/4"(1.25"ho	65	80	0.00	AJM20&sleeve	24.00	AJM20&sleeve	3.00	8	8
99.00	103.0	3	PLT 4x1.25 (1.25 Hole)	65	80	0.00	AJM20&sleeve	22.00	AJM20&sleeve	3.00	9	9

Load Summary

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Tower Engineering Solutions

Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	149.00	APXVSPP18-C-A20	3	57.00	8.02	0.83	287.31	11.742	0.83	0.00	3.00
2	149.00	APXVTM14-C-I20	3	56.00	6.34	0.79	284.31	7.855	0.79	0.00	3.00
3	149.00	1900MHz	3	60.00	2.77	0.50	171.17	4.460	0.50	0.00	3.00
4	149.00	800MHZ	3	59.50	2.64	0.50	163.44	4.182	0.50	0.00	3.00
5	149.00	TD-RRH8x20-25	3	70.00	4.05	0.50	227.60	5.161	0.50	0.00	3.00
6	149.00	800MHz Filter	3	8.80	0.78	0.50	32.31	1.642	0.50	0.00	3.00
7	149.00	ACU-A20-N	4	1.00	0.14	0.50	6.72	0.535	0.50	0.00	3.00
8	149.00	Low Profile Platform	1	1200.00	25.00	1.00	2595.24	52.905	1.00	0.00	0.00
9	138.00	LPA-80080/6CF	3	21.00	4.33	1.70	295.20	5.937	1.70	0.00	0.00
10	138.00	BXA-70063-6CF_2	3	17.00	7.57	0.73	263.39	9.275	0.73	0.00	0.00
11	138.00	BXA-171085-12B_2	3	15.00	4.74	0.84	140.53	7.846	0.84	0.00	0.00
12	138.00	GPS Receiver	1	10.00	1.00	1.00	48.77	1.942	1.00	0.00	0.00
13	138.00	FD9R6004/2C-3L	6	3.10	0.36	0.50	13.71	0.946	0.50	0.00	0.00
14	138.00	Low Profile Platform	1	1200.00	25.00	1.00	2584.58	52.692	1.00	0.00	0.00
15	130.00	7770.00	3	35.00	5.50	0.73	225.57	6.929	0.73	0.00	0.00
16	130.00	LGP 21401	12	17.50	0.00	0.50	59.80	1.387	0.50	0.00	0.00
17	130.00	DC6-48-60-18-8F	1	31.80	0.92	1.00	113.06	1.496	1.00	0.00	0.00
18	130.00	ABT-DF-DM-ADBH	1	1.10	0.05	1.00	4.03	0.303	1.00	0.00	0.00
19	130.00	Low Profile Platform	1	1200.00	25.00	1.00	2576.34	52.527	1.00	0.00	0.00
20	130.00	80010965	6	108.60	13.81	0.71	519.03	15.916	0.71	0.00	0.00
21	130.00	RRUS 4478 B14	3	59.40	1.65	0.50	113.90	2.331	0.50	0.00	0.00
22	130.00	4449 B5/B12	3	71.00	1.97	0.50	141.16	2.689	0.50	0.00	0.00
23	130.00	8843 B2/B66A	3	72.00	1.64	0.50	133.57	2.293	0.50	0.00	0.00
24	130.00	DC6-48-60-18-8C	1	20.00	1.26	0.50	89.35	2.127	0.50	0.00	0.00
25	130.00	DC6-48-60-0-8C-EV	1	16.00	4.78	0.50	178.64	5.942	0.50	0.00	0.00
26	130.00	VSRDual-TS-B-HD	2	148.40	4.10	0.75	339.03	10.872	0.75	0.00	0.00
27	130.00	XP-2020	24	10.00	0.69	0.75	21.77	1.355	0.75	0.00	0.00
28	130.00	(3) 12.5' - 2" Horizontal Pipe	1	137.25	5.94	0.75	313.56	15.744	0.75	0.00	0.00
29	115.00	LNX-6515DS-A1M	3	49.80	11.47	0.80	347.84	15.712	0.80	0.00	0.00
30	115.00	APX16DWV-16DWVS-E-A20	3	40.70	6.61	0.62	192.68	9.438	0.62	0.00	0.00
31	115.00	RRUS 11 (Band 4)	3	51.00	2.52	0.50	144.84	3.342	0.50	0.00	0.00
32	115.00	RRUS 11 (Band 12)	3	54.00	2.52	0.50	138.67	3.342	0.50	0.00	0.00
33	115.00	RRUS 11	3	54.00	2.94	0.50	177.76	3.388	0.50	0.00	0.00
34	115.00	T-Arm	3	350.00	8.00	0.75	667.23	17.064	0.75	0.00	0.00
35	73.00	GPS Receiver	1	10.00	1.00	1.00	46.38	1.883	1.00	0.00	0.00
36	50.00	58532A	1	0.40	0.22	1.00	9.96	0.662	1.00	0.00	0.00
		Totals:	**122**	**8,851.15**			**26,146.91**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	149.00	(4) 1-1/4" Fiber	0.00	Inside
0.00	138.00	(12) 1 5/8" Coax	0.00	Inside
0.00	138.00	(1) 1/2" Coax	0.00	Inside
0.00	130.00	(12) 1 5/8" Coax	0.00	Inside
0.00	130.00	(2) 2" Conduit	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
0.00	130.00	(1) 3" Conduit			0.00	Inside					
0.00	130.00	(6) 3/4" DC			0.00	Inside					
0.00	130.00	(2) 7/16" Fiber			0.00	Inside					
0.00	115.00	(2) 1 5/8" Hybrid			2.00	Outside					
97.00	105.00	(3) 1.25" Reinforcing plate			1.25	Outside					
50.00	77.00	(3) 1.25" Reinforcing plate			1.25	Outside					
0.00	73.00	(1) 1/2" Coax			0.00	Inside					
0.00	50.00	(1) 1/2" Coax			0.65	Outside					

Shaft Section Properties

Structure: CT12215-A-SBA | **Code:** EIA/TIA-222-G | 5/21/2019

Site Name: Litchfield 3, CT | **Exposure:** C

Height: 149.00 (ft) | **Crest Height:** 0.00

Base Elev: 0.000 (ft) | **Site Class:** B - Competent Rock

Gh: 1.1 | **Topography:** 1 | **Struct Class:** II | Page: 8

Tower Engineering Solutions

Increment Length: 3 (ft)

											Additional Reinforcing			
Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
0.00		0.3125	48.000	47.298	13589.6	25.67	153.60	65	71	0.0				
2.00		0.3125	47.586	46.887	13238.4	25.44	152.27	65	71	320.5				
4.00		0.3125	47.171	46.476	12893.3	25.21	150.95	65	72	317.7				
6.00		0.3125	46.757	46.065	12554.2	24.97	149.62	65	72	314.9				
8.00		0.3125	46.342	45.654	12221.1	24.74	148.30	65	72	312.1				
10.00		0.3125	45.928	45.243	11894.0	24.50	146.97	65	73	309.3				
12.00		0.3125	45.513	44.832	11572.7	24.27	145.64	65	73	306.5				
14.00		0.3125	45.099	44.421	11257.3	24.04	144.32	65	73	303.7				
16.00		0.3125	44.685	44.010	10947.7	23.80	142.99	65	73	300.9				
18.00		0.3125	44.270	43.599	10643.8	23.57	141.66	65	74	298.1				
20.00		0.3125	43.856	43.188	10345.6	23.33	140.34	65	74	295.3				
22.00		0.3125	43.441	42.777	10053.0	23.10	139.01	65	74	292.5				
24.00		0.3125	43.027	42.366	9766.0	22.87	137.69	65	75	289.7				
26.00		0.3125	42.612	41.955	9484.5	22.63	136.36	65	75	286.9				
28.00		0.3125	42.198	41.544	9208.4	22.40	135.03	65	75	284.1				
30.00		0.3125	41.784	41.133	8937.8	22.17	133.71	65	75	281.3				
32.00		0.3125	41.369	40.722	8672.5	21.93	132.38	65	76	278.5				
34.00		0.3125	40.955	40.311	8412.5	21.70	131.06	65	76	275.7				
36.00		0.3125	40.540	39.899	8157.8	21.46	129.73	65	76	272.9				
38.00		0.3125	40.126	39.488	7908.2	21.23	128.40	65	76	270.1				
40.00		0.3125	39.711	39.077	7663.9	21.00	127.08	65	77	267.3				
42.00		0.3125	39.297	38.666	7424.5	20.76	125.75	65	77	264.5				
44.00		0.3125	38.883	38.255	7190.3	20.53	124.42	65	77	261.7				
46.00		0.3125	38.468	37.844	6961.0	20.29	123.10	65	78	258.9				
47.55	Bot - Section 2	0.3125	38.146	37.525	6786.3	20.11	122.07	65	78	199.2				
48.00		0.3125	38.054	37.433	6736.6	20.06	121.77	65	78	103.2				
50.00		0.3125	37.639	37.022	6517.1	19.83	120.45	65	78	459.1				
51.75	RB1	0.3125	37.277	36.662	6329.0	19.62	119.29	65	78	397.6	16.88	3228.1	3228.1	100.5
52.00	RB2	0.3125	37.225	36.611	6302.4	19.59	119.12	65	78	56.5	34.88	6621.4	6621.4	29.7
52.97	Top - Section 1	0.2500	37.524	29.576	5191.5	25.06	150.10	65	72	218.4	34.88	6553.5	6553.5	115.1
54.00		0.2500	37.310	29.406	5102.9	24.90	149.24	65	72	103.4	34.88	6481.8	6481.8	122.2
56.00		0.2500	36.896	29.078	4933.6	24.61	147.58	65	72	199.0	34.88	6343.7	6343.7	237.3
58.00		0.2500	36.482	28.749	4768.1	24.32	145.93	65	73	196.8	34.88	6207.1	6207.1	237.3
60.00		0.2500	36.067	28.420	4606.3	24.03	144.27	65	73	194.5	34.88	6072.0	6072.0	237.3
62.00		0.2500	35.653	28.091	4448.3	23.74	142.61	65	73	192.3	34.88	5938.3	5938.3	237.3
64.00		0.2500	35.238	27.762	4293.9	23.44	140.95	65	74	190.1	34.88	5806.2	5806.2	237.3
66.00		0.2500	34.824	27.433	4143.1	23.15	139.30	65	74	187.8	34.88	5675.6	5675.6	237.3
66.67	RB3	0.2500	34.685	27.323	4093.4	23.05	138.74	65	74	62.4	51.75	8371.4	8371.4	118.0
68.00	RT2	0.2500	34.409	27.105	3995.9	22.86	137.64	65	75	123.2	33.75	5395.2	5395.2	152.7
68.25	RT1	0.2500	34.358	27.063	3977.8	22.82	137.43	65	75	23.0	16.88	2689.8	2689.8	14.4
70.00		0.2500	33.995	26.776	3852.2	22.57	135.98	65	75	160.3	16.88	2635.6	2635.6	100.5
72.00		0.2500	33.581	26.447	3712.0	22.27	134.32	65	75	181.1	16.88	2574.4	2574.4	114.8
73.00		0.2500	33.373	26.282	3643.2	22.13	133.49	65	75	89.7	16.88	2544.0	2544.0	57.4
74.00		0.2500	33.166	26.118	3575.3	21.98	132.66	65	76	89.2	16.88	2513.8	2513.8	57.4
75.25	RT3	0.2500	32.907	25.912	3491.5	21.80	131.63	65	76	110.7	16.88	2476.4	2476.4	71.8
76.00		0.2500	32.752	25.789	3441.9	21.69	131.01	65	76	66.0				
78.00		0.2500	32.337	25.460	3311.9	21.40	129.35	65	76	174.4				
80.00		0.2500	31.923	25.131	3185.3	21.10	127.69	65	77	172.2				
82.00		0.2500	31.508	24.803	3061.9	20.81	126.03	65	77	169.9				
84.00		0.2500	31.094	24.474	2941.7	20.52	124.38	65	77	167.7				

Increment Length: 3 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
86.00		0.2500	30.680	24.145	2824.7	20.23	122.72	65	78	165.4				
88.00		0.2500	30.265	23.816	2710.8	19.94	121.06	65	78	163.2				
90.00		0.2500	29.851	23.487	2600.1	19.64	119.40	65	78	161.0				
92.00		0.2500	29.436	23.158	2492.4	19.35	117.74	65	79	158.7				
94.00		0.2500	29.022	22.830	2387.7	19.06	116.09	65	79	156.5				
96.00		0.2500	28.607	22.501	2286.0	18.77	114.43	65	79	154.2				
96.18	Bot - Section 3	0.2500	28.571	22.472	2277.2	18.74	114.28	65	79	13.5				
98.00		0.2500	28.193	22.172	2187.3	18.47	112.77	65	80	244.0				
99.00	RB4	0.2500	27.986	22.008	2139.0	18.33	111.94	65	80	132.4	15.00	1655.0	1655.0	51.0
100.00		0.2500	27.779	21.843	2091.4	18.18	111.11	65	80	131.4	15.00	1632.0	1632.0	51.0
100.34	Top - Section 2	0.1875	28.082	16.600	1632.0	25.00	149.77	65	72	44.9	15.00	1624.2	1624.2	17.5
102.00		0.1875	27.739	16.396	1572.5	24.68	147.94	65	72	93.0	15.00	1586.7	1586.7	84.6
103.00	RT4	0.1875	27.532	16.273	1537.3	24.48	146.84	65	73	55.6	15.00	1564.2	1564.2	51.0
104.00		0.1875	27.325	16.149	1502.6	24.29	145.73	65	73	55.2				
106.00		0.1875	26.910	15.903	1434.8	23.90	143.52	65	73	109.1				
108.00		0.1875	26.496	15.656	1369.1	23.51	141.31	65	74	107.4				
110.00		0.1875	26.081	15.410	1305.4	23.12	139.10	65	74	105.7				
112.00		0.1875	25.667	15.163	1243.7	22.73	136.89	65	75	104.0				
114.00		0.1875	25.253	14.916	1184.0	22.34	134.68	65	75	102.4				
115.00		0.1875	25.045	14.793	1154.9	22.14	133.57	65	75	50.5				
116.00		0.1875	24.838	14.670	1126.2	21.95	132.47	65	76	50.1				
118.00		0.1875	24.424	14.423	1070.4	21.56	130.26	65	76	99.0				
120.00		0.1875	24.009	14.176	1016.4	21.17	128.05	65	77	97.3				
122.00		0.1875	23.595	13.930	964.3	20.78	125.84	65	77	95.6				
124.00		0.1875	23.180	13.683	914.0	20.39	123.63	65	77	94.0				
126.00		0.1875	22.766	13.437	865.4	20.00	121.42	65	78	92.3				
128.00		0.1875	22.352	13.190	818.6	19.61	119.21	65	78	90.6				
130.00		0.1875	21.937	12.943	773.6	19.22	117.00	65	79	88.9				
132.00		0.1875	21.523	12.697	730.2	18.83	114.79	65	79	87.2				
134.00		0.1875	21.108	12.450	688.5	18.44	112.58	65	80	85.6				
136.00		0.1875	20.694	12.203	648.3	18.05	110.37	65	80	83.9				
138.00		0.1875	20.279	11.957	609.8	17.66	108.16	65	81	82.2				
140.00		0.1875	19.865	11.710	572.9	17.27	105.95	65	81	80.5				
142.00		0.1875	19.451	11.463	537.4	16.88	103.74	65	82	78.9				
144.00		0.1875	19.036	11.217	503.5	16.49	101.53	65	82	77.2				
146.00		0.1875	18.622	10.970	471.0	16.10	99.32	65	82	75.5				
148.00		0.1875	18.207	10.724	439.9	15.71	97.11	65	83	73.8				
149.00		0.1875	18.000	10.600	424.9	15.52	96.00	65	83	36.3				
								Total Weight		**14728.1**				**2733.8**

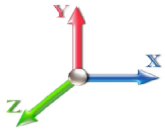
Wind Loading - Shaft

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 31

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	17.879	19.67	348.26	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	17.879	19.67	345.25	0.650	0.000	2.00	8.088	5.26	165.4	0.0	384.6
4.00		1.00	0.85	17.879	19.67	342.24	0.650	0.000	2.00	8.018	5.21	164.0	0.0	381.2
6.00		1.00	0.85	17.879	19.67	339.24	0.650	0.000	2.00	7.948	5.17	162.6	0.0	377.9
8.00		1.00	0.85	17.879	19.67	336.23	0.650	0.000	2.00	7.878	5.12	161.1	0.0	374.5
10.00		1.00	0.85	17.879	19.67	333.22	0.650	0.000	2.00	7.808	5.08	159.7	0.0	371.2
12.00		1.00	0.85	17.879	19.67	330.22	0.650	0.000	2.00	7.738	5.03	158.3	0.0	367.8
14.00		1.00	0.85	17.879	19.67	327.21	0.650	0.000	2.00	7.668	4.98	156.8	0.0	364.4
16.00		1.00	0.86	18.100	19.91	326.20	0.650	0.000	2.00	7.597	4.94	157.3	0.0	361.1
18.00		1.00	0.88	18.554	20.41	327.21	0.650	0.000	2.00	7.527	4.89	159.8	0.0	357.7
20.00		1.00	0.90	18.971	20.87	327.76	0.650	0.000	2.00	7.457	4.85	161.8	0.0	354.4
22.00		1.00	0.92	19.355	21.29	327.93	0.650	0.000	2.00	7.387	4.80	163.6	0.0	351.0
24.00		1.00	0.94	19.713	21.68	327.79	0.650	0.000	2.00	7.317	4.76	165.0	0.0	347.7
26.00		1.00	0.95	20.048	22.05	327.38	0.650	0.000	2.00	7.247	4.71	166.2	0.0	344.3
28.00		1.00	0.97	20.363	22.40	326.74	0.650	0.000	2.00	7.177	4.66	167.2	0.0	341.0
30.00		1.00	0.98	20.661	22.73	325.89	0.650	0.000	2.00	7.106	4.62	168.0	0.0	337.6
32.00		1.00	1.00	20.944	23.04	324.85	0.650	0.000	2.00	7.036	4.57	168.6	0.0	334.2
34.00		1.00	1.01	21.213	23.33	323.66	0.650	0.000	2.00	6.966	4.53	169.1	0.0	330.9
36.00		1.00	1.02	21.470	23.62	322.32	0.650	0.000	2.00	6.896	4.48	169.4	0.0	327.5
38.00		1.00	1.03	21.715	23.89	320.84	0.650	0.000	2.00	6.826	4.44	169.6	0.0	324.2
40.00		1.00	1.04	21.951	24.15	319.25	0.650	0.000	2.00	6.756	4.39	169.7	0.0	320.8
42.00		1.00	1.05	22.178	24.40	317.54	0.650	0.000	2.00	6.686	4.35	169.6	0.0	317.5
44.00		1.00	1.06	22.396	24.64	315.74	0.650	0.000	2.00	6.615	4.30	169.5	0.0	314.1
46.00		1.00	1.07	22.607	24.87	313.84	0.650	0.000	2.00	6.545	4.25	169.3	0.0	310.7
47.55	Bot - Section 2	1.00	1.08	22.765	25.04	312.30	0.650	0.000	1.55	5.035	3.27	131.1	0.0	239.0
48.00		1.00	1.08	22.810	25.09	311.85	0.650	0.000	0.45	1.459	0.95	38.1	0.0	123.9
50.00	Appurtenance(s)	1.00	1.09	23.007	25.31	309.78	0.650	0.000	2.00	6.490	4.22	170.8	0.0	550.9
51.75	RB1	1.00	1.10	23.174	25.49	307.91	0.650	0.000	1.75	5.621	3.65	149.0	0.0	477.1
52.00	RB2	1.00	1.10	23.198	25.52	307.64	0.650	0.000	0.25	0.799	0.52	21.2	0.0	67.8
52.97	Top - Section 1	1.00	1.11	23.288	25.62	306.57	0.650	0.000	0.97	3.088	2.01	82.3	0.0	262.1
54.00		1.00	1.11	23.383	25.72	309.57	0.650	0.000	1.03	3.261	2.12	87.2	0.0	124.0
56.00		1.00	1.12	23.562	25.92	307.31	0.650	0.000	2.00	6.279	4.08	169.3	0.0	238.8
58.00		1.00	1.13	23.737	26.11	304.98	0.650	0.000	2.00	6.209	4.04	168.6	0.0	236.1
60.00		1.00	1.14	23.907	26.30	302.59	0.650	0.000	2.00	6.139	3.99	167.9	0.0	233.4
62.00		1.00	1.14	24.073	26.48	300.15	0.650	0.000	2.00	6.069	3.94	167.1	0.0	230.8
64.00		1.00	1.15	24.234	26.66	297.66	0.650	0.000	2.00	5.999	3.90	166.3	0.0	228.1
66.00		1.00	1.16	24.392	26.83	295.11	0.650	0.000	2.00	5.929	3.85	165.4	0.0	225.4
66.67	RB3	1.00	1.16	24.444	26.89	294.25	0.650	0.000	0.67	1.970	1.28	55.1	0.0	74.9
68.00	RT2	1.00	1.17	24.545	27.00	292.51	0.650	0.000	1.33	3.888	2.53	109.2	0.0	147.8
68.25	RT1	1.00	1.17	24.564	27.02	292.19	0.650	0.000	0.25	0.727	0.47	20.4	0.0	27.6
70.00		1.00	1.17	24.696	27.17	289.88	0.650	0.000	1.75	5.061	3.29	143.0	0.0	192.4
72.00		1.00	1.18	24.843	27.33	287.19	0.650	0.000	2.00	5.718	3.72	162.5	0.0	217.3
73.00	Appurtenance(s)	1.00	1.18	24.915	27.41	285.83	0.650	0.000	1.00	2.833	1.84	80.7	0.0	107.7
74.00		1.00	1.19	24.986	27.48	284.47	0.650	0.000	1.00	2.815	1.83	80.5	0.0	107.0
75.25	RT3	1.00	1.19	25.075	27.58	282.74	0.650	0.000	1.25	3.494	2.27	100.2	0.0	132.8
76.00		1.00	1.19	25.127	27.64	281.70	0.650	0.000	0.75	2.083	1.35	59.9	0.0	79.2
78.00		1.00	1.20	25.265	27.79	278.90	0.650	0.000	2.00	5.508	3.58	159.2	0.0	209.3

Wind Loading - Shaft

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 11

80.00		1.00	1.21	25.400	27.94	276.06	0.650	0.000	2.00	5.438	3.53	158.0	0.0	206.6
82.00		1.00	1.21	25.532	28.09	273.18	0.650	0.000	2.00	5.367	3.49	156.8	0.0	203.9
84.00		1.00	1.22	25.662	28.23	270.28	0.650	0.000	2.00	5.297	3.44	155.5	0.0	201.2
86.00		1.00	1.23	25.789	28.37	267.33	0.650	0.000	2.00	5.227	3.40	154.2	0.0	198.5
88.00		1.00	1.23	25.915	28.51	264.36	0.650	0.000	2.00	5.157	3.35	152.9	0.0	195.8
90.00		1.00	1.24	26.037	28.64	261.36	0.650	0.000	2.00	5.087	3.31	151.5	0.0	193.2
92.00		1.00	1.24	26.158	28.77	258.33	0.650	0.000	2.00	5.017	3.26	150.1	0.0	190.5
94.00		1.00	1.25	26.277	28.90	255.27	0.650	0.000	2.00	4.947	3.22	148.7	0.0	187.8
96.00		1.00	1.25	26.394	29.03	252.18	0.650	0.000	2.00	4.877	3.17	147.2	0.0	185.1
96.18	Bot - Section 3	1.00	1.26	26.404	29.04	251.91	0.650	0.000	0.18	0.427	0.28	12.9	0.0	16.2
98.00		1.00	1.26	26.509	29.16	249.07	0.650	0.000	1.82	4.437	2.88	134.6	0.0	292.8
99.00	RB4	1.00	1.26	26.565	29.22	247.50	0.677 *	0.000	1.00	2.409	1.63	76.3	0.0	158.9
100.00		1.00	1.27	26.621	29.28	245.93	0.679 *	0.000	1.00	2.391	1.62	76.1	0.0	157.7
100.34	Top - Section 2	1.00	1.27	26.641	29.30	245.39	0.680 *	0.000	0.34	0.817	0.56	26.0	0.0	53.9
102.00		1.00	1.27	26.733	29.41	246.09	0.679 *	0.000	1.66	3.913	2.66	124.9	0.0	111.6
103.00	RT4	1.00	1.27	26.788	29.47	244.51	0.681 *	0.000	1.00	2.338	1.59	75.1	0.0	66.7
104.00		1.00	1.28	26.842	29.53	242.91	0.683 *	0.000	1.00	2.321	1.58	74.8	0.0	66.2
106.00		1.00	1.28	26.950	29.65	239.71	0.650	0.000	2.00	4.589	2.98	141.5	0.0	130.9
108.00		1.00	1.29	27.056	29.76	236.48	0.650	0.000	2.00	4.519	2.94	139.9	0.0	128.9
110.00		1.00	1.29	27.161	29.88	233.23	0.650	0.000	2.00	4.449	2.89	138.2	0.0	126.9
112.00		1.00	1.30	27.264	29.99	229.96	0.650	0.000	2.00	4.379	2.85	136.6	0.0	124.8
114.00		1.00	1.30	27.366	30.10	226.67	0.650	0.000	2.00	4.309	2.80	134.9	0.0	122.8
115.00	Appurtenance(s)	1.00	1.30	27.416	30.16	225.02	0.650	0.000	1.00	2.128	1.38	66.7	0.0	60.7
116.00		1.00	1.31	27.466	30.21	223.36	0.650	0.000	1.00	2.111	1.37	66.3	0.0	60.2
118.00		1.00	1.31	27.565	30.32	220.03	0.650	0.000	2.00	4.168	2.71	131.5	0.0	118.8
120.00		1.00	1.32	27.663	30.43	216.68	0.650	0.000	2.00	4.098	2.66	129.7	0.0	116.8
122.00		1.00	1.32	27.760	30.54	213.31	0.650	0.000	2.00	4.028	2.62	127.9	0.0	114.8
124.00		1.00	1.32	27.855	30.64	209.92	0.650	0.000	2.00	3.958	2.57	126.1	0.0	112.8
126.00		1.00	1.33	27.949	30.74	206.52	0.650	0.000	2.00	3.888	2.53	124.3	0.0	110.7
128.00		1.00	1.33	28.042	30.85	203.09	0.650	0.000	2.00	3.818	2.48	122.5	0.0	108.7
130.00	Appurtenance(s)	1.00	1.34	28.133	30.95	199.65	0.650	0.000	2.00	3.748	2.44	120.6	0.0	106.7
132.00		1.00	1.34	28.224	31.05	196.20	0.650	0.000	2.00	3.678	2.39	118.7	0.0	104.7
134.00		1.00	1.35	28.313	31.14	192.72	0.650	0.000	2.00	3.607	2.34	116.8	0.0	102.7
136.00		1.00	1.35	28.402	31.24	189.23	0.650	0.000	2.00	3.537	2.30	114.9	0.0	100.7
138.00	Appurtenance(s)	1.00	1.35	28.489	31.34	185.73	0.650	0.000	2.00	3.467	2.25	113.0	0.0	98.7
140.00		1.00	1.36	28.576	31.43	182.21	0.650	0.000	2.00	3.397	2.21	111.0	0.0	96.6
142.00		1.00	1.36	28.661	31.53	178.67	0.650	0.000	2.00	3.327	2.16	109.1	0.0	94.6
144.00		1.00	1.37	28.746	31.62	175.13	0.650	0.000	2.00	3.257	2.12	107.1	0.0	92.6
146.00		1.00	1.37	28.829	31.71	171.56	0.650	0.000	2.00	3.187	2.07	105.1	0.0	90.6
148.00		1.00	1.37	28.912	31.80	167.98	0.650	0.000	2.00	3.116	2.03	103.1	0.0	88.6
149.00	Appurtenance(s)	1.00	1.38	28.953	31.85	166.19	0.650	0.000	1.00	1.532	1.00	50.7	0.0	43.5
								Totals:	**149.00**			**11,178.6**		**17,673.7**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

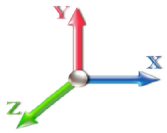
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 31

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	ACU-A20-N	4	29.075	31.982	0.40	0.80	0.22	4.80	0.000	3.000	11.46	0.00	34.39
2	149.00	800MHz Filter	3	29.075	31.982	0.40	0.80	0.94	31.68	0.000	3.000	47.90	0.00	143.69
3	149.00	TD-RRH8x20-25	3	29.075	31.982	0.40	0.80	4.86	252.00	0.000	3.000	248.69	0.00	746.08
4	149.00	800MHZ	3	29.075	31.982	0.40	0.80	3.17	214.20	0.000	3.000	162.11	0.00	486.33
5	149.00	1900MHz	3	29.075	31.982	0.40	0.80	3.32	216.00	0.000	3.000	170.09	0.00	510.28
6	149.00	APXVTM14-C-I20	3	29.075	31.982	0.63	0.80	12.02	201.60	0.000	3.000	615.11	0.00	1845.34
7	149.00	APXVSPP18-C-A20	3	29.075	31.982	0.66	0.80	15.98	205.20	0.000	3.000	817.51	0.00	2452.52
8	149.00	Low Profile Platform	1	28.953	31.848	1.00	1.00	25.00	1440.00	0.000	0.000	1273.93	0.00	0.00
9	138.00	BXA-70063-6CF_2	3	28.489	31.338	0.58	0.80	13.26	61.20	0.000	0.000	665.00	0.00	0.00
10	138.00	BXA-171085-12B_2	3	28.489	31.338	0.67	0.80	9.56	54.00	0.000	0.000	479.14	0.00	0.00
11	138.00	LPA-80080/6CF	3	28.489	31.338	1.36	0.80	17.67	75.60	0.000	0.000	885.81	0.00	0.00
12	138.00	Low Profile Platform	1	28.489	31.338	1.00	1.00	25.00	1440.00	0.000	0.000	1253.53	0.00	0.00
13	138.00	GPS Receiver	1	28.489	31.338	1.00	1.00	1.00	12.00	0.000	0.000	50.14	0.00	0.00
14	138.00	FD9R6004/2C-3L	6	28.489	31.338	0.40	0.80	0.86	22.32	0.000	0.000	43.32	0.00	0.00
15	130.00	(3) 12.5' - 2" Horizontal	1	28.133	30.947	0.75	1.00	4.45	164.70	0.000	0.000	220.49	0.00	0.00
16	130.00	XP-2020	24	28.133	30.947	0.56	0.75	9.31	288.00	0.000	0.000	461.23	0.00	0.00
17	130.00	VSRDual-TS-B-HD	2	28.133	30.947	0.56	0.75	4.61	356.16	0.000	0.000	228.39	0.00	0.00
18	130.00	DC6-48-60-0-8C-EV	1	28.133	30.947	0.38	0.75	1.79	19.20	0.000	0.000	88.75	0.00	0.00
19	130.00	DC6-48-60-18-8C	1	28.133	30.947	0.38	0.75	0.47	24.00	0.000	0.000	23.40	0.00	0.00
20	130.00	ABT-DF-DM-ADBH	1	28.133	30.947	0.75	0.75	0.04	1.32	0.000	0.000	1.86	0.00	0.00
21	130.00	7770.00	3	28.133	30.947	0.55	0.75	9.03	126.00	0.000	0.000	447.30	0.00	0.00
22	130.00	LGP 21401	12	28.133	30.947	0.38	0.75	0.00	252.00	0.000	0.000	0.00	0.00	0.00
23	130.00	DC6-48-60-18-8F	1	28.133	30.947	0.75	0.75	0.69	38.16	0.000	0.000	34.17	0.00	0.00
24	130.00	8843 B2/B66A	3	28.133	30.947	0.38	0.75	1.84	259.20	0.000	0.000	91.35	0.00	0.00
25	130.00	80010965	6	28.133	30.947	0.53	0.75	44.12	781.92	0.000	0.000	2184.73	0.00	0.00
26	130.00	RRUS 4478 B14	3	28.133	30.947	0.38	0.75	1.86	213.84	0.000	0.000	91.91	0.00	0.00
27	130.00	4449 B5/B12	3	28.133	30.947	0.38	0.75	2.22	255.60	0.000	0.000	109.74	0.00	0.00
28	130.00	Low Profile Platform	1	28.133	30.947	1.00	1.00	25.00	1440.00	0.000	0.000	1237.86	0.00	0.00
29	115.00	RRUS 11 (Band 4)	3	27.416	30.158	0.40	0.80	3.02	183.60	0.000	0.000	145.92	0.00	0.00
30	115.00	LNX-6515DS-A1M	3	27.416	30.158	0.64	0.80	22.02	179.28	0.000	0.000	1062.64	0.00	0.00
31	115.00	APX16DWV-16DWVS-E-A	3	27.416	30.158	0.50	0.80	9.84	146.52	0.000	0.000	474.60	0.00	0.00
32	115.00	RRUS 11	3	27.416	30.158	0.40	0.80	3.53	194.40	0.000	0.000	170.24	0.00	0.00
33	115.00	RRUS 11 (Band 12)	3	27.416	30.158	0.40	0.80	3.02	194.40	0.000	0.000	145.92	0.00	0.00
34	115.00	T-Arm	3	27.416	30.158	0.56	0.75	13.50	1260.00	0.000	0.000	651.41	0.00	0.00
35	73.00	GPS Receiver	1	24.915	27.406	1.00	1.00	1.00	12.00	0.000	0.000	43.85	0.00	0.00
36	50.00	58532A	1	23.007	25.308	1.00	1.00	0.22	0.48	0.000	0.000	8.91	0.00	0.00
							Totals:		**10,621.38**			**14,648.42**		

Total Applied Force Summary

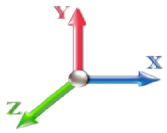
Structure:	CT12215-A-SBA		**Code:**	EIA/TIA-222-G	5/21/2019
Site Name:	Litchfield 3, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 13

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 31

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		165.44	479.09	0.00	0.00
4.00		164.00	475.74	0.00	0.00
6.00		162.57	472.38	0.00	0.00
8.00		161.13	469.02	0.00	0.00
10.00		159.70	465.67	0.00	0.00
12.00		158.26	462.31	0.00	0.00
14.00		156.83	458.95	0.00	0.00
16.00		157.31	455.60	0.00	0.00
18.00		159.78	452.24	0.00	0.00
20.00		161.84	448.88	0.00	0.00
22.00		163.56	445.52	0.00	0.00
24.00		165.01	442.17	0.00	0.00
26.00		166.20	438.81	0.00	0.00
28.00		167.18	435.45	0.00	0.00
30.00		167.97	432.10	0.00	0.00
32.00		168.59	428.74	0.00	0.00
34.00		169.05	425.38	0.00	0.00
36.00		169.37	422.03	0.00	0.00
38.00		169.57	418.67	0.00	0.00
40.00		169.65	415.31	0.00	0.00
42.00		169.62	411.96	0.00	0.00
44.00		169.49	408.60	0.00	0.00
46.00		169.27	405.24	0.00	0.00
47.55		131.13	312.42	0.00	0.00
48.00		38.07	144.96	0.00	0.00
50.00	(1) attachments	179.72	645.87	0.00	0.00
51.75		149.02	559.43	0.00	0.00
52.00		21.19	79.54	0.00	0.00
52.97		82.27	307.72	0.00	0.00
54.00		87.24	172.51	0.00	0.00
56.00		169.26	332.93	0.00	0.00
58.00		168.61	330.24	0.00	0.00
60.00		167.90	327.56	0.00	0.00
62.00		167.13	324.87	0.00	0.00
64.00		166.31	322.19	0.00	0.00
66.00		165.43	319.50	0.00	0.00
66.67		55.10	106.43	0.00	0.00
68.00		109.18	210.38	0.00	0.00
68.25		20.44	39.41	0.00	0.00
70.00		142.98	274.72	0.00	0.00
72.00		162.51	311.44	0.00	0.00
73.00	(1) attachments	124.59	166.71	0.00	0.00
74.00		80.47	153.85	0.00	0.00
75.25		100.24	191.37	0.00	0.00
76.00		59.89	114.32	0.00	0.00
78.00		159.19	303.00	0.00	0.00

Total Applied Force Summary

Structure:	CT12215-A-SBA		**Code:**	EIA/TIA-222-G	5/21/2019
Site Name:	Litchfield 3, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 14

Tower Engineering Solutions

80.00		158.00	300.32	0.00	0.00
82.00		156.78	297.63	0.00	0.00
84.00		155.52	294.95	0.00	0.00
86.00		154.22	292.26	0.00	0.00
88.00		152.89	289.58	0.00	0.00
90.00		151.52	286.89	0.00	0.00
92.00		150.13	284.20	0.00	0.00
94.00		148.70	281.52	0.00	0.00
96.00		147.24	278.83	0.00	0.00
96.18		12.91	24.50	0.00	0.00
98.00		134.55	378.23	0.00	0.00
99.00		76.26	205.78	0.00	0.00
100.00		76.05	204.60	0.00	0.00
100.34		26.04	69.98	0.00	0.00
102.00		124.93	189.25	0.00	0.00
103.00		75.06	113.57	0.00	0.00
104.00		74.84	113.06	0.00	0.00
106.00		141.49	224.61	0.00	0.00
108.00		139.88	222.60	0.00	0.00
110.00		138.24	220.59	0.00	0.00
112.00		136.58	218.57	0.00	0.00
114.00		134.89	216.56	0.00	0.00
115.00	(18) attachments	2717.48	2265.72	0.00	0.00
116.00		66.32	104.38	0.00	0.00
118.00		131.45	207.25	0.00	0.00
120.00		129.70	205.24	0.00	0.00
122.00		127.92	203.22	0.00	0.00
124.00		126.13	201.21	0.00	0.00
126.00		124.31	199.19	0.00	0.00
128.00		122.47	197.18	0.00	0.00
130.00	(62) attachments	5341.80	4415.26	0.00	0.00
132.00		118.74	144.19	0.00	0.00
134.00		116.84	142.18	0.00	0.00
136.00		114.93	140.16	0.00	0.00
138.00	(17) attachments	3489.94	1803.27	0.00	0.00
140.00		111.05	105.80	0.00	0.00
142.00		109.08	103.78	0.00	0.00
144.00		107.10	101.77	0.00	0.00
146.00		105.09	99.76	0.00	0.00
148.00		103.08	97.74	0.00	0.00
149.00	(23) attachments	3397.55	2613.60	0.00	6218.64
	Totals:	**25,826.98**	**34,580.22**	**0.00**	**6,218.64**

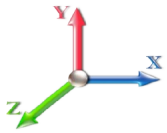
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 31

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	17.879	0.00	5.28
2.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.055	0.000	17.879	0.00	0.38
4.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	17.879	0.00	5.28
4.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.055	0.000	17.879	0.00	0.38
6.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.056	0.000	17.879	0.00	5.28
6.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.056	0.000	17.879	0.00	0.38
8.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.056	0.000	17.879	0.00	5.28
8.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.056	0.000	17.879	0.00	0.38
10.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	17.879	0.00	5.28
10.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.057	0.000	17.879	0.00	0.38
12.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	17.879	0.00	5.28
12.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.057	0.000	17.879	0.00	0.38
14.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	17.879	0.00	5.28
14.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.058	0.000	17.879	0.00	0.38
16.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	18.100	0.00	5.28
16.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.058	0.000	18.100	0.00	0.38
18.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	18.554	0.00	5.28
18.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.059	0.000	18.554	0.00	0.38
20.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	18.971	0.00	5.28
20.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.059	0.000	18.971	0.00	0.38
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	19.355	0.00	5.28
22.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.060	0.000	19.355	0.00	0.38
24.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	19.713	0.00	5.28
24.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.060	0.000	19.713	0.00	0.38
26.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.061	0.000	20.048	0.00	5.28
26.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.061	0.000	20.048	0.00	0.38
28.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	20.363	0.00	5.28
28.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.062	0.000	20.363	0.00	0.38
30.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	20.661	0.00	5.28
30.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.062	0.000	20.661	0.00	0.38
32.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	20.944	0.00	5.28
32.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.063	0.000	20.944	0.00	0.38
34.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	21.213	0.00	5.28
34.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.063	0.000	21.213	0.00	0.38
36.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	21.470	0.00	5.28
36.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.064	0.000	21.470	0.00	0.38
38.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	21.715	0.00	5.28
38.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.065	0.000	21.715	0.00	0.38
40.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	21.951	0.00	5.28
40.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.065	0.000	21.951	0.00	0.38
42.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	22.178	0.00	5.28
42.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.066	0.000	22.178	0.00	0.38
44.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	22.396	0.00	5.28
44.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.067	0.000	22.396	0.00	0.38
46.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	22.607	0.00	5.28
46.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.067	0.000	22.607	0.00	0.38
47.55	1 5/8" Hybrid	Yes	1.55	0.000	2.00	0.26	0.00	0.068	0.000	22.765	0.00	4.10

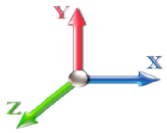
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 31

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
47.55	1/2" Coax	Yes	1.55	0.000	0.65	0.08	0.00	0.068	0.000	22.765	0.00	0.30
48.00	1 5/8" Hybrid	Yes	0.45	0.000	2.00	0.07	0.00	0.068	0.000	22.810	0.00	1.18
48.00	1/2" Coax	Yes	0.45	0.000	0.65	0.02	0.00	0.068	0.000	22.810	0.00	0.09
50.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.069	0.000	23.007	0.00	5.28
50.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.069	0.000	23.007	0.00	0.38
51.75	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.085	0.000	23.174	0.00	4.62
51.75	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.18	0.00	0.085	0.000	23.174	0.00	0.00
52.00	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.086	0.000	23.198	0.00	0.66
52.00	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.03	0.00	0.086	0.000	23.198	0.00	0.00
52.97	1 5/8" Hybrid	Yes	0.97	0.000	2.00	0.16	0.00	0.086	0.000	23.288	0.00	2.56
52.97	1.25" Reinforcing	Yes	0.97	0.000	1.25	0.10	0.00	0.086	0.000	23.288	0.00	0.00
54.00	1 5/8" Hybrid	Yes	1.03	0.000	2.00	0.17	0.00	0.086	0.000	23.383	0.00	2.72
54.00	1.25" Reinforcing	Yes	1.03	0.000	1.25	0.11	0.00	0.086	0.000	23.383	0.00	0.00
56.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.086	0.000	23.562	0.00	5.28
56.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.086	0.000	23.562	0.00	0.00
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.087	0.000	23.737	0.00	5.28
58.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.087	0.000	23.737	0.00	0.00
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.088	0.000	23.907	0.00	5.28
60.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.088	0.000	23.907	0.00	0.00
62.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.089	0.000	24.073	0.00	5.28
62.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.089	0.000	24.073	0.00	0.00
64.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.090	0.000	24.234	0.00	5.28
64.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.090	0.000	24.234	0.00	0.00
66.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.091	0.000	24.392	0.00	5.28
66.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.091	0.000	24.392	0.00	0.00
66.67	1 5/8" Hybrid	Yes	0.67	0.000	2.00	0.11	0.00	0.092	0.000	24.444	0.00	1.77
66.67	1.25" Reinforcing	Yes	0.67	0.000	1.25	0.07	0.00	0.092	0.000	24.444	0.00	0.00
68.00	1 5/8" Hybrid	Yes	1.33	0.000	2.00	0.22	0.00	0.093	0.000	24.545	0.00	3.51
68.00	1.25" Reinforcing	Yes	1.33	0.000	1.25	0.14	0.00	0.093	0.000	24.545	0.00	0.00
68.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.093	0.000	24.564	0.00	0.66
68.25	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.03	0.00	0.093	0.000	24.564	0.00	0.00
70.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.094	0.000	24.696	0.00	4.62
70.00	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.18	0.00	0.094	0.000	24.696	0.00	0.00
72.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.095	0.000	24.843	0.00	5.28
72.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.095	0.000	24.843	0.00	0.00
73.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.096	0.000	24.915	0.00	2.64
73.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.096	0.000	24.915	0.00	0.00
74.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.096	0.000	24.986	0.00	2.64
74.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.096	0.000	24.986	0.00	0.00
75.25	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.097	0.000	25.075	0.00	3.30
75.25	1.25" Reinforcing	Yes	1.25	0.000	1.25	0.13	0.00	0.097	0.000	25.075	0.00	0.00
76.00	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.097	0.000	25.127	0.00	1.98
76.00	1.25" Reinforcing	Yes	0.75	0.000	1.25	0.08	0.00	0.097	0.000	25.127	0.00	0.00
78.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.079	0.000	25.265	0.00	5.28
78.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.079	0.000	25.265	0.00	0.00
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.061	0.000	25.400	0.00	5.28
82.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	25.532	0.00	5.28

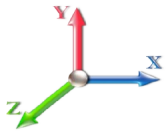
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 31

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	25.662	0.00	5.28
86.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	25.789	0.00	5.28
88.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	25.915	0.00	5.28
90.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	26.037	0.00	5.28
92.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	26.158	0.00	5.28
94.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	26.277	0.00	5.28
96.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.068	0.000	26.394	0.00	5.28
96.18	1 5/8" Hybrid	Yes	0.18	0.000	2.00	0.03	0.00	0.069	0.000	26.404	0.00	0.47
98.00	1 5/8" Hybrid	Yes	1.82	0.000	2.00	0.30	0.00	0.093	0.000	26.509	0.00	4.81
98.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.093	0.000	26.509	0.00	0.00
99.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.114	1.042	26.565	0.00	2.64
99.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.114	1.042	26.565	0.00	0.00
100.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.115	1.044	26.621	0.00	2.64
100.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.115	1.044	26.621	0.00	0.00
100.34	1 5/8" Hybrid	Yes	0.34	0.000	2.00	0.06	0.00	0.115	1.046	26.641	0.00	0.91
100.34	1.25" Reinforcing	Yes	0.34	0.000	1.25	0.04	0.00	0.115	1.046	26.641	0.00	0.00
102.00	1 5/8" Hybrid	Yes	1.66	0.000	2.00	0.28	0.00	0.115	1.044	26.733	0.00	4.37
102.00	1.25" Reinforcing	Yes	1.66	0.000	1.25	0.17	0.00	0.115	1.044	26.733	0.00	0.00
103.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.116	1.047	26.788	0.00	2.64
103.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.116	1.047	26.788	0.00	0.00
104.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.117	1.050	26.842	0.00	2.64
104.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.117	1.050	26.842	0.00	0.00
106.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.095	0.000	26.950	0.00	5.28
106.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.095	0.000	26.950	0.00	0.00
108.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.074	0.000	27.056	0.00	5.28
110.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.075	0.000	27.161	0.00	5.28
112.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.076	0.000	27.264	0.00	5.28
114.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.077	0.000	27.366	0.00	5.28
115.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.078	0.000	27.416	0.00	2.64
									Totals:		**0.0**	**313.2**

Calculated Forces

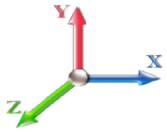
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 31

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-34.55	-25.86	0.00	-2910.3	0.00	2910.31	3031.07	1515.53	5947.06	2977.95	0.00	0.000	0.000	0.989
2.00	-34.02	-25.77	0.00	-2858.5	0.00	2858.58	3016.33	1508.17	5866.38	2937.55	0.03	-0.121	0.000	0.985
4.00	-33.49	-25.68	0.00	-2807.0	0.00	2807.04	3001.40	1500.70	5785.81	2897.21	0.10	-0.243	0.000	0.980
6.00	-32.96	-25.58	0.00	-2755.6	0.00	2755.69	2986.25	1493.13	5705.37	2856.93	0.23	-0.365	0.000	0.976
8.00	-32.44	-25.49	0.00	-2704.5	0.00	2704.53	2970.91	1485.45	5625.07	2816.71	0.41	-0.489	0.000	0.971
10.00	-31.92	-25.39	0.00	-2653.5	0.00	2653.56	2955.36	1477.68	5544.90	2776.57	0.64	-0.614	0.000	0.967
12.00	-31.40	-25.30	0.00	-2602.7	0.00	2602.77	2939.60	1469.80	5464.90	2736.51	0.93	-0.739	0.000	0.962
14.00	-30.89	-25.20	0.00	-2552.1	0.00	2552.17	2923.65	1461.82	5385.06	2696.53	1.27	-0.866	0.000	0.957
16.00	-30.38	-25.11	0.00	-2501.7	0.00	2501.77	2907.49	1453.74	5305.39	2656.64	1.66	-0.994	0.000	0.952
18.00	-29.88	-25.01	0.00	-2451.5	0.00	2451.55	2891.12	1445.56	5225.92	2616.84	2.10	-1.123	0.000	0.947
20.00	-29.37	-24.90	0.00	-2401.5	0.00	2401.54	2874.56	1437.28	5146.64	2577.14	2.60	-1.252	0.000	0.942
22.00	-28.88	-24.80	0.00	-2351.7	0.00	2351.74	2857.79	1428.89	5067.57	2537.55	3.15	-1.383	0.000	0.937
24.00	-28.38	-24.68	0.00	-2302.1	0.00	2302.15	2840.81	1420.41	4988.71	2498.06	3.76	-1.515	0.000	0.932
26.00	-27.89	-24.57	0.00	-2252.7	0.00	2252.78	2823.63	1411.82	4910.09	2458.69	4.42	-1.647	0.000	0.926
28.00	-27.40	-24.46	0.00	-2203.6	0.00	2203.64	2806.25	1403.13	4831.70	2419.44	5.14	-1.781	0.000	0.921
30.00	-26.92	-24.34	0.00	-2154.7	0.00	2154.73	2788.67	1394.33	4753.57	2380.32	5.92	-1.916	0.000	0.915
32.00	-26.44	-24.22	0.00	-2106.0	0.00	2106.06	2770.88	1385.44	4675.69	2341.32	6.75	-2.051	0.000	0.909
34.00	-25.96	-24.09	0.00	-2057.6	0.00	2057.62	2752.89	1376.44	4598.09	2302.46	7.64	-2.188	0.000	0.903
36.00	-25.49	-23.97	0.00	-2009.4	0.00	2009.44	2734.69	1367.35	4520.77	2263.74	8.58	-2.326	0.000	0.897
38.00	-25.02	-23.84	0.00	-1961.5	0.00	1961.50	2716.29	1358.15	4443.74	2225.17	9.59	-2.464	0.000	0.891
40.00	-24.56	-23.72	0.00	-1913.8	0.00	1913.81	2697.69	1348.85	4367.01	2186.75	10.65	-2.603	0.000	0.885
42.00	-24.09	-23.59	0.00	-1866.3	0.00	1866.38	2678.89	1339.44	4290.59	2148.48	11.77	-2.744	0.000	0.878
44.00	-23.64	-23.46	0.00	-1819.2	0.00	1819.21	2659.88	1329.94	4214.50	2110.38	12.95	-2.885	0.000	0.871
46.00	-23.19	-23.32	0.00	-1772.3	0.00	1772.30	2640.67	1320.33	4138.74	2072.44	14.19	-3.027	0.000	0.864
47.55	-22.85	-23.20	0.00	-1736.0	0.00	1736.08	2625.60	1312.80	4080.13	2043.10	15.19	-3.139	0.000	0.859
48.00	-22.68	-23.19	0.00	-1725.7	0.00	1725.72	2621.25	1310.62	4063.32	2034.68	15.49	-3.171	0.000	0.857
50.00	-21.99	-23.02	0.00	-1679.3	0.00	1679.35	2601.63	1300.82	3988.26	1997.09	16.85	-3.315	0.000	0.850
51.75	-21.41	-22.87	0.00	-1639.0	0.00	1639.06	2584.30	1292.15	3922.88	1964.36	18.08	-3.442	0.000	0.559
52.00	-21.32	-22.85	0.00	-1633.3	0.00	1633.35	2581.81	1290.90	3913.56	1959.69	18.26	-3.454	0.000	0.411
52.97	-21.01	-22.76	0.00	-1611.1	0.00	1611.18	1914.68	957.34	2935.86	1470.11	18.97	-3.488	0.000	0.451
54.00	-20.82	-22.68	0.00	-1587.7	0.00	1587.74	1908.40	954.20	2909.37	1456.85	19.73	-3.525	0.000	0.486
56.00	-20.47	-22.52	0.00	-1542.3	0.00	1542.37	1896.06	948.03	2858.01	1431.13	21.22	-3.602	0.000	0.477
58.00	-20.12	-22.36	0.00	-1497.3	0.00	1497.33	1883.51	941.76	2806.77	1405.47	22.74	-3.679	0.000	0.468
60.00	-19.77	-22.20	0.00	-1452.6	0.00	1452.61	1870.76	935.38	2755.66	1379.88	24.30	-3.755	0.000	0.459
62.00	-19.43	-22.04	0.00	-1408.2	0.00	1408.21	1857.80	928.90	2704.70	1354.36	25.89	-3.831	0.000	0.451
64.00	-19.09	-21.87	0.00	-1364.1	0.00	1364.14	1844.65	922.32	2653.88	1328.91	27.51	-3.907	0.000	0.442
66.00	-18.76	-21.70	0.00	-1320.4	0.00	1320.40	1831.29	915.64	2603.23	1303.55	29.16	-3.983	0.000	0.432
66.67	-18.65	-21.65	0.00	-1305.8	0.00	1305.86	1826.76	913.38	2586.30	1295.07	29.72	-4.008	0.000	0.335
68.00	-18.44	-21.53	0.00	-1277.0	0.00	1277.06	1817.72	908.86	2552.75	1278.27	30.84	-4.048	0.000	0.430
68.25	-18.38	-21.53	0.00	-1271.6	0.00	1271.68	1816.01	908.01	2546.46	1275.12	31.05	-4.057	0.000	0.602
70.00	-18.08	-21.40	0.00	-1234.0	0.00	1234.00	1803.95	901.98	2502.46	1253.09	32.56	-4.151	0.000	0.591
72.00	-17.75	-21.24	0.00	-1191.2	0.00	1191.21	1789.98	894.99	2452.36	1228.00	34.32	-4.257	0.000	0.579
73.00	-17.57	-21.12	0.00	-1169.9	0.00	1169.97	1782.92	891.46	2427.38	1215.49	35.21	-4.311	0.000	0.573
74.00	-17.40	-21.04	0.00	-1148.8	0.00	1148.86	1775.81	887.90	2402.46	1203.02	36.12	-4.364	0.000	0.567
75.25	-17.20	-20.94	0.00	-1122.5	0.00	1122.55	1766.84	883.42	2371.38	1187.45	37.27	-4.430	0.000	0.560
75.25	-17.20	-20.94	0.00	-1122.5	0.00	1122.55	1766.84	883.42	2371.38	1187.45	37.27	-4.430	0.000	0.560
76.00	-17.05	-20.91	0.00	-1106.8	0.00	1106.85	1761.43	880.71	2352.78	1178.14	37.97	-4.470	0.000	0.950
78.00	-16.70	-20.78	0.00	-1065.0	0.00	1065.03	1746.84	873.42	2303.32	1153.37	39.88	-4.650	0.000	0.934

Calculated Forces

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 19

Tower Engineering Solutions

80.00	-16.35	-20.65	0.00	-1023.4	0.00	1023.47	1732.06	866.03	2254.10	1128.72	41.87	-4.829	0.000	0.917
82.00	-16.00	-20.52	0.00	-982.18	0.00	982.18	1717.07	858.53	2205.12	1104.20	43.92	-5.008	0.000	0.899
84.00	-15.66	-20.38	0.00	-941.14	0.00	941.14	1701.88	850.94	2156.41	1079.81	46.06	-5.187	0.000	0.881
86.00	-15.32	-20.25	0.00	-900.38	0.00	900.38	1686.48	843.24	2107.95	1055.54	48.27	-5.365	0.000	0.863
88.00	-14.98	-20.12	0.00	-859.88	0.00	859.88	1670.88	835.44	2059.78	1031.42	50.55	-5.542	0.000	0.843
90.00	-14.65	-19.98	0.00	-819.64	0.00	819.64	1655.08	827.54	2011.90	1007.44	52.91	-5.719	0.000	0.823
92.00	-14.32	-19.85	0.00	-779.68	0.00	779.68	1639.07	819.54	1964.31	983.61	55.34	-5.894	0.000	0.802
94.00	-14.00	-19.71	0.00	-739.98	0.00	739.98	1622.86	811.43	1917.03	959.94	57.84	-6.067	0.000	0.780
96.00	-13.70	-19.56	0.00	-700.55	0.00	700.55	1606.45	803.22	1870.07	936.43	60.41	-6.239	0.000	0.757
96.18	-13.65	-19.57	0.00	-697.09	0.00	697.09	1604.99	802.49	1865.94	934.36	60.64	-6.254	0.000	0.755
98.00	-13.25	-19.42	0.00	-661.42	0.00	661.42	1589.83	794.91	1823.44	913.08	63.06	-6.409	0.000	0.733
99.00	-13.03	-19.33	0.00	-642.00	0.00	642.00	1581.44	790.72	1800.26	901.47	64.41	-6.493	0.000	0.407
100.00	-12.83	-19.24	0.00	-622.67	0.00	622.67	1573.01	786.50	1777.16	889.90	65.77	-6.541	0.000	0.398
100.34	-12.75	-19.22	0.00	-616.06	0.00	616.06	1075.68	537.84	1234.34	618.09	66.24	-6.557	0.000	0.446
102.00	-12.55	-19.09	0.00	-584.23	0.00	584.23	1068.04	534.02	1210.40	606.10	68.52	-6.634	0.000	0.487
103.00	-12.43	-19.01	0.00	-565.14	0.00	565.14	1063.37	531.68	1195.97	598.87	69.91	-6.685	0.000	0.475
103.00	-12.43	-19.01	0.00	-565.14	0.00	565.14	1063.37	531.68	1195.97	598.87	69.91	-6.685	0.000	0.475
104.00	-12.28	-18.95	0.00	-546.13	0.00	546.13	1058.64	529.32	1181.57	591.66	71.32	-6.736	0.000	0.936
106.00	-12.01	-18.82	0.00	-508.23	0.00	508.23	1049.03	524.52	1152.85	577.28	74.18	-6.936	0.000	0.893
108.00	-11.75	-18.70	0.00	-470.59	0.00	470.59	1039.22	519.61	1124.23	562.95	77.12	-7.130	0.000	0.849
110.00	-11.49	-18.57	0.00	-433.19	0.00	433.19	1029.21	514.60	1095.73	548.68	80.14	-7.318	0.000	0.802
112.00	-11.23	-18.44	0.00	-396.05	0.00	396.05	1018.99	509.50	1067.37	534.48	83.24	-7.499	0.000	0.753
114.00	-10.99	-18.30	0.00	-359.17	0.00	359.17	1008.57	504.29	1039.14	520.34	86.41	-7.671	0.000	0.702
115.00	-9.09	-15.32	0.00	-340.87	0.00	340.87	1003.28	501.64	1025.09	513.31	88.02	-7.755	0.000	0.674
116.00	-8.96	-15.26	0.00	-325.55	0.00	325.55	997.95	498.97	1011.07	506.29	89.65	-7.838	0.000	0.653
118.00	-8.74	-15.12	0.00	-295.04	0.00	295.04	987.12	493.56	983.16	492.31	92.95	-7.994	0.000	0.609
120.00	-8.51	-14.99	0.00	-264.80	0.00	264.80	976.09	488.04	955.42	478.42	96.32	-8.143	0.000	0.563
122.00	-8.30	-14.85	0.00	-234.82	0.00	234.82	964.85	482.43	927.87	464.62	99.75	-8.283	0.000	0.515
124.00	-8.08	-14.71	0.00	-205.12	0.00	205.12	953.42	476.71	900.51	450.92	103.24	-8.413	0.000	0.464
126.00	-7.88	-14.58	0.00	-175.69	0.00	175.69	941.77	470.89	873.35	437.32	106.78	-8.531	0.000	0.411
128.00	-7.67	-14.44	0.00	-146.54	0.00	146.54	929.93	464.96	846.40	423.83	110.36	-8.637	0.000	0.355
130.00	-4.10	-8.50	0.00	-117.66	0.00	117.66	917.88	458.94	819.69	410.45	113.99	-8.729	0.000	0.291
132.00	-3.97	-8.36	0.00	-100.66	0.00	100.66	905.63	452.81	793.20	397.19	117.65	-8.809	0.000	0.258
134.00	-3.84	-8.23	0.00	-83.94	0.00	83.94	893.17	446.59	766.97	384.05	121.34	-8.881	0.000	0.223
136.00	-3.71	-8.10	0.00	-67.47	0.00	67.47	880.51	440.26	740.98	371.04	125.06	-8.944	0.000	0.186
138.00	-2.47	-4.37	0.00	-51.27	0.00	51.27	867.65	433.83	715.27	358.17	128.81	-8.996	0.000	0.146
140.00	-2.38	-4.25	0.00	-42.53	0.00	42.53	854.59	427.29	689.83	345.43	132.57	-9.040	0.000	0.126
142.00	-2.29	-4.13	0.00	-34.03	0.00	34.03	841.32	420.66	664.68	332.84	136.35	-9.078	0.000	0.105
144.00	-2.20	-4.01	0.00	-25.77	0.00	25.77	827.84	413.92	639.83	320.39	140.14	-9.109	0.000	0.083
146.00	-2.12	-3.89	0.00	-17.76	0.00	17.76	814.17	407.08	615.29	308.10	143.95	-9.134	0.000	0.060
148.00	-2.04	-3.77	0.00	-9.99	0.00	9.99	796.71	398.35	588.42	294.65	147.76	-9.151	0.000	0.037
149.00	0.00	-3.40	0.00	-6.22	0.00	6.22	787.55	393.77	574.90	287.88	149.67	-9.156	0.000	0.022

Wind Loading - Shaft

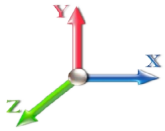
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 31

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	17.879	19.67	348.26	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	17.879	19.67	345.25	0.650	0.000	2.00	8.088	5.26	165.4	0.0	288.4
4.00		1.00	0.85	17.879	19.67	342.24	0.650	0.000	2.00	8.018	5.21	164.0	0.0	285.9
6.00		1.00	0.85	17.879	19.67	339.24	0.650	0.000	2.00	7.948	5.17	162.6	0.0	283.4
8.00		1.00	0.85	17.879	19.67	336.23	0.650	0.000	2.00	7.878	5.12	161.1	0.0	280.9
10.00		1.00	0.85	17.879	19.67	333.22	0.650	0.000	2.00	7.808	5.08	159.7	0.0	278.4
12.00		1.00	0.85	17.879	19.67	330.22	0.650	0.000	2.00	7.738	5.03	158.3	0.0	275.9
14.00		1.00	0.85	17.879	19.67	327.21	0.650	0.000	2.00	7.668	4.98	156.8	0.0	273.3
16.00		1.00	0.86	18.100	19.91	326.20	0.650	0.000	2.00	7.597	4.94	157.3	0.0	270.8
18.00		1.00	0.88	18.554	20.41	327.21	0.650	0.000	2.00	7.527	4.89	159.8	0.0	268.3
20.00		1.00	0.90	18.971	20.87	327.76	0.650	0.000	2.00	7.457	4.85	161.8	0.0	265.8
22.00		1.00	0.92	19.355	21.29	327.93	0.650	0.000	2.00	7.387	4.80	163.6	0.0	263.3
24.00		1.00	0.94	19.713	21.68	327.79	0.650	0.000	2.00	7.317	4.76	165.0	0.0	260.7
26.00		1.00	0.95	20.048	22.05	327.38	0.650	0.000	2.00	7.247	4.71	166.2	0.0	258.2
28.00		1.00	0.97	20.363	22.40	326.74	0.650	0.000	2.00	7.177	4.66	167.2	0.0	255.7
30.00		1.00	0.98	20.661	22.73	325.89	0.650	0.000	2.00	7.106	4.62	168.0	0.0	253.2
32.00		1.00	1.00	20.944	23.04	324.85	0.650	0.000	2.00	7.036	4.57	168.6	0.0	250.7
34.00		1.00	1.01	21.213	23.33	323.66	0.650	0.000	2.00	6.966	4.53	169.1	0.0	248.2
36.00		1.00	1.02	21.470	23.62	322.32	0.650	0.000	2.00	6.896	4.48	169.4	0.0	245.6
38.00		1.00	1.03	21.715	23.89	320.84	0.650	0.000	2.00	6.826	4.44	169.6	0.0	243.1
40.00		1.00	1.04	21.951	24.15	319.25	0.650	0.000	2.00	6.756	4.39	169.7	0.0	240.6
42.00		1.00	1.05	22.178	24.40	317.54	0.650	0.000	2.00	6.686	4.35	169.6	0.0	238.1
44.00		1.00	1.06	22.396	24.64	315.74	0.650	0.000	2.00	6.615	4.30	169.5	0.0	235.6
46.00		1.00	1.07	22.607	24.87	313.84	0.650	0.000	2.00	6.545	4.25	169.3	0.0	233.1
47.55	Bot - Section 2	1.00	1.08	22.765	25.04	312.30	0.650	0.000	1.55	5.035	3.27	131.1	0.0	179.3
48.00		1.00	1.08	22.810	25.09	311.85	0.650	0.000	0.45	1.459	0.95	38.1	0.0	92.9
50.00	Appurtenance(s)	1.00	1.09	23.007	25.31	309.78	0.650	0.000	2.00	6.490	4.22	170.8	0.0	413.2
51.75	RB1	1.00	1.10	23.174	25.49	307.91	0.650	0.000	1.75	5.621	3.65	149.0	0.0	357.8
52.00	RB2	1.00	1.10	23.198	25.52	307.64	0.650	0.000	0.25	0.799	0.52	21.2	0.0	50.8
52.97	Top - Section 1	1.00	1.11	23.288	25.62	306.57	0.650	0.000	0.97	3.088	2.01	82.3	0.0	196.6
54.00		1.00	1.11	23.383	25.72	309.57	0.650	0.000	1.03	3.261	2.12	87.2	0.0	93.0
56.00		1.00	1.12	23.562	25.92	307.31	0.650	0.000	2.00	6.279	4.08	169.3	0.0	179.1
58.00		1.00	1.13	23.737	26.11	304.98	0.650	0.000	2.00	6.209	4.04	168.6	0.0	177.1
60.00		1.00	1.14	23.907	26.30	302.59	0.650	0.000	2.00	6.139	3.99	167.9	0.0	175.1
62.00		1.00	1.14	24.073	26.48	300.15	0.650	0.000	2.00	6.069	3.94	167.1	0.0	173.1
64.00		1.00	1.15	24.234	26.66	297.66	0.650	0.000	2.00	5.999	3.90	166.3	0.0	171.1
66.00		1.00	1.16	24.392	26.83	295.11	0.650	0.000	2.00	5.929	3.85	165.4	0.0	169.0
66.67	RB3	1.00	1.16	24.444	26.89	294.25	0.650	0.000	0.67	1.970	1.28	55.1	0.0	56.2
68.00	RT2	1.00	1.17	24.545	27.00	292.51	0.650	0.000	1.33	3.888	2.53	109.2	0.0	110.8
68.25	RT1	1.00	1.17	24.564	27.02	292.19	0.650	0.000	0.25	0.727	0.47	20.4	0.0	20.7
70.00		1.00	1.17	24.696	27.17	289.88	0.650	0.000	1.75	5.061	3.29	143.0	0.0	144.3
72.00		1.00	1.18	24.843	27.33	287.19	0.650	0.000	2.00	5.718	3.72	162.5	0.0	163.0
73.00	Appurtenance(s)	1.00	1.18	24.915	27.41	285.83	0.650	0.000	1.00	2.833	1.84	80.7	0.0	80.7
74.00		1.00	1.19	24.986	27.48	284.47	0.650	0.000	1.00	2.815	1.83	80.5	0.0	80.2
75.25	RT3	1.00	1.19	25.075	27.58	282.74	0.650	0.000	1.25	3.494	2.27	100.2	0.0	99.6
76.00		1.00	1.19	25.127	27.64	281.70	0.650	0.000	0.75	2.083	1.35	59.9	0.0	59.4
78.00		1.00	1.20	25.265	27.79	278.90	0.650	0.000	2.00	5.508	3.58	159.2	0.0	157.0

Wind Loading - Shaft

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 21

80.00	1.00	1.21	25.400	27.94	276.06	0.650	0.000	2.00	5.438	3.53	158.0	0.0	154.9
82.00	1.00	1.21	25.532	28.09	273.18	0.650	0.000	2.00	5.367	3.49	156.8	0.0	152.9
84.00	1.00	1.22	25.662	28.23	270.28	0.650	0.000	2.00	5.297	3.44	155.5	0.0	150.9
86.00	1.00	1.23	25.789	28.37	267.33	0.650	0.000	2.00	5.227	3.40	154.2	0.0	148.9
88.00	1.00	1.23	25.915	28.51	264.36	0.650	0.000	2.00	5.157	3.35	152.9	0.0	146.9
90.00	1.00	1.24	26.037	28.64	261.36	0.650	0.000	2.00	5.087	3.31	151.5	0.0	144.9
92.00	1.00	1.24	26.158	28.77	258.33	0.650	0.000	2.00	5.017	3.26	150.1	0.0	142.9
94.00	1.00	1.25	26.277	28.90	255.27	0.650	0.000	2.00	4.947	3.22	148.7	0.0	140.8
96.00	1.00	1.25	26.394	29.03	252.18	0.650	0.000	2.00	4.877	3.17	147.2	0.0	138.8
96.18 Bot - Section 3	1.00	1.26	26.404	29.04	251.91	0.650	0.000	0.18	0.427	0.28	12.9	0.0	12.2
98.00	1.00	1.26	26.509	29.16	249.07	0.650	0.000	1.82	4.437	2.88	134.6	0.0	219.6
99.00 RB4	1.00	1.26	26.565	29.22	247.50	0.677 *	0.000	1.00	2.409	1.63	76.3	0.0	119.2
100.00	1.00	1.27	26.621	29.28	245.93	0.679 *	0.000	1.00	2.391	1.62	76.1	0.0	118.3
100.34 Top - Section 2	1.00	1.27	26.641	29.30	245.39	0.680 *	0.000	0.34	0.817	0.56	26.0	0.0	40.4
102.00	1.00	1.27	26.733	29.41	246.09	0.679 *	0.000	1.66	3.913	2.66	124.9	0.0	83.7
103.00 RT4	1.00	1.27	26.788	29.47	244.51	0.681 *	0.000	1.00	2.338	1.59	75.1	0.0	50.0
104.00	1.00	1.28	26.842	29.53	242.91	0.683 *	0.000	1.00	2.321	1.58	74.8	0.0	49.6
106.00	1.00	1.28	26.950	29.65	239.71	0.650	0.000	2.00	4.589	2.98	141.5	0.0	98.2
108.00	1.00	1.29	27.056	29.76	236.48	0.650	0.000	2.00	4.519	2.94	139.9	0.0	96.6
110.00	1.00	1.29	27.161	29.88	233.23	0.650	0.000	2.00	4.449	2.89	138.2	0.0	95.1
112.00	1.00	1.30	27.264	29.99	229.96	0.650	0.000	2.00	4.379	2.85	136.6	0.0	93.6
114.00	1.00	1.30	27.366	30.10	226.67	0.650	0.000	2.00	4.309	2.80	134.9	0.0	92.1
115.00 Appurtenance(s)	1.00	1.30	27.416	30.16	225.02	0.650	0.000	1.00	2.128	1.38	66.7	0.0	45.5
116.00	1.00	1.31	27.466	30.21	223.36	0.650	0.000	1.00	2.111	1.37	66.3	0.0	45.1
118.00	1.00	1.31	27.565	30.32	220.03	0.650	0.000	2.00	4.168	2.71	131.5	0.0	89.1
120.00	1.00	1.32	27.663	30.43	216.68	0.650	0.000	2.00	4.098	2.66	129.7	0.0	87.6
122.00	1.00	1.32	27.760	30.54	213.31	0.650	0.000	2.00	4.028	2.62	127.9	0.0	86.1
124.00	1.00	1.32	27.855	30.64	209.92	0.650	0.000	2.00	3.958	2.57	126.1	0.0	84.6
126.00	1.00	1.33	27.949	30.74	206.52	0.650	0.000	2.00	3.888	2.53	124.3	0.0	83.1
128.00	1.00	1.33	28.042	30.85	203.09	0.650	0.000	2.00	3.818	2.48	122.5	0.0	81.5
130.00 Appurtenance(s)	1.00	1.34	28.133	30.95	199.65	0.650	0.000	2.00	3.748	2.44	120.6	0.0	80.0
132.00	1.00	1.34	28.224	31.05	196.20	0.650	0.000	2.00	3.678	2.39	118.7	0.0	78.5
134.00	1.00	1.35	28.313	31.14	192.72	0.650	0.000	2.00	3.607	2.34	116.8	0.0	77.0
136.00	1.00	1.35	28.402	31.24	189.23	0.650	0.000	2.00	3.537	2.30	114.9	0.0	75.5
138.00 Appurtenance(s)	1.00	1.35	28.489	31.34	185.73	0.650	0.000	2.00	3.467	2.25	113.0	0.0	74.0
140.00	1.00	1.36	28.576	31.43	182.21	0.650	0.000	2.00	3.397	2.21	111.0	0.0	72.5
142.00	1.00	1.36	28.661	31.53	178.67	0.650	0.000	2.00	3.327	2.16	109.1	0.0	71.0
144.00	1.00	1.37	28.746	31.62	175.13	0.650	0.000	2.00	3.257	2.12	107.1	0.0	69.5
146.00	1.00	1.37	28.829	31.71	171.56	0.650	0.000	2.00	3.187	2.07	105.1	0.0	67.9
148.00	1.00	1.37	28.912	31.80	167.98	0.650	0.000	2.00	3.116	2.03	103.1	0.0	66.4
149.00 Appurtenance(s)	1.00	1.38	28.953	31.85	166.19	0.650	0.000	1.00	1.532	1.00	50.7	0.0	32.7
							Totals:	**149.00**			**11,178.6**		**13,255.3**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

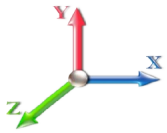
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 31

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	ACU-A20-N	4	29.075	31.982	0.40	0.80	0.22	3.60	0.000	3.000	11.46	0.00	34.39
2	149.00	800MHz Filter	3	29.075	31.982	0.40	0.80	0.94	23.76	0.000	3.000	47.90	0.00	143.69
3	149.00	TD-RRH8x20-25	3	29.075	31.982	0.40	0.80	4.86	189.00	0.000	3.000	248.69	0.00	746.08
4	149.00	800MHZ	3	29.075	31.982	0.40	0.80	3.17	160.65	0.000	3.000	162.11	0.00	486.33
5	149.00	1900MHz	3	29.075	31.982	0.40	0.80	3.32	162.00	0.000	3.000	170.09	0.00	510.28
6	149.00	APXVTM14-C-I20	3	29.075	31.982	0.63	0.80	12.02	151.20	0.000	3.000	615.11	0.00	1845.34
7	149.00	APXVSPP18-C-A20	3	29.075	31.982	0.66	0.80	15.98	153.90	0.000	3.000	817.51	0.00	2452.52
8	149.00	Low Profile Platform	1	28.953	31.848	1.00	1.00	25.00	1080.00	0.000	0.000	1273.93	0.00	0.00
9	138.00	BXA-70063-6CF_2	3	28.489	31.338	0.58	0.80	13.26	45.90	0.000	0.000	665.00	0.00	0.00
10	138.00	BXA-171085-12B_2	3	28.489	31.338	0.67	0.80	9.56	40.50	0.000	0.000	479.14	0.00	0.00
11	138.00	LPA-80080/6CF	3	28.489	31.338	1.36	0.80	17.67	56.70	0.000	0.000	885.81	0.00	0.00
12	138.00	Low Profile Platform	1	28.489	31.338	1.00	1.00	25.00	1080.00	0.000	0.000	1253.53	0.00	0.00
13	138.00	GPS Receiver	1	28.489	31.338	1.00	1.00	1.00	9.00	0.000	0.000	50.14	0.00	0.00
14	138.00	FD9R6004/2C-3L	6	28.489	31.338	0.40	0.80	0.86	16.74	0.000	0.000	43.32	0.00	0.00
15	130.00	(3) 12.5' - 2" Horizontal	1	28.133	30.947	0.75	1.00	4.45	123.53	0.000	0.000	220.49	0.00	0.00
16	130.00	XP-2020	24	28.133	30.947	0.56	0.75	9.31	216.00	0.000	0.000	461.23	0.00	0.00
17	130.00	VSRDual-TS-B-HD	2	28.133	30.947	0.56	0.75	4.61	267.12	0.000	0.000	228.39	0.00	0.00
18	130.00	DC6-48-60-0-8C-EV	1	28.133	30.947	0.38	0.75	1.79	14.40	0.000	0.000	88.75	0.00	0.00
19	130.00	DC6-48-60-18-8C	1	28.133	30.947	0.38	0.75	0.47	18.00	0.000	0.000	23.40	0.00	0.00
20	130.00	ABT-DF-DM-ADBH	1	28.133	30.947	0.75	0.75	0.04	0.99	0.000	0.000	1.86	0.00	0.00
21	130.00	7770.00	3	28.133	30.947	0.55	0.75	9.03	94.50	0.000	0.000	447.30	0.00	0.00
22	130.00	LGP 21401	12	28.133	30.947	0.38	0.75	0.00	189.00	0.000	0.000	0.00	0.00	0.00
23	130.00	DC6-48-60-18-8F	1	28.133	30.947	0.75	0.75	0.69	28.62	0.000	0.000	34.17	0.00	0.00
24	130.00	8843 B2/B66A	3	28.133	30.947	0.38	0.75	1.84	194.40	0.000	0.000	91.35	0.00	0.00
25	130.00	80010965	6	28.133	30.947	0.53	0.75	44.12	586.44	0.000	0.000	2184.73	0.00	0.00
26	130.00	RRUS 4478 B14	3	28.133	30.947	0.38	0.75	1.86	160.38	0.000	0.000	91.91	0.00	0.00
27	130.00	4449 B5/B12	3	28.133	30.947	0.38	0.75	2.22	191.70	0.000	0.000	109.74	0.00	0.00
28	130.00	Low Profile Platform	1	28.133	30.947	1.00	1.00	25.00	1080.00	0.000	0.000	1237.86	0.00	0.00
29	115.00	RRUS 11 (Band 4)	3	27.416	30.158	0.40	0.80	3.02	137.70	0.000	0.000	145.92	0.00	0.00
30	115.00	LNX-6515DS-A1M	3	27.416	30.158	0.64	0.80	22.02	134.46	0.000	0.000	1062.64	0.00	0.00
31	115.00	APX16DWV-16DWVS-E-A	3	27.416	30.158	0.50	0.80	9.84	109.89	0.000	0.000	474.60	0.00	0.00
32	115.00	RRUS 11	3	27.416	30.158	0.40	0.80	3.53	145.80	0.000	0.000	170.24	0.00	0.00
33	115.00	RRUS 11 (Band 12)	3	27.416	30.158	0.40	0.80	3.02	145.80	0.000	0.000	145.92	0.00	0.00
34	115.00	T-Arm	3	27.416	30.158	0.56	0.75	13.50	945.00	0.000	0.000	651.41	0.00	0.00
35	73.00	GPS Receiver	1	24.915	27.406	1.00	1.00	1.00	9.00	0.000	0.000	43.85	0.00	0.00
36	50.00	58532A	1	23.007	25.308	1.00	1.00	0.22	0.36	0.000	0.000	8.91	0.00	0.00
							Totals:		**7,966.03**			**14,648.42**		

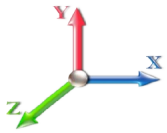
Total Applied Force Summary

Structure:	CT12215-A-SBA		**Code:**	EIA/TIA-222-G	5/21/2019
Site Name:	Litchfield 3, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 23

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 31

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		165.44	359.32	0.00	0.00
4.00		164.00	356.80	0.00	0.00
6.00		162.57	354.28	0.00	0.00
8.00		161.13	351.77	0.00	0.00
10.00		159.70	349.25	0.00	0.00
12.00		158.26	346.73	0.00	0.00
14.00		156.83	344.21	0.00	0.00
16.00		157.31	341.70	0.00	0.00
18.00		159.78	339.18	0.00	0.00
20.00		161.84	336.66	0.00	0.00
22.00		163.56	334.14	0.00	0.00
24.00		165.01	331.63	0.00	0.00
26.00		166.20	329.11	0.00	0.00
28.00		167.18	326.59	0.00	0.00
30.00		167.97	324.07	0.00	0.00
32.00		168.59	321.56	0.00	0.00
34.00		169.05	319.04	0.00	0.00
36.00		169.37	316.52	0.00	0.00
38.00		169.57	314.00	0.00	0.00
40.00		169.65	311.48	0.00	0.00
42.00		169.62	308.97	0.00	0.00
44.00		169.49	306.45	0.00	0.00
46.00		169.27	303.93	0.00	0.00
47.55		131.13	234.32	0.00	0.00
48.00		38.07	108.72	0.00	0.00
50.00	(1) attachments	179.72	484.41	0.00	0.00
51.75		149.02	419.57	0.00	0.00
52.00		21.19	59.66	0.00	0.00
52.97		82.27	230.79	0.00	0.00
54.00		87.24	129.38	0.00	0.00
56.00		169.26	249.70	0.00	0.00
58.00		168.61	247.68	0.00	0.00
60.00		167.90	245.67	0.00	0.00
62.00		167.13	243.65	0.00	0.00
64.00		166.31	241.64	0.00	0.00
66.00		165.43	239.63	0.00	0.00
66.67		55.10	79.82	0.00	0.00
68.00		109.18	157.79	0.00	0.00
68.25		20.44	29.56	0.00	0.00
70.00		142.98	206.04	0.00	0.00
72.00		162.51	233.58	0.00	0.00
73.00	(1) attachments	124.59	125.04	0.00	0.00
74.00		80.47	115.39	0.00	0.00
75.25		100.24	143.53	0.00	0.00
76.00		59.89	85.74	0.00	0.00
78.00		159.19	227.25	0.00	0.00

Total Applied Force Summary

Structure:	CT12215-A-SBA		**Code:**	EIA/TIA-222-G	5/21/2019
Site Name:	Litchfield 3, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 24

Tower Engineering Solutions

80.00		158.00	225.24	0.00	0.00
82.00		156.78	223.22	0.00	0.00
84.00		155.52	221.21	0.00	0.00
86.00		154.22	219.20	0.00	0.00
88.00		152.89	217.18	0.00	0.00
90.00		151.52	215.17	0.00	0.00
92.00		150.13	213.15	0.00	0.00
94.00		148.70	211.14	0.00	0.00
96.00		147.24	209.13	0.00	0.00
96.18		12.91	18.38	0.00	0.00
98.00		134.55	283.67	0.00	0.00
99.00		76.26	154.33	0.00	0.00
100.00		76.05	153.45	0.00	0.00
100.34		26.04	52.48	0.00	0.00
102.00		124.93	141.94	0.00	0.00
103.00		75.06	85.17	0.00	0.00
104.00		74.84	84.80	0.00	0.00
106.00		141.49	168.46	0.00	0.00
108.00		139.88	166.95	0.00	0.00
110.00		138.24	165.44	0.00	0.00
112.00		136.58	163.93	0.00	0.00
114.00		134.89	162.42	0.00	0.00
115.00	(18) attachments	2717.48	1699.29	0.00	0.00
116.00		66.32	78.29	0.00	0.00
118.00		131.45	155.44	0.00	0.00
120.00		129.70	153.93	0.00	0.00
122.00		127.92	152.42	0.00	0.00
124.00		126.13	150.91	0.00	0.00
126.00		124.31	149.39	0.00	0.00
128.00		122.47	147.88	0.00	0.00
130.00	(62) attachments	5341.80	3311.45	0.00	0.00
132.00		118.74	108.14	0.00	0.00
134.00		116.84	106.63	0.00	0.00
136.00		114.93	105.12	0.00	0.00
138.00	(17) attachments	3489.94	1352.45	0.00	0.00
140.00		111.05	79.35	0.00	0.00
142.00		109.08	77.84	0.00	0.00
144.00		107.10	76.33	0.00	0.00
146.00		105.09	74.82	0.00	0.00
148.00		103.08	73.31	0.00	0.00
149.00	(23) attachments	3397.55	1960.20	0.00	6218.64
	Totals:	**25,826.98**	**25,935.17**	**0.00**	**6,218.64**

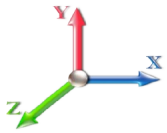
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 31

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	17.879	0.00	3.96
2.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.055	0.000	17.879	0.00	0.29
4.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	17.879	0.00	3.96
4.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.055	0.000	17.879	0.00	0.29
6.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.056	0.000	17.879	0.00	3.96
6.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.056	0.000	17.879	0.00	0.29
8.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.056	0.000	17.879	0.00	3.96
8.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.056	0.000	17.879	0.00	0.29
10.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	17.879	0.00	3.96
10.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.057	0.000	17.879	0.00	0.29
12.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	17.879	0.00	3.96
12.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.057	0.000	17.879	0.00	0.29
14.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	17.879	0.00	3.96
14.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.058	0.000	17.879	0.00	0.29
16.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	18.100	0.00	3.96
16.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.058	0.000	18.100	0.00	0.29
18.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	18.554	0.00	3.96
18.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.059	0.000	18.554	0.00	0.29
20.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	18.971	0.00	3.96
20.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.059	0.000	18.971	0.00	0.29
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	19.355	0.00	3.96
22.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.060	0.000	19.355	0.00	0.29
24.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	19.713	0.00	3.96
24.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.060	0.000	19.713	0.00	0.29
26.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.061	0.000	20.048	0.00	3.96
26.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.061	0.000	20.048	0.00	0.29
28.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	20.363	0.00	3.96
28.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.062	0.000	20.363	0.00	0.29
30.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	20.661	0.00	3.96
30.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.062	0.000	20.661	0.00	0.29
32.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	20.944	0.00	3.96
32.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.063	0.000	20.944	0.00	0.29
34.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	21.213	0.00	3.96
34.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.063	0.000	21.213	0.00	0.29
36.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	21.470	0.00	3.96
36.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.064	0.000	21.470	0.00	0.29
38.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	21.715	0.00	3.96
38.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.065	0.000	21.715	0.00	0.29
40.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	21.951	0.00	3.96
40.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.065	0.000	21.951	0.00	0.29
42.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	22.178	0.00	3.96
42.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.066	0.000	22.178	0.00	0.29
44.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	22.396	0.00	3.96
44.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.067	0.000	22.396	0.00	0.29
46.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	22.607	0.00	3.96
46.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.067	0.000	22.607	0.00	0.29
47.55	1 5/8" Hybrid	Yes	1.55	0.000	2.00	0.26	0.00	0.068	0.000	22.765	0.00	3.08

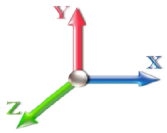
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 31

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
47.55	1/2" Coax	Yes	1.55	0.000	0.65	0.08	0.00	0.068	0.000	22.765	0.00	0.22
48.00	1 5/8" Hybrid	Yes	0.45	0.000	2.00	0.07	0.00	0.068	0.000	22.810	0.00	0.88
48.00	1/2" Coax	Yes	0.45	0.000	0.65	0.02	0.00	0.068	0.000	22.810	0.00	0.06
50.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.069	0.000	23.007	0.00	3.96
50.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.069	0.000	23.007	0.00	0.29
51.75	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.085	0.000	23.174	0.00	3.47
51.75	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.18	0.00	0.085	0.000	23.174	0.00	0.00
52.00	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.086	0.000	23.198	0.00	0.50
52.00	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.03	0.00	0.086	0.000	23.198	0.00	0.00
52.97	1 5/8" Hybrid	Yes	0.97	0.000	2.00	0.16	0.00	0.086	0.000	23.288	0.00	1.92
52.97	1.25" Reinforcing	Yes	0.97	0.000	1.25	0.10	0.00	0.086	0.000	23.288	0.00	0.00
54.00	1 5/8" Hybrid	Yes	1.03	0.000	2.00	0.17	0.00	0.086	0.000	23.383	0.00	2.04
54.00	1.25" Reinforcing	Yes	1.03	0.000	1.25	0.11	0.00	0.086	0.000	23.383	0.00	0.00
56.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.086	0.000	23.562	0.00	3.96
56.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.086	0.000	23.562	0.00	0.00
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.087	0.000	23.737	0.00	3.96
58.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.087	0.000	23.737	0.00	0.00
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.088	0.000	23.907	0.00	3.96
60.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.088	0.000	23.907	0.00	0.00
62.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.089	0.000	24.073	0.00	3.96
62.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.089	0.000	24.073	0.00	0.00
64.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.090	0.000	24.234	0.00	3.96
64.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.090	0.000	24.234	0.00	0.00
66.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.091	0.000	24.392	0.00	3.96
66.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.091	0.000	24.392	0.00	0.00
66.67	1 5/8" Hybrid	Yes	0.67	0.000	2.00	0.11	0.00	0.092	0.000	24.444	0.00	1.33
66.67	1.25" Reinforcing	Yes	0.67	0.000	1.25	0.07	0.00	0.092	0.000	24.444	0.00	0.00
68.00	1 5/8" Hybrid	Yes	1.33	0.000	2.00	0.22	0.00	0.093	0.000	24.545	0.00	2.63
68.00	1.25" Reinforcing	Yes	1.33	0.000	1.25	0.14	0.00	0.093	0.000	24.545	0.00	0.00
68.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.093	0.000	24.564	0.00	0.50
68.25	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.03	0.00	0.093	0.000	24.564	0.00	0.00
70.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.094	0.000	24.696	0.00	3.47
70.00	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.18	0.00	0.094	0.000	24.696	0.00	0.00
72.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.095	0.000	24.843	0.00	3.96
72.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.095	0.000	24.843	0.00	0.00
73.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.096	0.000	24.915	0.00	1.98
73.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.096	0.000	24.915	0.00	0.00
74.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.096	0.000	24.986	0.00	1.98
74.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.096	0.000	24.986	0.00	0.00
75.25	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.097	0.000	25.075	0.00	2.48
75.25	1.25" Reinforcing	Yes	1.25	0.000	1.25	0.13	0.00	0.097	0.000	25.075	0.00	0.00
76.00	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.097	0.000	25.127	0.00	1.49
76.00	1.25" Reinforcing	Yes	0.75	0.000	1.25	0.08	0.00	0.097	0.000	25.127	0.00	0.00
78.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.079	0.000	25.265	0.00	3.96
78.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.079	0.000	25.265	0.00	0.00
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.061	0.000	25.400	0.00	3.96
82.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	25.532	0.00	3.96

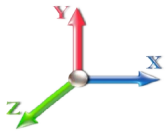
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 31

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	25.662	0.00	3.96
86.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	25.789	0.00	3.96
88.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	25.915	0.00	3.96
90.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	26.037	0.00	3.96
92.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	26.158	0.00	3.96
94.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	26.277	0.00	3.96
96.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.068	0.000	26.394	0.00	3.96
96.18	1 5/8" Hybrid	Yes	0.18	0.000	2.00	0.03	0.00	0.069	0.000	26.404	0.00	0.35
98.00	1 5/8" Hybrid	Yes	1.82	0.000	2.00	0.30	0.00	0.093	0.000	26.509	0.00	3.61
98.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.093	0.000	26.509	0.00	0.00
99.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.114	1.042	26.565	0.00	1.98
99.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.114	1.042	26.565	0.00	0.00
100.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.115	1.044	26.621	0.00	1.98
100.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.115	1.044	26.621	0.00	0.00
100.34	1 5/8" Hybrid	Yes	0.34	0.000	2.00	0.06	0.00	0.115	1.046	26.641	0.00	0.68
100.34	1.25" Reinforcing	Yes	0.34	0.000	1.25	0.04	0.00	0.115	1.046	26.641	0.00	0.00
102.00	1 5/8" Hybrid	Yes	1.66	0.000	2.00	0.28	0.00	0.115	1.044	26.733	0.00	3.28
102.00	1.25" Reinforcing	Yes	1.66	0.000	1.25	0.17	0.00	0.115	1.044	26.733	0.00	0.00
103.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.116	1.047	26.788	0.00	1.98
103.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.116	1.047	26.788	0.00	0.00
104.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.117	1.050	26.842	0.00	1.98
104.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.117	1.050	26.842	0.00	0.00
106.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.095	0.000	26.950	0.00	3.96
106.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.095	0.000	26.950	0.00	0.00
108.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.074	0.000	27.056	0.00	3.96
110.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.075	0.000	27.161	0.00	3.96
112.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.076	0.000	27.264	0.00	3.96
114.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.077	0.000	27.366	0.00	3.96
115.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.078	0.000	27.416	0.00	1.98
									Totals:		**0.0**	**234.9**

Calculated Forces

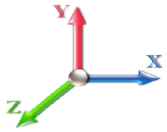
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 31

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-25.91	-25.85	0.00	-2864.5	0.00	2864.57	3031.07	1515.53	5947.06	2977.95	0.00	0.000	0.000	0.971
2.00	-25.49	-25.74	0.00	-2812.8	0.00	2812.86	3016.33	1508.17	5866.38	2937.55	0.03	-0.119	0.000	0.966
4.00	-25.08	-25.63	0.00	-2761.3	0.00	2761.38	3001.40	1500.70	5785.81	2897.21	0.10	-0.239	0.000	0.962
6.00	-24.68	-25.52	0.00	-2710.1	0.00	2710.12	2986.25	1493.13	5705.37	2856.93	0.23	-0.359	0.000	0.957
8.00	-24.27	-25.41	0.00	-2659.0	0.00	2659.09	2970.91	1485.45	5625.07	2816.71	0.40	-0.481	0.000	0.953
10.00	-23.87	-25.29	0.00	-2608.2	0.00	2608.28	2955.36	1477.68	5544.90	2776.57	0.63	-0.604	0.000	0.948
12.00	-23.47	-25.18	0.00	-2557.6	0.00	2557.69	2939.60	1469.80	5464.90	2736.51	0.91	-0.727	0.000	0.943
14.00	-23.07	-25.07	0.00	-2507.3	0.00	2507.33	2923.65	1461.82	5385.06	2696.53	1.24	-0.852	0.000	0.938
16.00	-22.68	-24.96	0.00	-2457.1	0.00	2457.19	2907.49	1453.74	5305.39	2656.64	1.63	-0.977	0.000	0.933
18.00	-22.29	-24.84	0.00	-2407.2	0.00	2407.28	2891.12	1445.56	5225.92	2616.84	2.07	-1.104	0.000	0.928
20.00	-21.90	-24.72	0.00	-2357.5	0.00	2357.59	2874.56	1437.28	5146.64	2577.14	2.56	-1.231	0.000	0.923
22.00	-21.52	-24.60	0.00	-2308.1	0.00	2308.15	2857.79	1428.89	5067.57	2537.55	3.10	-1.359	0.000	0.917
24.00	-21.13	-24.47	0.00	-2258.9	0.00	2258.95	2840.81	1420.41	4988.71	2498.06	3.70	-1.489	0.000	0.912
26.00	-20.75	-24.35	0.00	-2210.0	0.00	2210.01	2823.63	1411.82	4910.09	2458.69	4.35	-1.619	0.000	0.907
28.00	-20.38	-24.22	0.00	-2161.3	0.00	2161.32	2806.25	1403.13	4831.70	2419.44	5.05	-1.750	0.000	0.901
30.00	-20.00	-24.08	0.00	-2112.8	0.00	2112.88	2788.67	1394.33	4753.57	2380.32	5.82	-1.882	0.000	0.895
32.00	-19.63	-23.95	0.00	-2064.7	0.00	2064.72	2770.88	1385.44	4675.69	2341.32	6.63	-2.015	0.000	0.889
34.00	-19.26	-23.82	0.00	-2016.8	0.00	2016.82	2752.89	1376.44	4598.09	2302.46	7.51	-2.149	0.000	0.883
36.00	-18.90	-23.68	0.00	-1969.1	0.00	1969.19	2734.69	1367.35	4520.77	2263.74	8.44	-2.284	0.000	0.877
38.00	-18.53	-23.54	0.00	-1921.8	0.00	1921.83	2716.29	1358.15	4443.74	2225.17	9.42	-2.419	0.000	0.871
40.00	-18.17	-23.40	0.00	-1874.7	0.00	1874.75	2697.69	1348.85	4367.01	2186.75	10.46	-2.556	0.000	0.864
42.00	-17.82	-23.26	0.00	-1827.9	0.00	1827.95	2678.89	1339.44	4290.59	2148.48	11.56	-2.693	0.000	0.858
44.00	-17.46	-23.12	0.00	-1781.4	0.00	1781.43	2659.88	1329.94	4214.50	2110.38	12.72	-2.832	0.000	0.851
46.00	-17.12	-22.97	0.00	-1735.1	0.00	1735.19	2640.67	1320.33	4138.74	2072.44	13.94	-2.971	0.000	0.844
47.55	-16.86	-22.85	0.00	-1699.5	0.00	1699.51	2625.60	1312.80	4080.13	2043.10	14.92	-3.080	0.000	0.839
48.00	-16.72	-22.83	0.00	-1689.3	0.00	1689.31	2621.25	1310.62	4063.32	2034.68	15.21	-3.112	0.000	0.837
50.00	-16.20	-22.66	0.00	-1643.6	0.00	1643.65	2601.63	1300.82	3988.26	1997.09	16.55	-3.252	0.000	0.830
51.75	-15.76	-22.51	0.00	-1603.9	0.00	1603.99	2584.30	1292.15	3922.88	1964.36	17.76	-3.376	0.000	0.545
52.00	-15.69	-22.49	0.00	-1598.3	0.00	1598.36	2581.81	1290.90	3913.56	1959.69	17.94	-3.388	0.000	0.401
52.97	-15.45	-22.40	0.00	-1576.5	0.00	1576.55	1914.68	957.34	2935.86	1470.11	18.63	-3.422	0.000	0.440
54.00	-15.31	-22.32	0.00	-1553.4	0.00	1553.48	1908.40	954.20	2909.37	1456.85	19.37	-3.458	0.000	0.474
56.00	-15.04	-22.16	0.00	-1508.8	0.00	1508.84	1896.06	948.03	2858.01	1431.13	20.84	-3.533	0.000	0.465
58.00	-14.77	-21.99	0.00	-1464.5	0.00	1464.52	1883.51	941.76	2806.77	1405.47	22.33	-3.608	0.000	0.457
60.00	-14.51	-21.83	0.00	-1420.5	0.00	1420.54	1870.76	935.38	2755.66	1379.88	23.86	-3.683	0.000	0.448
62.00	-14.25	-21.66	0.00	-1376.8	0.00	1376.88	1857.80	928.90	2704.70	1354.36	25.42	-3.758	0.000	0.439
64.00	-13.99	-21.50	0.00	-1333.5	0.00	1333.55	1844.65	922.32	2653.88	1328.91	27.00	-3.832	0.000	0.431
66.00	-13.75	-21.33	0.00	-1290.5	0.00	1290.55	1831.29	915.64	2603.23	1303.55	28.62	-3.906	0.000	0.422
66.67	-13.66	-21.28	0.00	-1276.2	0.00	1276.26	1826.76	913.38	2586.30	1295.07	29.17	-3.931	0.000	0.327
68.00	-13.50	-21.16	0.00	-1247.9	0.00	1247.96	1817.72	908.86	2552.75	1278.27	30.27	-3.969	0.000	0.419
68.25	-13.45	-21.15	0.00	-1242.6	0.00	1242.67	1816.01	908.01	2546.46	1275.12	30.48	-3.979	0.000	0.587
70.00	-13.22	-21.02	0.00	-1205.6	0.00	1205.65	1803.95	901.98	2502.46	1253.09	31.96	-4.070	0.000	0.576
72.00	-12.97	-20.86	0.00	-1163.6	0.00	1163.61	1789.98	894.99	2452.36	1228.00	33.68	-4.174	0.000	0.564
73.00	-12.84	-20.74	0.00	-1142.7	0.00	1142.75	1782.92	891.46	2427.38	1215.49	34.56	-4.226	0.000	0.559
74.00	-12.71	-20.66	0.00	-1122.0	0.00	1122.02	1775.81	887.90	2402.46	1203.02	35.45	-4.278	0.000	0.553
75.25	-12.55	-20.56	0.00	-1096.1	0.00	1096.19	1766.84	883.42	2371.38	1187.45	36.58	-4.343	0.000	0.545
75.25	-12.55	-20.56	0.00	-1096.1	0.00	1096.19	1766.84	883.42	2371.38	1187.45	36.58	-4.343	0.000	0.545
76.00	-12.43	-20.52	0.00	-1080.7	0.00	1080.77	1761.43	880.71	2352.78	1178.14	37.26	-4.382	0.000	0.925
78.00	-12.16	-20.38	0.00	-1039.7	0.00	1039.73	1746.84	873.42	2303.32	1153.37	39.14	-4.557	0.000	0.909

Calculated Forces

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

80.00	-11.88	-20.24	0.00	-998.98	0.00	998.98	1732.06	866.03	2254.10	1128.72	41.08	-4.732	0.000	0.892
82.00	-11.61	-20.10	0.00	-958.50	0.00	958.50	1717.07	858.53	2205.12	1104.20	43.10	-4.907	0.000	0.875
84.00	-11.35	-19.96	0.00	-918.30	0.00	918.30	1701.88	850.94	2156.41	1079.81	45.19	-5.081	0.000	0.858
86.00	-11.08	-19.82	0.00	-878.37	0.00	878.37	1686.48	843.24	2107.95	1055.54	47.35	-5.255	0.000	0.839
88.00	-10.82	-19.68	0.00	-838.73	0.00	838.73	1670.88	835.44	2059.78	1031.42	49.59	-5.428	0.000	0.820
90.00	-10.56	-19.54	0.00	-799.37	0.00	799.37	1655.08	827.54	2011.90	1007.44	51.90	-5.600	0.000	0.800
92.00	-10.31	-19.40	0.00	-760.29	0.00	760.29	1639.07	819.54	1964.31	983.61	54.28	-5.771	0.000	0.780
94.00	-10.06	-19.26	0.00	-721.49	0.00	721.49	1622.86	811.43	1917.03	959.94	56.73	-5.940	0.000	0.758
96.00	-9.83	-19.11	0.00	-682.96	0.00	682.96	1606.45	803.22	1870.07	936.43	59.25	-6.107	0.000	0.736
96.18	-9.79	-19.11	0.00	-679.59	0.00	679.59	1604.99	802.49	1865.94	934.36	59.47	-6.122	0.000	0.734
98.00	-9.48	-18.96	0.00	-644.75	0.00	644.75	1589.83	794.91	1823.44	913.08	61.84	-6.273	0.000	0.713
99.00	-9.32	-18.88	0.00	-625.78	0.00	625.78	1581.44	790.72	1800.26	901.47	63.16	-6.356	0.000	0.395
100.00	-9.16	-18.79	0.00	-606.90	0.00	606.90	1573.01	786.50	1777.16	889.90	64.49	-6.402	0.000	0.387
100.34	-9.10	-18.77	0.00	-600.45	0.00	600.45	1075.68	537.84	1234.34	618.09	64.95	-6.418	0.000	0.434
102.00	-8.95	-18.64	0.00	-569.36	0.00	569.36	1068.04	534.02	1210.40	606.10	67.19	-6.492	0.000	0.473
103.00	-8.86	-18.56	0.00	-550.72	0.00	550.72	1063.37	531.68	1195.97	598.87	68.55	-6.543	0.000	0.461
103.00	-8.86	-18.56	0.00	-550.72	0.00	550.72	1063.37	531.68	1195.97	598.87	68.55	-6.543	0.000	0.461
104.00	-8.74	-18.50	0.00	-532.16	0.00	532.16	1058.64	529.32	1181.57	591.66	69.92	-6.592	0.000	0.909
106.00	-8.53	-18.37	0.00	-495.16	0.00	495.16	1049.03	524.52	1152.85	577.28	72.72	-6.787	0.000	0.867
108.00	-8.32	-18.23	0.00	-458.43	0.00	458.43	1039.22	519.61	1124.23	562.95	75.60	-6.976	0.000	0.824
110.00	-8.12	-18.10	0.00	-421.96	0.00	421.96	1029.21	514.60	1095.73	548.68	78.55	-7.159	0.000	0.778
112.00	-7.92	-17.97	0.00	-385.76	0.00	385.76	1018.99	509.50	1067.37	534.48	81.58	-7.335	0.000	0.731
114.00	-7.74	-17.83	0.00	-349.82	0.00	349.82	1008.57	504.29	1039.14	520.34	84.68	-7.503	0.000	0.681
115.00	-6.39	-14.92	0.00	-331.99	0.00	331.99	1003.28	501.64	1025.09	513.31	86.26	-7.585	0.000	0.654
116.00	-6.29	-14.86	0.00	-317.07	0.00	317.07	997.95	498.97	1011.07	506.29	87.85	-7.665	0.000	0.633
118.00	-6.12	-14.73	0.00	-287.35	0.00	287.35	987.12	493.56	983.16	492.31	91.09	-7.818	0.000	0.591
120.00	-5.95	-14.59	0.00	-257.90	0.00	257.90	976.09	488.04	955.42	478.42	94.39	-7.963	0.000	0.546
122.00	-5.78	-14.46	0.00	-228.72	0.00	228.72	964.85	482.43	927.87	464.62	97.74	-8.099	0.000	0.499
124.00	-5.62	-14.32	0.00	-199.81	0.00	199.81	953.42	476.71	900.51	450.92	101.15	-8.225	0.000	0.450
126.00	-5.46	-14.19	0.00	-171.17	0.00	171.17	941.77	470.89	873.35	437.32	104.61	-8.341	0.000	0.398
128.00	-5.31	-14.05	0.00	-142.79	0.00	142.79	929.93	464.96	846.40	423.83	108.12	-8.444	0.000	0.344
130.00	-2.81	-8.28	0.00	-114.69	0.00	114.69	917.88	458.94	819.69	410.45	111.66	-8.533	0.000	0.283
132.00	-2.71	-8.15	0.00	-98.12	0.00	98.12	905.63	452.81	793.20	397.19	115.24	-8.612	0.000	0.250
134.00	-2.61	-8.03	0.00	-81.81	0.00	81.81	893.17	446.59	766.97	384.05	118.85	-8.682	0.000	0.216
136.00	-2.52	-7.90	0.00	-65.76	0.00	65.76	880.51	440.26	740.98	371.04	122.49	-8.743	0.000	0.180
138.00	-1.71	-4.25	0.00	-49.96	0.00	49.96	867.65	433.83	715.27	358.17	126.15	-8.794	0.000	0.142
140.00	-1.65	-4.12	0.00	-41.47	0.00	41.47	854.59	427.29	689.83	345.43	129.82	-8.836	0.000	0.122
142.00	-1.58	-4.01	0.00	-33.22	0.00	33.22	841.32	420.66	664.68	332.84	133.52	-8.873	0.000	0.102
144.00	-1.52	-3.89	0.00	-25.21	0.00	25.21	827.84	413.92	639.83	320.39	137.23	-8.904	0.000	0.081
146.00	-1.46	-3.77	0.00	-17.43	0.00	17.43	814.17	407.08	615.29	308.10	140.95	-8.928	0.000	0.058
148.00	-1.41	-3.66	0.00	-9.88	0.00	9.88	796.71	398.35	588.42	294.65	144.68	-8.945	0.000	0.035
149.00	0.00	-3.40	0.00	-6.22	0.00	6.22	787.55	393.77	574.90	287.88	146.55	-8.950	0.000	0.022

Wind Loading - Shaft

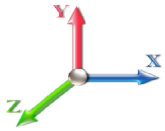
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 30	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 30

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	3.308	3.64	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	3.308	3.64	0.00	1.200	1.511	2.00	8.592	10.31	37.5	185.9	570.5
4.00		1.00	0.85	3.308	3.64	0.00	1.200	1.620	2.00	8.558	10.27	37.4	198.0	579.2
6.00		1.00	0.85	3.308	3.64	0.00	1.200	1.687	2.00	8.510	10.21	37.2	204.7	582.6
8.00		1.00	0.85	3.308	3.64	0.00	1.200	1.736	2.00	8.457	10.15	36.9	209.1	583.6
10.00		1.00	0.85	3.308	3.64	0.00	1.200	1.775	2.00	8.399	10.08	36.7	212.1	583.3
12.00		1.00	0.85	3.308	3.64	0.00	1.200	1.808	2.00	8.340	10.01	36.4	214.3	582.1
14.00		1.00	0.85	3.308	3.64	0.00	1.200	1.836	2.00	8.279	9.94	36.1	215.8	580.3
16.00		1.00	0.86	3.348	3.68	0.00	1.200	1.860	2.00	8.217	9.86	36.3	216.9	578.0
18.00		1.00	0.88	3.432	3.78	0.00	1.200	1.882	2.00	8.155	9.79	36.9	217.6	575.4
20.00		1.00	0.90	3.509	3.86	0.00	1.200	1.902	2.00	8.091	9.71	37.5	218.1	572.4
22.00		1.00	0.92	3.581	3.94	0.00	1.200	1.921	2.00	8.027	9.63	37.9	218.2	569.3
24.00		1.00	0.94	3.647	4.01	0.00	1.200	1.937	2.00	7.963	9.56	38.3	218.2	565.9
26.00		1.00	0.95	3.709	4.08	0.00	1.200	1.953	2.00	7.898	9.48	38.7	218.0	562.3
28.00		1.00	0.97	3.767	4.14	0.00	1.200	1.967	2.00	7.832	9.40	38.9	217.7	558.6
30.00		1.00	0.98	3.822	4.20	0.00	1.200	1.981	2.00	7.767	9.32	39.2	217.2	554.8
32.00		1.00	1.00	3.874	4.26	0.00	1.200	1.994	2.00	7.701	9.24	39.4	216.6	550.8
34.00		1.00	1.01	3.924	4.32	0.00	1.200	2.006	2.00	7.635	9.16	39.5	215.9	546.7
36.00		1.00	1.02	3.972	4.37	0.00	1.200	2.017	2.00	7.569	9.08	39.7	215.1	542.6
38.00		1.00	1.03	4.017	4.42	0.00	1.200	2.028	2.00	7.502	9.00	39.8	214.2	538.3
40.00		1.00	1.04	4.061	4.47	0.00	1.200	2.039	2.00	7.435	8.92	39.9	213.2	534.0
42.00		1.00	1.05	4.103	4.51	0.00	1.200	2.049	2.00	7.369	8.84	39.9	212.2	529.6
44.00		1.00	1.06	4.143	4.56	0.00	1.200	2.058	2.00	7.302	8.76	39.9	211.1	525.2
46.00		1.00	1.07	4.182	4.60	0.00	1.200	2.068	2.00	7.235	8.68	39.9	209.9	520.7
47.55	Bot - Section 2	1.00	1.08	4.211	4.63	0.00	1.200	2.074	1.55	5.572	6.69	31.0	162.3	401.3
48.00		1.00	1.08	4.220	4.64	0.00	1.200	2.076	0.45	1.614	1.94	9.0	47.2	171.0
50.00	Appurtenance(s)	1.00	1.09	4.256	4.68	0.00	1.200	2.085	2.00	7.185	8.62	40.4	210.0	760.9
51.75	RB1	1.00	1.10	4.287	4.72	0.00	1.200	2.092	1.75	6.231	7.48	35.3	182.8	659.9
52.00	RB2	1.00	1.10	4.291	4.72	0.00	1.200	2.093	0.25	0.886	1.06	5.0	26.1	93.9
52.97	Top - Section 1	1.00	1.11	4.308	4.74	0.00	1.200	2.097	0.97	3.427	4.11	19.5	100.9	363.0
54.00		1.00	1.11	4.326	4.76	0.00	1.200	2.101	1.03	3.622	4.35	20.7	106.8	230.8
56.00		1.00	1.12	4.359	4.79	0.00	1.200	2.109	2.00	6.982	8.38	40.2	206.0	444.8
58.00		1.00	1.13	4.391	4.83	0.00	1.200	2.116	2.00	6.914	8.30	40.1	204.6	440.7
60.00		1.00	1.14	4.423	4.86	0.00	1.200	2.123	2.00	6.847	8.22	40.0	203.1	436.5
62.00		1.00	1.14	4.453	4.90	0.00	1.200	2.130	2.00	6.779	8.13	39.8	201.6	432.3
64.00		1.00	1.15	4.483	4.93	0.00	1.200	2.137	2.00	6.711	8.05	39.7	200.0	428.1
66.00		1.00	1.16	4.512	4.96	0.00	1.200	2.144	2.00	6.643	7.97	39.6	198.5	423.8
66.67	RB3	1.00	1.16	4.522	4.97	0.00	1.200	2.146	0.67	2.210	2.65	13.2	66.3	141.2
68.00	RT2	1.00	1.17	4.541	4.99	0.00	1.200	2.150	1.33	4.365	5.24	26.2	130.9	278.7
68.25	RT1	1.00	1.17	4.544	5.00	0.00	1.200	2.151	0.25	0.817	0.98	4.9	24.6	52.2
70.00		1.00	1.17	4.569	5.03	0.00	1.200	2.156	1.75	5.690	6.83	34.3	170.8	363.2
72.00		1.00	1.18	4.596	5.06	0.00	1.200	2.162	2.00	6.439	7.73	39.1	193.6	410.9
73.00	Appurtenance(s)	1.00	1.18	4.609	5.07	0.00	1.200	2.165	1.00	3.194	3.83	19.4	96.4	204.0
74.00		1.00	1.19	4.622	5.08	0.00	1.200	2.168	1.00	3.177	3.81	19.4	95.9	202.9
75.25	RT3	1.00	1.19	4.639	5.10	0.00	1.200	2.172	1.25	3.947	4.74	24.2	119.2	252.0
76.00		1.00	1.19	4.648	5.11	0.00	1.200	2.174	0.75	2.355	2.83	14.5	71.3	150.5
78.00		1.00	1.20	4.674	5.14	0.00	1.200	2.180	2.00	6.234	7.48	38.5	188.4	397.7

Wind Loading - Shaft

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

80.00	1.00	1.21	4.699	5.17	0.00	1.200	2.185	2.00	6.166	7.40	38.2	186.6	393.2
82.00	1.00	1.21	4.723	5.20	0.00	1.200	2.191	2.00	6.098	7.32	38.0	184.9	388.8
84.00	1.00	1.22	4.747	5.22	0.00	1.200	2.196	2.00	6.029	7.24	37.8	183.1	384.3
86.00	1.00	1.23	4.771	5.25	0.00	1.200	2.201	2.00	5.961	7.15	37.5	181.2	379.8
88.00	1.00	1.23	4.794	5.27	0.00	1.200	2.206	2.00	5.892	7.07	37.3	179.4	375.2
90.00	1.00	1.24	4.817	5.30	0.00	1.200	2.211	2.00	5.824	6.99	37.0	177.5	370.7
92.00	1.00	1.24	4.839	5.32	0.00	1.200	2.216	2.00	5.755	6.91	36.8	175.6	366.1
94.00	1.00	1.25	4.861	5.35	0.00	1.200	2.221	2.00	5.687	6.82	36.5	173.7	361.5
96.00	1.00	1.25	4.883	5.37	0.00	1.200	2.225	2.00	5.618	6.74	36.2	171.8	356.9
96.18 Bot - Section 3	1.00	1.26	4.885	5.37	0.00	1.200	2.226	0.18	0.493	0.59	3.2	15.2	31.4
98.00	1.00	1.26	4.904	5.39	0.00	1.200	2.230	1.82	5.115	6.14	33.1	156.8	449.5
99.00 RB4	1.00	1.26	4.914	5.41	0.00	1.250 *	2.232	1.00	2.781	3.48	18.8	85.5	244.4
100.00	1.00	1.27	4.925	5.42	0.00	1.253 *	2.234	1.00	2.764	3.46	18.8	85.0	242.7
100.34 Top - Section 2	1.00	1.27	4.928	5.42	0.00	1.255 *	2.235	0.34	0.945	1.19	6.4	29.1	83.0
102.00	1.00	1.27	4.945	5.44	0.00	1.253 *	2.239	1.66	4.531	5.68	30.9	139.2	250.8
103.00 RT4	1.00	1.27	4.956	5.45	0.00	1.257 *	2.241	1.00	2.712	3.41	18.6	83.5	150.2
104.00	1.00	1.28	4.966	5.46	0.00	1.260 *	2.243	1.00	2.695	3.40	18.5	83.0	149.2
106.00	1.00	1.28	4.986	5.48	0.00	1.200	2.248	2.00	5.338	6.41	35.1	164.1	295.0
108.00	1.00	1.29	5.005	5.51	0.00	1.200	2.252	2.00	5.270	6.32	34.8	162.1	290.9
110.00	1.00	1.29	5.025	5.53	0.00	1.200	2.256	2.00	5.201	6.24	34.5	160.0	286.9
112.00	1.00	1.30	5.044	5.55	0.00	1.200	2.260	2.00	5.132	6.16	34.2	158.0	282.8
114.00	1.00	1.30	5.063	5.57	0.00	1.200	2.264	2.00	5.063	6.08	33.8	156.0	278.8
115.00 Appurtenance(s)	1.00	1.30	5.072	5.58	0.00	1.200	2.266	1.00	2.506	3.01	16.8	77.5	138.1
116.00	1.00	1.31	5.081	5.59	0.00	1.200	2.268	1.00	2.489	2.99	16.7	76.9	137.1
118.00	1.00	1.31	5.099	5.61	0.00	1.200	2.272	2.00	4.926	5.91	33.2	151.8	270.6
120.00	1.00	1.32	5.117	5.63	0.00	1.200	2.276	2.00	4.857	5.83	32.8	149.7	266.5
122.00	1.00	1.32	5.135	5.65	0.00	1.200	2.279	2.00	4.788	5.75	32.5	147.6	262.4
124.00	1.00	1.32	5.153	5.67	0.00	1.200	2.283	2.00	4.719	5.66	32.1	145.5	258.3
126.00	1.00	1.33	5.170	5.69	0.00	1.200	2.287	2.00	4.650	5.58	31.7	143.4	254.1
128.00	1.00	1.33	5.187	5.71	0.00	1.200	2.290	2.00	4.581	5.50	31.4	141.3	250.0
130.00 Appurtenance(s)	1.00	1.34	5.204	5.72	0.00	1.200	2.294	2.00	4.512	5.41	31.0	139.1	245.8
132.00	1.00	1.34	5.221	5.74	0.00	1.200	2.297	2.00	4.443	5.33	30.6	137.0	241.7
134.00	1.00	1.35	5.238	5.76	0.00	1.200	2.301	2.00	4.374	5.25	30.2	134.8	237.5
136.00	1.00	1.35	5.254	5.78	0.00	1.200	2.304	2.00	4.305	5.17	29.9	132.6	233.3
138.00 Appurtenance(s)	1.00	1.35	5.270	5.80	0.00	1.200	2.308	2.00	4.236	5.08	29.5	130.5	229.1
140.00	1.00	1.36	5.286	5.81	0.00	1.200	2.311	2.00	4.167	5.00	29.1	128.3	224.9
142.00	1.00	1.36	5.302	5.83	0.00	1.200	2.314	2.00	4.098	4.92	28.7	126.1	220.7
144.00	1.00	1.37	5.318	5.85	0.00	1.200	2.317	2.00	4.029	4.84	28.3	123.8	216.5
146.00	1.00	1.37	5.333	5.87	0.00	1.200	2.321	2.00	3.960	4.75	27.9	121.6	212.2
148.00	1.00	1.37	5.348	5.88	0.00	1.200	2.324	2.00	3.891	4.67	27.5	119.4	208.0
149.00 Appurtenance(s)	1.00	1.38	5.356	5.89	0.00	1.200	2.325	1.00	1.919	2.30	13.6	59.1	102.7
						Totals:		**149.00**			**2,703.0**		**31,248.3**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

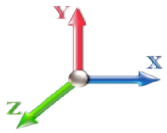
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 30

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	ACU-A20-N	4	5.379	5.916	0.40	0.80	0.86	22.50	0.000	3.000	5.07	0.00	15.20
2	149.00	800MHz Filter	3	5.379	5.916	0.40	0.80	1.97	87.21	0.000	3.000	11.66	0.00	34.97
3	149.00	TD-RRH8x20-25	3	5.379	5.916	0.40	0.80	6.19	724.79	0.000	3.000	36.64	0.00	109.93
4	149.00	800MHZ	3	5.379	5.916	0.40	0.80	5.02	458.81	0.000	3.000	29.69	0.00	89.08
5	149.00	1900MHz	3	5.379	5.916	0.40	0.80	5.35	477.82	0.000	3.000	31.67	0.00	95.00
6	149.00	APXVTM14-C-I20	3	5.379	5.916	0.63	0.80	14.89	886.54	0.000	3.000	88.12	0.00	264.35
7	149.00	APXVSPP18-C-A20	3	5.379	5.916	0.66	0.80	23.39	747.64	0.000	3.000	138.39	0.00	415.18
8	149.00	Low Profile Platform	1	5.356	5.892	1.00	1.00	52.90	2535.24	0.000	0.000	311.70	0.00	0.00
9	138.00	BXA-70063-6CF_2	3	5.270	5.797	0.58	0.80	16.25	800.36	0.000	0.000	94.21	0.00	0.00
10	138.00	BXA-171085-12B_2	3	5.270	5.797	0.67	0.80	15.82	348.98	0.000	0.000	91.70	0.00	0.00
11	138.00	LPA-80080/6CF	3	5.270	5.797	1.36	0.80	24.22	898.19	0.000	0.000	140.44	0.00	0.00
12	138.00	Low Profile Platform	1	5.270	5.797	1.00	1.00	52.69	2524.58	0.000	0.000	305.47	0.00	0.00
13	138.00	GPS Receiver	1	5.270	5.797	1.00	1.00	1.94	42.77	0.000	0.000	11.26	0.00	0.00
14	138.00	FD9R6004/2C-3L	6	5.270	5.797	0.40	0.80	2.27	72.20	0.000	0.000	13.16	0.00	0.00
15	130.00	(3) 12.5' - 2" Horizontal	1	5.204	5.725	0.75	1.00	11.81	298.26	0.000	0.000	67.60	0.00	0.00
16	130.00	XP-2020	24	5.204	5.725	0.56	0.75	18.29	268.13	0.000	0.000	104.70	0.00	0.00
17	130.00	VSRDual-TS-B-HD	2	5.204	5.725	0.56	0.75	12.23	648.42	0.000	0.000	70.02	0.00	0.00
18	130.00	DC6-48-60-0-8C-EV	1	5.204	5.725	0.38	0.75	2.23	152.04	0.000	0.000	12.76	0.00	0.00
19	130.00	DC6-48-60-18-8C	1	5.204	5.725	0.38	0.75	0.80	78.25	0.000	0.000	4.57	0.00	0.00
20	130.00	ABT-DF-DM-ADBH	1	5.204	5.725	0.75	0.75	0.23	3.55	0.000	0.000	1.30	0.00	0.00
21	130.00	7770.00	3	5.204	5.725	0.55	0.75	11.38	697.72	0.000	0.000	65.15	0.00	0.00
22	130.00	LGP 21401	12	5.204	5.725	0.38	0.75	6.24	759.55	0.000	0.000	35.74	0.00	0.00
23	130.00	DC6-48-60-18-8F	1	5.204	5.725	0.75	0.75	1.12	101.72	0.000	0.000	6.42	0.00	0.00
24	130.00	8843 B2/B66A	3	5.204	5.725	0.38	0.75	2.58	407.92	0.000	0.000	14.77	0.00	0.00
25	130.00	80010965	6	5.204	5.725	0.53	0.75	50.85	3244.52	0.000	0.000	291.12	0.00	0.00
26	130.00	RRUS 4478 B14	3	5.204	5.725	0.38	0.75	2.62	349.15	0.000	0.000	15.01	0.00	0.00
27	130.00	4449 B5/B12	3	5.204	5.725	0.38	0.75	3.03	425.29	0.000	0.000	17.32	0.00	0.00
28	130.00	Low Profile Platform	1	5.204	5.725	1.00	1.00	52.53	2516.34	0.000	0.000	300.71	0.00	0.00
29	115.00	RRUS 11 (Band 4)	3	5.072	5.579	0.40	0.80	4.01	417.11	0.000	0.000	22.38	0.00	0.00
30	115.00	LNX-6515DS-A1M	3	5.072	5.579	0.64	0.80	30.17	876.01	0.000	0.000	168.30	0.00	0.00
31	115.00	APX16DWV-16DWVS-E-A	3	5.072	5.579	0.50	0.80	14.04	501.97	0.000	0.000	78.35	0.00	0.00
32	115.00	RRUS 11	3	5.072	5.579	0.40	0.80	4.07	565.69	0.000	0.000	22.68	0.00	0.00
33	115.00	RRUS 11 (Band 12)	3	5.072	5.579	0.40	0.80	4.01	401.62	0.000	0.000	22.38	0.00	0.00
34	115.00	T-Arm	3	5.072	5.579	0.56	0.75	28.80	2001.69	0.000	0.000	160.65	0.00	0.00
35	73.00	GPS Receiver	1	4.609	5.070	1.00	1.00	1.88	40.38	0.000	0.000	9.55	0.00	0.00
36	50.00	58532A	1	4.256	4.682	1.00	1.00	0.66	7.64	0.000	0.000	3.10	0.00	0.00
							Totals:		**25,390.59**			**2,803.75**		

Total Applied Force Summary

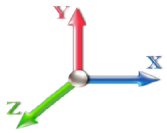
Structure:	CT12215-A-SBA		**Code:**	EIA/TIA-222-G	5/21/2019
Site Name:	Litchfield 3, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 33

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 30

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		37.51	688.46	0.00	0.00
4.00		37.36	699.64	0.00	0.00
6.00		37.16	704.57	0.00	0.00
8.00		36.92	706.78	0.00	0.00
10.00		36.67	707.42	0.00	0.00
12.00		36.41	707.04	0.00	0.00
14.00		36.15	705.94	0.00	0.00
16.00		36.32	704.29	0.00	0.00
18.00		36.95	702.21	0.00	0.00
20.00		37.48	699.79	0.00	0.00
22.00		37.94	697.08	0.00	0.00
24.00		38.33	694.14	0.00	0.00
26.00		38.66	690.99	0.00	0.00
28.00		38.95	687.67	0.00	0.00
30.00		39.19	684.19	0.00	0.00
32.00		39.38	680.57	0.00	0.00
34.00		39.55	676.83	0.00	0.00
36.00		39.68	672.98	0.00	0.00
38.00		39.78	669.03	0.00	0.00
40.00		39.86	665.00	0.00	0.00
42.00		39.90	660.87	0.00	0.00
44.00		39.93	656.68	0.00	0.00
46.00		39.94	652.41	0.00	0.00
47.55		30.98	503.81	0.00	0.00
48.00		8.99	200.53	0.00	0.00
50.00	(1) attachments	43.46	900.80	0.00	0.00
51.75		35.26	784.86	0.00	0.00
52.00		5.02	111.73	0.00	0.00
52.97		19.49	432.36	0.00	0.00
54.00		20.68	304.55	0.00	0.00
56.00		40.17	588.19	0.00	0.00
58.00		40.08	584.31	0.00	0.00
60.00		39.97	580.39	0.00	0.00
62.00		39.85	576.42	0.00	0.00
64.00		39.71	572.41	0.00	0.00
66.00		39.57	568.37	0.00	0.00
66.67		13.19	189.65	0.00	0.00
68.00		26.16	374.95	0.00	0.00
68.25		4.90	70.33	0.00	0.00
70.00		34.31	490.01	0.00	0.00
72.00		39.06	556.03	0.00	0.00
73.00	(1) attachments	28.98	317.01	0.00	0.00
74.00		19.38	275.40	0.00	0.00
75.25		24.17	342.71	0.00	0.00
76.00		14.45	204.91	0.00	0.00
78.00		38.46	530.47	0.00	0.00

Total Applied Force Summary

Structure:	CT12215-A-SBA		**Code:**	EIA/TIA-222-G	5/21/2019
Site Name:	Litchfield 3, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 34

Tower Engineering Solutions

80.00		38.24	513.56	0.00	0.00
82.00		38.02	509.18	0.00	0.00
84.00		37.78	504.78	0.00	0.00
86.00		37.54	500.36	0.00	0.00
88.00		37.29	495.91	0.00	0.00
90.00		37.03	491.44	0.00	0.00
92.00		36.76	486.95	0.00	0.00
94.00		36.49	482.45	0.00	0.00
96.00		36.21	477.92	0.00	0.00
96.18		3.18	42.07	0.00	0.00
98.00		33.11	572.92	0.00	0.00
99.00		18.79	317.97	0.00	0.00
100.00		18.76	316.34	0.00	0.00
100.34		6.43	108.29	0.00	0.00
102.00		30.88	372.86	0.00	0.00
103.00		18.58	223.94	0.00	0.00
104.00		18.55	222.98	0.00	0.00
106.00		35.13	429.47	0.00	0.00
108.00		34.82	412.40	0.00	0.00
110.00		34.50	408.44	0.00	0.00
112.00		34.17	404.46	0.00	0.00
114.00		33.84	400.46	0.00	0.00
115.00	(18) attachments	491.51	4963.08	0.00	0.00
116.00		16.69	181.33	0.00	0.00
118.00		33.16	359.07	0.00	0.00
120.00		32.81	354.97	0.00	0.00
122.00		32.46	350.86	0.00	0.00
124.00		32.10	346.73	0.00	0.00
126.00		31.74	342.60	0.00	0.00
128.00		31.37	338.45	0.00	0.00
130.00	(62) attachments	1038.20	10285.14	0.00	0.00
132.00		30.62	281.16	0.00	0.00
134.00		30.24	276.99	0.00	0.00
136.00		29.86	272.80	0.00	0.00
138.00	(17) attachments	685.71	4955.68	0.00	0.00
140.00		29.08	234.05	0.00	0.00
142.00		28.68	229.84	0.00	0.00
144.00		28.28	225.61	0.00	0.00
146.00		27.88	221.37	0.00	0.00
148.00		27.47	217.13	0.00	0.00
149.00	(23) attachments	666.50	6047.80	0.00	1023.70
	Totals:	**5,506.75**	**65,054.59**	**0.00**	**1,023.70**

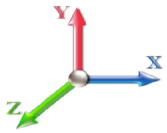
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 35	

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.84	0.00	0.055	0.000	3.308	0.00	21.60
2.00	1/2" Coax	Yes	2.00	0.000	0.65	0.61	0.00	0.055	0.000	3.308	0.00	7.56
4.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.87	0.00	0.055	0.000	3.308	0.00	23.10
4.00	1/2" Coax	Yes	2.00	0.000	0.65	0.65	0.00	0.055	0.000	3.308	0.00	8.50
6.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.90	0.00	0.056	0.000	3.308	0.00	24.06
6.00	1/2" Coax	Yes	2.00	0.000	0.65	0.67	0.00	0.056	0.000	3.308	0.00	9.11
8.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.91	0.00	0.056	0.000	3.308	0.00	24.78
8.00	1/2" Coax	Yes	2.00	0.000	0.65	0.69	0.00	0.056	0.000	3.308	0.00	9.57
10.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.92	0.00	0.057	0.000	3.308	0.00	25.36
10.00	1/2" Coax	Yes	2.00	0.000	0.65	0.70	0.00	0.057	0.000	3.308	0.00	9.95
12.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.94	0.00	0.057	0.000	3.308	0.00	25.85
12.00	1/2" Coax	Yes	2.00	0.000	0.65	0.71	0.00	0.057	0.000	3.308	0.00	10.27
14.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.95	0.00	0.058	0.000	3.308	0.00	26.27
14.00	1/2" Coax	Yes	2.00	0.000	0.65	0.72	0.00	0.058	0.000	3.308	0.00	10.54
16.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.95	0.00	0.058	0.000	3.348	0.00	26.65
16.00	1/2" Coax	Yes	2.00	0.000	0.65	0.73	0.00	0.058	0.000	3.348	0.00	10.79
18.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.96	0.00	0.059	0.000	3.432	0.00	26.99
18.00	1/2" Coax	Yes	2.00	0.000	0.65	0.74	0.00	0.059	0.000	3.432	0.00	11.02
20.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.97	0.00	0.059	0.000	3.509	0.00	27.29
20.00	1/2" Coax	Yes	2.00	0.000	0.65	0.74	0.00	0.059	0.000	3.509	0.00	11.22
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.97	0.00	0.060	0.000	3.581	0.00	27.58
22.00	1/2" Coax	Yes	2.00	0.000	0.65	0.75	0.00	0.060	0.000	3.581	0.00	11.41
24.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.98	0.00	0.060	0.000	3.647	0.00	27.84
24.00	1/2" Coax	Yes	2.00	0.000	0.65	0.75	0.00	0.060	0.000	3.647	0.00	11.58
26.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.98	0.00	0.061	0.000	3.709	0.00	28.09
26.00	1/2" Coax	Yes	2.00	0.000	0.65	0.76	0.00	0.061	0.000	3.709	0.00	11.75
28.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.99	0.00	0.062	0.000	3.767	0.00	28.31
28.00	1/2" Coax	Yes	2.00	0.000	0.65	0.76	0.00	0.062	0.000	3.767	0.00	11.90
30.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.99	0.00	0.062	0.000	3.822	0.00	28.53
30.00	1/2" Coax	Yes	2.00	0.000	0.65	0.77	0.00	0.062	0.000	3.822	0.00	12.05
32.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.00	0.00	0.063	0.000	3.874	0.00	28.74
32.00	1/2" Coax	Yes	2.00	0.000	0.65	0.77	0.00	0.063	0.000	3.874	0.00	12.18
34.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.00	0.00	0.063	0.000	3.924	0.00	28.93
34.00	1/2" Coax	Yes	2.00	0.000	0.65	0.78	0.00	0.063	0.000	3.924	0.00	12.32
36.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.01	0.00	0.064	0.000	3.972	0.00	29.11
36.00	1/2" Coax	Yes	2.00	0.000	0.65	0.78	0.00	0.064	0.000	3.972	0.00	12.44
38.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.01	0.00	0.065	0.000	4.017	0.00	29.29
38.00	1/2" Coax	Yes	2.00	0.000	0.65	0.78	0.00	0.065	0.000	4.017	0.00	12.56
40.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.01	0.00	0.065	0.000	4.061	0.00	29.46
40.00	1/2" Coax	Yes	2.00	0.000	0.65	0.79	0.00	0.065	0.000	4.061	0.00	12.67
42.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.02	0.00	0.066	0.000	4.103	0.00	29.62
42.00	1/2" Coax	Yes	2.00	0.000	0.65	0.79	0.00	0.066	0.000	4.103	0.00	12.78
44.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.02	0.00	0.067	0.000	4.143	0.00	29.78
44.00	1/2" Coax	Yes	2.00	0.000	0.65	0.79	0.00	0.067	0.000	4.143	0.00	12.89
46.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.02	0.00	0.067	0.000	4.182	0.00	29.93
46.00	1/2" Coax	Yes	2.00	0.000	0.65	0.80	0.00	0.067	0.000	4.182	0.00	12.99
47.55	1 5/8" Hybrid	Yes	1.55	0.000	2.00	0.80	0.00	0.068	0.000	4.211	0.00	23.33

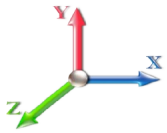
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 36	

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
47.55	1/2" Coax	Yes	1.55	0.000	0.65	0.62	0.00	0.068	0.000	4.211	0.00	10.15
48.00	1 5/8" Hybrid	Yes	0.45	0.000	2.00	0.23	0.00	0.068	0.000	4.220	0.00	6.72
48.00	1/2" Coax	Yes	0.45	0.000	0.65	0.18	0.00	0.068	0.000	4.220	0.00	2.92
50.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.03	0.00	0.069	0.000	4.256	0.00	30.21
50.00	1/2" Coax	Yes	2.00	0.000	0.65	0.80	0.00	0.069	0.000	4.256	0.00	13.18
51.75	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.90	0.00	0.085	0.000	4.287	0.00	26.54
51.75	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.79	0.00	0.085	0.000	4.287	0.00	20.72
52.00	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.13	0.00	0.086	0.000	4.291	0.00	3.79
52.00	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.11	0.00	0.086	0.000	4.291	0.00	2.96
52.97	1 5/8" Hybrid	Yes	0.97	0.000	2.00	0.50	0.00	0.086	0.000	4.308	0.00	14.75
52.97	1.25" Reinforcing	Yes	0.97	0.000	1.25	0.44	0.00	0.086	0.000	4.308	0.00	11.52
54.00	1 5/8" Hybrid	Yes	1.03	0.000	2.00	0.53	0.00	0.086	0.000	4.326	0.00	15.69
54.00	1.25" Reinforcing	Yes	1.03	0.000	1.25	0.47	0.00	0.086	0.000	4.326	0.00	12.27
56.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.04	0.00	0.086	0.000	4.359	0.00	30.60
56.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.91	0.00	0.086	0.000	4.359	0.00	23.95
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.04	0.00	0.087	0.000	4.391	0.00	30.72
58.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.91	0.00	0.087	0.000	4.391	0.00	24.07
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.04	0.00	0.088	0.000	4.423	0.00	30.84
60.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.92	0.00	0.088	0.000	4.423	0.00	24.18
62.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.04	0.00	0.089	0.000	4.453	0.00	30.96
62.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.92	0.00	0.089	0.000	4.453	0.00	24.30
64.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.05	0.00	0.090	0.000	4.483	0.00	31.07
64.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.92	0.00	0.090	0.000	4.483	0.00	24.41
66.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.05	0.00	0.091	0.000	4.512	0.00	31.18
66.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.92	0.00	0.091	0.000	4.512	0.00	24.51
66.67	1 5/8" Hybrid	Yes	0.67	0.000	2.00	0.35	0.00	0.092	0.000	4.522	0.00	10.46
66.67	1.25" Reinforcing	Yes	0.67	0.000	1.25	0.31	0.00	0.092	0.000	4.522	0.00	8.22
68.00	1 5/8" Hybrid	Yes	1.33	0.000	2.00	0.70	0.00	0.093	0.000	4.541	0.00	20.81
68.00	1.25" Reinforcing	Yes	1.33	0.000	1.25	0.62	0.00	0.093	0.000	4.541	0.00	16.37
68.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.13	0.00	0.093	0.000	4.544	0.00	3.91
68.25	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.12	0.00	0.093	0.000	4.544	0.00	3.08
70.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.92	0.00	0.094	0.000	4.569	0.00	27.47
70.00	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.81	0.00	0.094	0.000	4.569	0.00	21.63
72.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.05	0.00	0.095	0.000	4.596	0.00	31.49
72.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.93	0.00	0.095	0.000	4.596	0.00	24.82
73.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.53	0.00	0.096	0.000	4.609	0.00	15.77
73.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.47	0.00	0.096	0.000	4.609	0.00	12.43
74.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.53	0.00	0.096	0.000	4.622	0.00	15.80
74.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.47	0.00	0.096	0.000	4.622	0.00	12.46
75.25	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.66	0.00	0.097	0.000	4.639	0.00	19.78
75.25	1.25" Reinforcing	Yes	1.25	0.000	1.25	0.58	0.00	0.097	0.000	4.639	0.00	15.61
76.00	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.40	0.00	0.097	0.000	4.648	0.00	11.88
76.00	1.25" Reinforcing	Yes	0.75	0.000	1.25	0.35	0.00	0.097	0.000	4.648	0.00	9.38
78.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.06	0.00	0.079	0.000	4.674	0.00	31.79
78.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.47	0.00	0.079	0.000	4.674	0.00	12.55
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.06	0.00	0.061	0.000	4.699	0.00	31.88
82.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.06	0.00	0.062	0.000	4.723	0.00	31.97

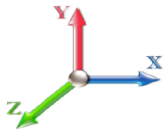
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 37	

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.07	0.00	0.063	0.000	4.747	0.00	32.06
86.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.07	0.00	0.064	0.000	4.771	0.00	32.15
88.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.07	0.00	0.065	0.000	4.794	0.00	32.23
90.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.07	0.00	0.066	0.000	4.817	0.00	32.32
92.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.07	0.00	0.066	0.000	4.839	0.00	32.40
94.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.07	0.00	0.067	0.000	4.861	0.00	32.48
96.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.08	0.00	0.068	0.000	4.883	0.00	32.56
96.18	1 5/8" Hybrid	Yes	0.18	0.000	2.00	0.09	0.00	0.069	0.000	4.885	0.00	2.88
98.00	1 5/8" Hybrid	Yes	1.82	0.000	2.00	0.98	0.00	0.093	0.000	4.904	0.00	29.76
98.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.48	0.00	0.093	0.000	4.904	0.00	12.97
99.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.54	0.00	0.114	1.042	4.914	0.00	16.34
99.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.48	0.00	0.114	1.042	4.914	0.00	12.99
100.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.54	0.00	0.115	1.044	4.925	0.00	16.36
100.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.48	0.00	0.115	1.044	4.925	0.00	13.01
100.34	1 5/8" Hybrid	Yes	0.34	0.000	2.00	0.19	0.00	0.115	1.046	4.928	0.00	5.62
100.34	1.25" Reinforcing	Yes	0.34	0.000	1.25	0.16	0.00	0.115	1.046	4.928	0.00	4.47
102.00	1 5/8" Hybrid	Yes	1.66	0.000	2.00	0.89	0.00	0.115	1.044	4.945	0.00	27.17
102.00	1.25" Reinforcing	Yes	1.66	0.000	1.25	0.79	0.00	0.115	1.044	4.945	0.00	21.61
103.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.54	0.00	0.116	1.047	4.956	0.00	16.42
103.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.48	0.00	0.116	1.047	4.956	0.00	13.06
104.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.54	0.00	0.117	1.050	4.966	0.00	16.43
104.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.48	0.00	0.117	1.050	4.966	0.00	13.08
106.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.08	0.00	0.095	0.000	4.986	0.00	32.94
106.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.48	0.00	0.095	0.000	4.986	0.00	13.12
108.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.08	0.00	0.074	0.000	5.005	0.00	33.02
110.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.09	0.00	0.075	0.000	5.025	0.00	33.09
112.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.09	0.00	0.076	0.000	5.044	0.00	33.16
114.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	1.09	0.00	0.077	0.000	5.063	0.00	33.23
115.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.54	0.00	0.078	0.000	5.072	0.00	16.63
										Totals:	**0.0**	**2,443.8**

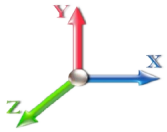
Calculated Forces

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 38	

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 30

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-65.05	-5.52	0.00	-656.38	0.00	656.38	3031.07	1515.53	5947.06	2977.95	0.00	0.000	0.000	0.242
2.00	-64.36	-5.51	0.00	-645.34	0.00	645.34	3016.33	1508.17	5866.38	2937.55	0.01	-0.027	0.000	0.241
4.00	-63.66	-5.51	0.00	-634.31	0.00	634.31	3001.40	1500.70	5785.81	2897.21	0.02	-0.055	0.000	0.240
6.00	-62.95	-5.50	0.00	-623.30	0.00	623.30	2986.25	1493.13	5705.37	2856.93	0.05	-0.083	0.000	0.239
8.00	-62.24	-5.49	0.00	-612.29	0.00	612.29	2970.91	1485.45	5625.07	2816.71	0.09	-0.111	0.000	0.238
10.00	-61.53	-5.49	0.00	-601.31	0.00	601.31	2955.36	1477.68	5544.90	2776.57	0.15	-0.139	0.000	0.237
12.00	-60.82	-5.48	0.00	-590.34	0.00	590.34	2939.60	1469.80	5464.90	2736.51	0.21	-0.167	0.000	0.236
14.00	-60.11	-5.47	0.00	-579.39	0.00	579.39	2923.65	1461.82	5385.06	2696.53	0.29	-0.196	0.000	0.235
16.00	-59.41	-5.46	0.00	-568.45	0.00	568.45	2907.49	1453.74	5305.39	2656.64	0.37	-0.225	0.000	0.234
18.00	-58.70	-5.45	0.00	-557.53	0.00	557.53	2891.12	1445.56	5225.92	2616.84	0.47	-0.254	0.000	0.233
20.00	-58.00	-5.44	0.00	-546.63	0.00	546.63	2874.56	1437.28	5146.64	2577.14	0.59	-0.284	0.000	0.232
22.00	-57.30	-5.43	0.00	-535.75	0.00	535.75	2857.79	1428.89	5067.57	2537.55	0.71	-0.314	0.000	0.231
24.00	-56.60	-5.42	0.00	-524.89	0.00	524.89	2840.81	1420.41	4988.71	2498.06	0.85	-0.344	0.000	0.230
26.00	-55.91	-5.40	0.00	-514.06	0.00	514.06	2823.63	1411.82	4910.09	2458.69	1.00	-0.374	0.000	0.229
28.00	-55.22	-5.39	0.00	-503.26	0.00	503.26	2806.25	1403.13	4831.70	2419.44	1.16	-0.404	0.000	0.228
30.00	-54.53	-5.37	0.00	-492.48	0.00	492.48	2788.67	1394.33	4753.57	2380.32	1.34	-0.435	0.000	0.226
32.00	-53.85	-5.36	0.00	-481.74	0.00	481.74	2770.88	1385.44	4675.69	2341.32	1.53	-0.466	0.000	0.225
34.00	-53.17	-5.34	0.00	-471.02	0.00	471.02	2752.89	1376.44	4598.09	2302.46	1.73	-0.497	0.000	0.224
36.00	-52.50	-5.33	0.00	-460.34	0.00	460.34	2734.69	1367.35	4520.77	2263.74	1.95	-0.529	0.000	0.223
38.00	-51.82	-5.31	0.00	-449.69	0.00	449.69	2716.29	1358.15	4443.74	2225.17	2.18	-0.561	0.000	0.221
40.00	-51.16	-5.29	0.00	-439.07	0.00	439.07	2697.69	1348.85	4367.01	2186.75	2.42	-0.593	0.000	0.220
42.00	-50.49	-5.27	0.00	-428.49	0.00	428.49	2678.89	1339.44	4290.59	2148.48	2.67	-0.625	0.000	0.218
44.00	-49.83	-5.25	0.00	-417.95	0.00	417.95	2659.88	1329.94	4214.50	2110.38	2.94	-0.657	0.000	0.217
46.00	-49.18	-5.23	0.00	-407.45	0.00	407.45	2640.67	1320.33	4138.74	2072.44	3.22	-0.690	0.000	0.215
47.55	-48.67	-5.21	0.00	-399.32	0.00	399.32	2625.60	1312.80	4080.13	2043.10	3.45	-0.716	0.000	0.214
48.00	-48.47	-5.21	0.00	-397.00	0.00	397.00	2621.25	1310.62	4063.32	2034.68	3.52	-0.723	0.000	0.214
50.00	-47.57	-5.18	0.00	-386.57	0.00	386.57	2601.63	1300.82	3988.26	1997.09	3.83	-0.756	0.000	0.212
51.75	-46.78	-5.15	0.00	-377.50	0.00	377.50	2584.30	1292.15	3922.88	1964.36	4.11	-0.785	0.000	0.140
52.00	-46.67	-5.15	0.00	-376.22	0.00	376.22	2581.81	1290.90	3913.56	1959.69	4.15	-0.788	0.000	0.103
52.97	-46.24	-5.13	0.00	-371.22	0.00	371.22	1914.68	957.34	2935.86	1470.11	4.31	-0.796	0.000	0.113
54.00	-45.93	-5.11	0.00	-365.94	0.00	365.94	1908.40	954.20	2909.37	1456.85	4.49	-0.805	0.000	0.122
56.00	-45.34	-5.08	0.00	-355.71	0.00	355.71	1896.06	948.03	2858.01	1431.13	4.83	-0.822	0.000	0.120
58.00	-44.76	-5.05	0.00	-345.55	0.00	345.55	1883.51	941.76	2806.77	1405.47	5.18	-0.840	0.000	0.118
60.00	-44.18	-5.01	0.00	-335.46	0.00	335.46	1870.76	935.38	2755.66	1379.88	5.53	-0.858	0.000	0.116
62.00	-43.60	-4.98	0.00	-325.44	0.00	325.44	1857.80	928.90	2704.70	1354.36	5.89	-0.875	0.000	0.113
64.00	-43.03	-4.94	0.00	-315.49	0.00	315.49	1844.65	922.32	2653.88	1328.91	6.27	-0.893	0.000	0.111
66.00	-42.46	-4.90	0.00	-305.61	0.00	305.61	1831.29	915.64	2603.23	1303.55	6.64	-0.910	0.000	0.109
66.67	-42.27	-4.89	0.00	-302.33	0.00	302.33	1826.76	913.38	2586.30	1295.07	6.77	-0.916	0.000	0.085
68.00	-41.89	-4.86	0.00	-295.82	0.00	295.82	1817.72	908.86	2552.75	1278.27	7.03	-0.925	0.000	0.109
68.25	-41.82	-4.86	0.00	-294.61	0.00	294.61	1816.01	908.01	2546.46	1275.12	7.08	-0.927	0.000	0.152
70.00	-41.33	-4.84	0.00	-286.10	0.00	286.10	1803.95	901.98	2502.46	1253.09	7.42	-0.949	0.000	0.150
72.00	-40.77	-4.80	0.00	-276.42	0.00	276.42	1789.98	894.99	2452.36	1228.00	7.82	-0.974	0.000	0.147
73.00	-40.46	-4.78	0.00	-271.62	0.00	271.62	1782.92	891.46	2427.38	1215.49	8.03	-0.986	0.000	0.145
74.00	-40.18	-4.76	0.00	-266.84	0.00	266.84	1775.81	887.90	2402.46	1203.02	8.24	-0.999	0.000	0.144
75.25	-39.84	-4.74	0.00	-260.88	0.00	260.88	1766.84	883.42	2371.38	1187.45	8.50	-1.014	0.000	0.142
75.25	-39.84	-4.74	0.00	-260.88	0.00	260.88	1766.84	883.42	2371.38	1187.45	8.50	-1.014	0.000	0.142
76.00	-39.63	-4.74	0.00	-257.33	0.00	257.33	1761.43	880.71	2352.78	1178.14	8.66	-1.023	0.000	0.241
78.00	-39.10	-4.72	0.00	-247.84	0.00	247.84	1746.84	873.42	2303.32	1153.37	9.10	-1.065	0.000	0.237

Calculated Forces

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 39	

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80.00	-38.58	-4.70	0.00	-238.40	0.00	238.40	1732.06	866.03	2254.10	1128.72	9.55	-1.107	0.000	0.234
82.00	-38.07	-4.68	0.00	-229.00	0.00	229.00	1717.07	858.53	2205.12	1104.20	10.03	-1.149	0.000	0.230
84.00	-37.56	-4.66	0.00	-219.63	0.00	219.63	1701.88	850.94	2156.41	1079.81	10.52	-1.190	0.000	0.226
86.00	-37.06	-4.64	0.00	-210.31	0.00	210.31	1686.48	843.24	2107.95	1055.54	11.02	-1.232	0.000	0.221
88.00	-36.56	-4.62	0.00	-201.03	0.00	201.03	1670.88	835.44	2059.78	1031.42	11.55	-1.273	0.000	0.217
90.00	-36.07	-4.60	0.00	-191.80	0.00	191.80	1655.08	827.54	2011.90	1007.44	12.09	-1.314	0.000	0.212
92.00	-35.58	-4.57	0.00	-182.61	0.00	182.61	1639.07	819.54	1964.31	983.61	12.65	-1.355	0.000	0.207
94.00	-35.09	-4.55	0.00	-173.46	0.00	173.46	1622.86	811.43	1917.03	959.94	13.23	-1.396	0.000	0.202
96.00	-34.61	-4.52	0.00	-164.36	0.00	164.36	1606.45	803.22	1870.07	936.43	13.82	-1.436	0.000	0.197
96.18	-34.57	-4.52	0.00	-163.56	0.00	163.56	1604.99	802.49	1865.94	934.36	13.87	-1.440	0.000	0.197
98.00	-34.00	-4.49	0.00	-155.32	0.00	155.32	1589.83	794.91	1823.44	913.08	14.43	-1.476	0.000	0.192
99.00	-33.68	-4.47	0.00	-150.83	0.00	150.83	1581.44	790.72	1800.26	901.47	14.74	-1.496	0.000	0.107
100.00	-33.36	-4.45	0.00	-146.35	0.00	146.35	1573.01	786.50	1777.16	889.90	15.06	-1.507	0.000	0.105
100.34	-33.25	-4.45	0.00	-144.82	0.00	144.82	1075.68	537.84	1234.34	618.09	15.16	-1.511	0.000	0.117
102.00	-32.88	-4.42	0.00	-137.45	0.00	137.45	1068.04	534.02	1210.40	606.10	15.69	-1.529	0.000	0.129
103.00	-32.66	-4.40	0.00	-133.04	0.00	133.04	1063.37	531.68	1195.97	598.87	16.01	-1.541	0.000	0.126
103.00	-32.66	-4.40	0.00	-133.04	0.00	133.04	1063.37	531.68	1195.97	598.87	16.01	-1.541	0.000	0.126
104.00	-32.43	-4.39	0.00	-128.64	0.00	128.64	1058.64	529.32	1181.57	591.66	16.34	-1.553	0.000	0.248
106.00	-32.00	-4.37	0.00	-119.86	0.00	119.86	1049.03	524.52	1152.85	577.28	17.00	-1.600	0.000	0.238
108.00	-31.58	-4.35	0.00	-111.12	0.00	111.12	1039.22	519.61	1124.23	562.95	17.68	-1.646	0.000	0.228
110.00	-31.17	-4.33	0.00	-102.42	0.00	102.42	1029.21	514.60	1095.73	548.68	18.38	-1.691	0.000	0.217
112.00	-30.77	-4.30	0.00	-93.77	0.00	93.77	1018.99	509.50	1067.37	534.48	19.10	-1.733	0.000	0.206
114.00	-30.37	-4.27	0.00	-85.17	0.00	85.17	1008.57	504.29	1039.14	520.34	19.83	-1.774	0.000	0.194
115.00	-25.42	-3.63	0.00	-80.90	0.00	80.90	1003.28	501.64	1025.09	513.31	20.21	-1.794	0.000	0.183
116.00	-25.24	-3.63	0.00	-77.26	0.00	77.26	997.95	498.97	1011.07	506.29	20.58	-1.814	0.000	0.178
118.00	-24.88	-3.60	0.00	-70.01	0.00	70.01	987.12	493.56	983.16	492.31	21.35	-1.851	0.000	0.167
120.00	-24.52	-3.57	0.00	-62.82	0.00	62.82	976.09	488.04	955.42	478.42	22.13	-1.886	0.000	0.156
122.00	-24.17	-3.54	0.00	-55.69	0.00	55.69	964.85	482.43	927.87	464.62	22.93	-1.919	0.000	0.145
124.00	-23.82	-3.50	0.00	-48.62	0.00	48.62	953.42	476.71	900.51	450.92	23.74	-1.950	0.000	0.133
126.00	-23.48	-3.47	0.00	-41.61	0.00	41.61	941.77	470.89	873.35	437.32	24.57	-1.978	0.000	0.120
128.00	-23.14	-3.44	0.00	-34.67	0.00	34.67	929.93	464.96	846.40	423.83	25.40	-2.003	0.000	0.107
130.00	-12.90	-2.04	0.00	-27.79	0.00	27.79	917.88	458.94	819.69	410.45	26.24	-2.025	0.000	0.082
132.00	-12.62	-2.01	0.00	-23.70	0.00	23.70	905.63	452.81	793.20	397.19	27.10	-2.044	0.000	0.074
134.00	-12.34	-1.97	0.00	-19.69	0.00	19.69	893.17	446.59	766.97	384.05	27.96	-2.061	0.000	0.065
136.00	-12.07	-1.93	0.00	-15.75	0.00	15.75	880.51	440.26	740.98	371.04	28.82	-2.075	0.000	0.056
138.00	-7.14	-1.07	0.00	-11.88	0.00	11.88	867.65	433.83	715.27	358.17	29.69	-2.088	0.000	0.041
140.00	-6.91	-1.03	0.00	-9.74	0.00	9.74	854.59	427.29	689.83	345.43	30.57	-2.098	0.000	0.036
142.00	-6.68	-1.00	0.00	-7.68	0.00	7.68	841.32	420.66	664.68	332.84	31.45	-2.106	0.000	0.031
144.00	-6.46	-0.96	0.00	-5.69	0.00	5.69	827.84	413.92	639.83	320.39	32.34	-2.113	0.000	0.026
146.00	-6.23	-0.93	0.00	-3.76	0.00	3.76	814.17	407.08	615.29	308.10	33.22	-2.119	0.000	0.020
148.00	-6.02	-0.89	0.00	-1.91	0.00	1.91	796.71	398.35	588.42	294.65	34.11	-2.122	0.000	0.014
149.00	0.00	-0.67	0.00	-1.02	0.00	1.02	787.55	393.77	574.90	287.88	34.55	-2.123	0.000	0.004

Seismic Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 40	

Load Case:	1.2D + 1.0E							**Iterations**	27
Gust Response Factor	1.10				**Sds**	0.12		**Ss**	0.19
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.04		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.29		**SA**	0.01	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
2.00		320.49	0.00	0.01	0.01	2.96	
4.00		317.70	0.00	0.03	0.01	4.56	
6.00		314.90	0.00	0.04	0.02	5.58	
8.00		312.10	0.01	0.05	0.03	6.26	
10.00		309.30	0.01	0.05	0.03	6.73	
12.00		306.51	0.01	0.06	0.03	7.05	
14.00		303.71	0.02	0.06	0.04	7.26	
16.00		300.91	0.02	0.07	0.04	7.40	
18.00		298.11	0.03	0.07	0.04	7.48	
20.00		295.32	0.03	0.07	0.04	7.53	
22.00		292.52	0.04	0.07	0.04	7.55	
24.00		289.72	0.05	0.07	0.04	7.56	
26.00		286.92	0.06	0.07	0.04	7.56	
28.00		284.13	0.07	0.07	0.04	7.56	
30.00		281.33	0.08	0.07	0.04	7.56	
32.00		278.53	0.09	0.07	0.04	7.56	
34.00		275.73	0.10	0.07	0.04	7.57	
36.00		272.94	0.11	0.07	0.04	7.58	
38.00		270.14	0.12	0.07	0.03	7.59	
40.00		267.34	0.14	0.07	0.03	7.60	
42.00		264.54	0.15	0.07	0.03	7.60	
44.00		261.75	0.16	0.07	0.03	7.60	
46.00		258.95	0.18	0.07	0.03	7.59	
47.55	Bot - Section 2	199.19	0.19	0.06	0.02	5.86	
48.00		103.21	0.20	0.06	0.02	3.04	
50.00	Appurtenance(s)	459.48	0.21	0.06	0.02	13.57	
51.75	RB1	397.56	0.23	0.06	0.02	11.71	
52.00	RB2	56.48	0.23	0.06	0.02	1.66	
52.97	Top - Section 1	218.40	0.24	0.06	0.02	6.40	
54.00		103.36	0.25	0.06	0.02	3.01	
56.00		199.01	0.27	0.05	0.02	5.69	
58.00		196.77	0.29	0.05	0.01	5.45	
60.00		194.53	0.31	0.04	0.01	5.13	
62.00		192.29	0.33	0.04	0.01	4.72	
64.00		190.06	0.35	0.03	0.01	4.22	
66.00		187.82	0.37	0.03	0.01	3.59	
66.67	RB3	62.42	0.38	0.02	0.01	1.12	
68.00	RT2	123.16	0.39	0.02	0.01	1.90	
68.25	RT1	23.04	0.40	0.02	0.01	0.34	
70.00		160.30	0.42	0.01	0.01	1.76	
72.00		181.10	0.44	0.00	0.01	1.08	
73.00	Appurtenance(s)	99.71	0.45	0.00	0.01	0.32	
74.00		89.15	0.47	0.00	0.01	0.04	
75.25	RT3	110.66	0.48	-0.01	0.01	-0.34	
76.00		65.97	0.49	-0.01	0.01	-0.34	

Seismic Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 41	

78.00			174.39	0.52	-0.02	0.01	-1.88		
80.00			172.15	0.54	-0.03	0.01	-2.76		
82.00			169.91	0.57	-0.04	0.01	-3.53		
84.00			167.68	0.60	-0.05	0.01	-4.17		
86.00			165.44	0.63	-0.06	0.02	-4.66		
88.00			163.20	0.66	-0.07	0.02	-5.02		
90.00			160.96	0.69	-0.08	0.03	-5.26		
92.00			158.73	0.72	-0.09	0.03	-5.37		
94.00			156.49	0.75	-0.10	0.04	-5.38		
96.00			154.25	0.78	-0.11	0.05	-5.30		
96.18	Bot - Section 3		13.52	0.79	-0.11	0.05	-0.46		
98.00			243.98	0.82	-0.11	0.06	-8.22		
99.00	RB4		132.43	0.83	-0.12	0.06	-4.39		
100.00			131.45	0.85	-0.12	0.07	-4.27		
100.34	Top - Section 2		44.90	0.86	-0.12	0.07	-1.45		
102.00			93.00	0.89	-0.12	0.08	-2.87		
103.00	RT4		55.58	0.90	-0.12	0.09	-1.65		
104.00			55.16	0.92	-0.12	0.10	-1.58		
106.00			109.07	0.96	-0.12	0.11	-2.82		
108.00			107.39	0.99	-0.11	0.13	-2.44		
110.00			105.71	1.03	-0.10	0.15	-2.01		
112.00			104.03	1.07	-0.09	0.17	-1.54		
114.00			102.35	1.11	-0.07	0.19	-1.04		
115.00	Appurtenance(s)		1849.0	1.13	-0.05	0.20	-14.22		
116.00			50.13	1.15	-0.04	0.22	-0.25		
118.00			99.00	1.19	-0.01	0.24	0.06		
120.00			97.32	1.23	0.03	0.27	0.65		
122.00			95.64	1.27	0.08	0.31	1.27		
124.00			93.96	1.31	0.13	0.34	1.92		
126.00			92.28	1.35	0.20	0.38	2.59		
128.00			90.60	1.39	0.27	0.43	3.29		
130.00	Appurtenance(s)		3605.6	1.44	0.36	0.47	162.06		
132.00			87.25	1.48	0.46	0.52	4.73		
134.00			85.57	1.53	0.57	0.58	5.47		
136.00			83.89	1.57	0.70	0.64	6.23		
138.00	Appurtenance(s)		1469.8	1.62	0.85	0.70	125.05		
140.00			80.53	1.67	1.01	0.77	7.77		
142.00			78.85	1.72	1.19	0.84	8.55		
144.00			77.18	1.77	1.39	0.92	9.34		
146.00			75.50	1.81	1.61	1.00	10.13		
148.00			73.82	1.86	1.85	1.09	10.91		
149.00	Appurtenance(s)		2174.1	1.89	1.98	1.14	336.85		
		Totals:	**23,579.3**				**845.5**	**Total Wind:**	**25,827.0**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 42	

Tower Engineering Solutions

Load Case: 1.2D + 1.0E

Iterations 27

Gust Response Factor	1.10			**Sds**	0.12			**Ss**	0.19
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.04			**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.29	**SA**	0.01			**Seismic Importance Factor**	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-34.58	-0.94	0.00	-114.53	0.00	114.53	3031.07	1515.53	5947.06	2977.95		0.00	0.00	0.050
2.00	-34.10	-0.94	0.00	-112.65	0.00	112.65	3016.33	1508.17	5866.38	2937.55		0.00	0.00	0.050
4.00	-33.63	-0.94	0.00	-110.77	0.00	110.77	3001.40	1500.70	5785.81	2897.21		0.00	-0.01	0.049
6.00	-33.15	-0.93	0.00	-108.90	0.00	108.90	2986.25	1493.13	5705.37	2856.93		0.01	-0.01	0.049
8.00	-32.68	-0.93	0.00	-107.03	0.00	107.03	2970.91	1485.45	5625.07	2816.71		0.02	-0.02	0.049
10.00	-32.22	-0.93	0.00	-105.17	0.00	105.17	2955.36	1477.68	5544.90	2776.57		0.03	-0.02	0.049
12.00	-31.76	-0.92	0.00	-103.32	0.00	103.32	2939.60	1469.80	5464.90	2736.51		0.04	-0.03	0.049
14.00	-31.30	-0.92	0.00	-101.48	0.00	101.48	2923.65	1461.82	5385.06	2696.53		0.05	-0.03	0.048
16.00	-30.84	-0.91	0.00	-99.64	0.00	99.64	2907.49	1453.74	5305.39	2656.64		0.07	-0.04	0.048
18.00	-30.39	-0.91	0.00	-97.82	0.00	97.82	2891.12	1445.56	5225.92	2616.84		0.08	-0.04	0.048
20.00	-29.94	-0.90	0.00	-96.00	0.00	96.00	2874.56	1437.28	5146.64	2577.14		0.10	-0.05	0.048
22.00	-29.49	-0.90	0.00	-94.20	0.00	94.20	2857.79	1428.89	5067.57	2537.55		0.12	-0.05	0.047
24.00	-29.05	-0.89	0.00	-92.41	0.00	92.41	2840.81	1420.41	4988.71	2498.06		0.15	-0.06	0.047
26.00	-28.61	-0.89	0.00	-90.63	0.00	90.63	2823.63	1411.82	4910.09	2458.69		0.18	-0.07	0.047
28.00	-28.18	-0.88	0.00	-88.85	0.00	88.85	2806.25	1403.13	4831.70	2419.44		0.20	-0.07	0.047
30.00	-27.75	-0.87	0.00	-87.09	0.00	87.09	2788.67	1394.33	4753.57	2380.32		0.23	-0.08	0.047
32.00	-27.32	-0.87	0.00	-85.34	0.00	85.34	2770.88	1385.44	4675.69	2341.32		0.27	-0.08	0.046
34.00	-26.89	-0.86	0.00	-83.61	0.00	83.61	2752.89	1376.44	4598.09	2302.46		0.30	-0.09	0.046
36.00	-26.47	-0.86	0.00	-81.88	0.00	81.88	2734.69	1367.35	4520.77	2263.74		0.34	-0.09	0.046
38.00	-26.05	-0.85	0.00	-80.16	0.00	80.16	2716.29	1358.15	4443.74	2225.17		0.38	-0.10	0.046
40.00	-25.63	-0.85	0.00	-78.46	0.00	78.46	2697.69	1348.85	4367.01	2186.75		0.42	-0.10	0.045
42.00	-25.22	-0.84	0.00	-76.76	0.00	76.76	2678.89	1339.44	4290.59	2148.48		0.47	-0.11	0.045
44.00	-24.81	-0.84	0.00	-75.08	0.00	75.08	2659.88	1329.94	4214.50	2110.38		0.52	-0.12	0.045
46.00	-24.41	-0.83	0.00	-73.41	0.00	73.41	2640.67	1320.33	4138.74	2072.44		0.57	-0.12	0.045
47.55	-24.10	-0.82	0.00	-72.12	0.00	72.12	2625.60	1312.80	4080.13	2043.10		0.61	-0.13	0.044
48.00	-23.95	-0.82	0.00	-71.76	0.00	71.76	2621.25	1310.62	4063.32	2034.68		0.62	-0.13	0.044
50.00	-23.31	-0.81	0.00	-70.11	0.00	70.11	2601.63	1300.82	3988.26	1997.09		0.67	-0.13	0.044
51.75	-22.75	-0.80	0.00	-68.70	0.00	68.70	2584.30	1292.15	3922.88	1964.36		0.72	-0.14	0.029
52.00	-22.67	-0.80	0.00	-68.50	0.00	68.50	2581.81	1290.90	3913.56	1959.69		0.73	-0.14	0.022
52.97	-22.36	-0.79	0.00	-67.73	0.00	67.73	1914.68	957.34	2935.86	1470.11		0.76	-0.14	0.024
54.00	-22.19	-0.79	0.00	-66.91	0.00	66.91	1908.40	954.20	2909.37	1456.85		0.79	-0.14	0.026
56.00	-21.85	-0.78	0.00	-65.34	0.00	65.34	1896.06	948.03	2858.01	1431.13		0.85	-0.15	0.025
58.00	-21.52	-0.78	0.00	-63.78	0.00	63.78	1883.51	941.76	2806.77	1405.47		0.91	-0.15	0.025
60.00	-21.20	-0.77	0.00	-62.23	0.00	62.23	1870.76	935.38	2755.66	1379.88		0.97	-0.15	0.025
62.00	-20.87	-0.77	0.00	-60.68	0.00	60.68	1857.80	928.90	2704.70	1354.36		1.04	-0.16	0.024
64.00	-20.55	-0.76	0.00	-59.15	0.00	59.15	1844.65	922.32	2653.88	1328.91		1.11	-0.16	0.024
66.00	-20.23	-0.76	0.00	-57.62	0.00	57.62	1831.29	915.64	2603.23	1303.55		1.17	-0.16	0.024
66.67	-20.12	-0.76	0.00	-57.11	0.00	57.11	1826.76	913.38	2586.30	1295.07		1.20	-0.16	0.018
68.00	-19.91	-0.76	0.00	-56.10	0.00	56.10	1817.72	908.86	2552.75	1278.27		1.24	-0.16	0.024
68.25	-19.87	-0.76	0.00	-55.92	0.00	55.92	1816.01	908.01	2546.46	1275.12		1.25	-0.17	0.033
70.00	-19.60	-0.76	0.00	-54.59	0.00	54.59	1803.95	901.98	2502.46	1253.09		1.31	-0.17	0.033
72.00	-19.29	-0.75	0.00	-53.08	0.00	53.08	1789.98	894.99	2452.36	1228.00		1.38	-0.17	0.032
73.00	-19.12	-0.75	0.00	-52.32	0.00	52.32	1782.92	891.46	2427.38	1215.49		1.42	-0.18	0.032
74.00	-18.97	-0.76	0.00	-51.57	0.00	51.57	1775.81	887.90	2402.46	1203.02		1.46	-0.18	0.032
75.25	-18.77	-0.76	0.00	-50.63	0.00	50.63	1766.84	883.42	2371.38	1187.45		1.50	-0.18	0.031
75.25	-18.77	-0.76	0.00	-50.63	0.00	50.63	1766.84	883.42	2371.38	1187.45		1.50	-0.18	0.031
76.00	-18.66	-0.76	0.00	-50.06	0.00	50.06	1761.43	880.71	2352.78	1178.14		1.53	-0.18	0.053

Calculated Forces

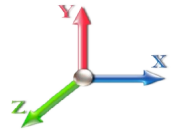
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 43	

Tower Engineering Solutions

78.00	-18.36	-0.76	0.00	-48.55	0.00	48.55	1746.84	873.42	2303.32	1153.37	1.61	-0.19	0.053
80.00	-18.06	-0.76	0.00	-47.03	0.00	47.03	1732.06	866.03	2254.10	1128.72	1.69	-0.20	0.052
82.00	-17.76	-0.76	0.00	-45.51	0.00	45.51	1717.07	858.53	2205.12	1104.20	1.78	-0.21	0.052
84.00	-17.46	-0.76	0.00	-43.99	0.00	43.99	1701.88	850.94	2156.41	1079.81	1.87	-0.22	0.051
86.00	-17.17	-0.76	0.00	-42.46	0.00	42.46	1686.48	843.24	2107.95	1055.54	1.96	-0.23	0.050
88.00	-16.88	-0.77	0.00	-40.93	0.00	40.93	1670.88	835.44	2059.78	1031.42	2.06	-0.23	0.050
90.00	-16.59	-0.77	0.00	-39.40	0.00	39.40	1655.08	827.54	2011.90	1007.44	2.16	-0.24	0.049
92.00	-16.31	-0.77	0.00	-37.87	0.00	37.87	1639.07	819.54	1964.31	983.61	2.26	-0.25	0.048
94.00	-16.03	-0.77	0.00	-36.33	0.00	36.33	1622.86	811.43	1917.03	959.94	2.37	-0.26	0.048
96.00	-15.75	-0.77	0.00	-34.79	0.00	34.79	1606.45	803.22	1870.07	936.43	2.48	-0.27	0.047
96.18	-15.72	-0.77	0.00	-34.66	0.00	34.66	1604.99	802.49	1865.94	934.36	2.49	-0.27	0.047
98.00	-15.35	-0.77	0.00	-33.25	0.00	33.25	1589.83	794.91	1823.44	913.08	2.59	-0.28	0.046
99.00	-15.14	-0.77	0.00	-32.48	0.00	32.48	1581.44	790.72	1800.26	901.47	2.65	-0.28	0.026
100.00	-14.94	-0.77	0.00	-31.71	0.00	31.71	1573.01	786.50	1777.16	889.90	2.71	-0.28	0.026
100.34	-14.87	-0.77	0.00	-31.45	0.00	31.45	1075.68	537.84	1234.34	618.09	2.73	-0.28	0.029
102.00	-14.68	-0.77	0.00	-30.17	0.00	30.17	1068.04	534.02	1210.40	606.10	2.83	-0.29	0.032
103.00	-14.56	-0.77	0.00	-29.40	0.00	29.40	1063.37	531.68	1195.97	598.87	2.89	-0.29	0.031
103.00	-14.56	-0.77	0.00	-29.40	0.00	29.40	1063.37	531.68	1195.97	598.87	2.89	-0.29	0.031
104.00	-14.45	-0.77	0.00	-28.63	0.00	28.63	1058.64	529.32	1181.57	591.66	2.95	-0.29	0.062
106.00	-14.23	-0.77	0.00	-27.09	0.00	27.09	1049.03	524.52	1152.85	577.28	3.07	-0.30	0.060
108.00	-14.00	-0.77	0.00	-25.54	0.00	25.54	1039.22	519.61	1124.23	562.95	3.20	-0.31	0.059
110.00	-13.78	-0.78	0.00	-24.00	0.00	24.00	1029.21	514.60	1095.73	548.68	3.34	-0.32	0.057
112.00	-13.56	-0.78	0.00	-22.45	0.00	22.45	1018.99	509.50	1067.37	534.48	3.47	-0.33	0.055
114.00	-13.35	-0.78	0.00	-20.89	0.00	20.89	1008.57	504.29	1039.14	520.34	3.62	-0.34	0.053
115.00	-11.08	-0.76	0.00	-20.12	0.00	20.12	1003.28	501.64	1025.09	513.31	3.69	-0.35	0.050
116.00	-10.98	-0.76	0.00	-19.35	0.00	19.35	997.95	498.97	1011.07	506.29	3.76	-0.35	0.049
118.00	-10.77	-0.77	0.00	-17.82	0.00	17.82	987.12	493.56	983.16	492.31	3.91	-0.36	0.047
120.00	-10.56	-0.77	0.00	-16.29	0.00	16.29	976.09	488.04	955.42	478.42	4.07	-0.37	0.045
122.00	-10.36	-0.76	0.00	-14.76	0.00	14.76	964.85	482.43	927.87	464.62	4.23	-0.38	0.043
124.00	-10.16	-0.76	0.00	-13.23	0.00	13.23	953.42	476.71	900.51	450.92	4.39	-0.39	0.040
126.00	-9.96	-0.76	0.00	-11.71	0.00	11.71	941.77	470.89	873.35	437.32	4.55	-0.40	0.037
128.00	-9.76	-0.76	0.00	-10.19	0.00	10.19	929.93	464.96	846.40	423.83	4.72	-0.40	0.035
130.00	-5.35	-0.56	0.00	-8.68	0.00	8.68	917.88	458.94	819.69	410.45	4.89	-0.41	0.027
132.00	-5.20	-0.56	0.00	-7.55	0.00	7.55	905.63	452.81	793.20	397.19	5.06	-0.42	0.025
134.00	-5.06	-0.55	0.00	-6.44	0.00	6.44	893.17	446.59	766.97	384.05	5.24	-0.42	0.022
136.00	-4.92	-0.55	0.00	-5.33	0.00	5.33	880.51	440.26	740.98	371.04	5.42	-0.43	0.020
138.00	-3.12	-0.41	0.00	-4.24	0.00	4.24	867.65	433.83	715.27	358.17	5.60	-0.43	0.015
140.00	-3.01	-0.40	0.00	-3.43	0.00	3.43	854.59	427.29	689.83	345.43	5.78	-0.43	0.013
142.00	-2.91	-0.39	0.00	-2.63	0.00	2.63	841.32	420.66	664.68	332.84	5.96	-0.44	0.011
144.00	-2.81	-0.38	0.00	-1.85	0.00	1.85	827.84	413.92	639.83	320.39	6.15	-0.44	0.009
146.00	-2.71	-0.37	0.00	-1.09	0.00	1.09	814.17	407.08	615.29	308.10	6.33	-0.44	0.007
148.00	-2.61	-0.36	0.00	-0.36	0.00	0.36	796.71	398.35	588.42	294.65	6.52	-0.44	0.004
149.00	0.00	-0.34	0.00	0.00	0.00	0.00	787.55	393.77	574.90	287.88	6.61	-0.44	0.000

Seismic Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 44	



Load Case:	0.9D + 1.0E					**Iterations**	27
Gust Response Factor	1.10			**Sds**	0.12	**Ss**	0.19
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.04	**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.29	**SA**	0.01	**Seismic Importance Factor**	1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
2.00		320.49	0.00	0.01	0.01	2.96	
4.00		317.70	0.00	0.03	0.01	4.56	
6.00		314.90	0.00	0.04	0.02	5.58	
8.00		312.10	0.01	0.05	0.03	6.26	
10.00		309.30	0.01	0.05	0.03	6.73	
12.00		306.51	0.01	0.06	0.03	7.05	
14.00		303.71	0.02	0.06	0.04	7.26	
16.00		300.91	0.02	0.07	0.04	7.40	
18.00		298.11	0.03	0.07	0.04	7.48	
20.00		295.32	0.03	0.07	0.04	7.53	
22.00		292.52	0.04	0.07	0.04	7.55	
24.00		289.72	0.05	0.07	0.04	7.56	
26.00		286.92	0.06	0.07	0.04	7.56	
28.00		284.13	0.07	0.07	0.04	7.56	
30.00		281.33	0.08	0.07	0.04	7.56	
32.00		278.53	0.09	0.07	0.04	7.56	
34.00		275.73	0.10	0.07	0.04	7.57	
36.00		272.94	0.11	0.07	0.04	7.58	
38.00		270.14	0.12	0.07	0.03	7.59	
40.00		267.34	0.14	0.07	0.03	7.60	
42.00		264.54	0.15	0.07	0.03	7.60	
44.00		261.75	0.16	0.07	0.03	7.60	
46.00		258.95	0.18	0.07	0.03	7.59	
47.55	Bot - Section 2	199.19	0.19	0.06	0.02	5.86	
48.00		103.21	0.20	0.06	0.02	3.04	
50.00	Appurtenance(s)	459.48	0.21	0.06	0.02	13.57	
51.75	RB1	397.56	0.23	0.06	0.02	11.71	
52.00	RB2	56.48	0.23	0.06	0.02	1.66	
52.97	Top - Section 1	218.40	0.24	0.06	0.02	6.40	
54.00		103.36	0.25	0.06	0.02	3.01	
56.00		199.01	0.27	0.05	0.02	5.69	
58.00		196.77	0.29	0.05	0.01	5.45	
60.00		194.53	0.31	0.04	0.01	5.13	
62.00		192.29	0.33	0.04	0.01	4.72	
64.00		190.06	0.35	0.03	0.01	4.22	
66.00		187.82	0.37	0.03	0.01	3.59	
66.67	RB3	62.42	0.38	0.02	0.01	1.12	
68.00	RT2	123.16	0.39	0.02	0.01	1.90	
68.25	RT1	23.04	0.40	0.02	0.01	0.34	
70.00		160.30	0.42	0.01	0.01	1.76	
72.00		181.10	0.44	0.00	0.01	1.08	
73.00	Appurtenance(s)	99.71	0.45	0.00	0.01	0.32	
74.00		89.15	0.47	0.00	0.01	0.04	
75.25	RT3	110.66	0.48	-0.01	0.01	-0.34	
76.00		65.97	0.49	-0.01	0.01	-0.34	

Seismic Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 45	

78.00			174.39	0.52	-0.02	0.01	-1.88		
80.00			172.15	0.54	-0.03	0.01	-2.76		
82.00			169.91	0.57	-0.04	0.01	-3.53		
84.00			167.68	0.60	-0.05	0.01	-4.17		
86.00			165.44	0.63	-0.06	0.02	-4.66		
88.00			163.20	0.66	-0.07	0.02	-5.02		
90.00			160.96	0.69	-0.08	0.03	-5.26		
92.00			158.73	0.72	-0.09	0.03	-5.37		
94.00			156.49	0.75	-0.10	0.04	-5.38		
96.00			154.25	0.78	-0.11	0.05	-5.30		
96.18	Bot - Section 3		13.52	0.79	-0.11	0.05	-0.46		
98.00			243.98	0.82	-0.11	0.06	-8.22		
99.00	RB4		132.43	0.83	-0.12	0.06	-4.39		
100.00			131.45	0.85	-0.12	0.07	-4.27		
100.34	Top - Section 2		44.90	0.86	-0.12	0.07	-1.45		
102.00			93.00	0.89	-0.12	0.08	-2.87		
103.00	RT4		55.58	0.90	-0.12	0.09	-1.65		
104.00			55.16	0.92	-0.12	0.10	-1.58		
106.00			109.07	0.96	-0.12	0.11	-2.82		
108.00			107.39	0.99	-0.11	0.13	-2.44		
110.00			105.71	1.03	-0.10	0.15	-2.01		
112.00			104.03	1.07	-0.09	0.17	-1.54		
114.00			102.35	1.11	-0.07	0.19	-1.04		
115.00	Appurtenance(s)		1849.0	1.13	-0.05	0.20	-14.22		
116.00			50.13	1.15	-0.04	0.22	-0.25		
118.00			99.00	1.19	-0.01	0.24	0.06		
120.00			97.32	1.23	0.03	0.27	0.65		
122.00			95.64	1.27	0.08	0.31	1.27		
124.00			93.96	1.31	0.13	0.34	1.92		
126.00			92.28	1.35	0.20	0.38	2.59		
128.00			90.60	1.39	0.27	0.43	3.29		
130.00	Appurtenance(s)		3605.6	1.44	0.36	0.47	162.06		
132.00			87.25	1.48	0.46	0.52	4.73		
134.00			85.57	1.53	0.57	0.58	5.47		
136.00			83.89	1.57	0.70	0.64	6.23		
138.00	Appurtenance(s)		1469.8	1.62	0.85	0.70	125.05		
140.00			80.53	1.67	1.01	0.77	7.77		
142.00			78.85	1.72	1.19	0.84	8.55		
144.00			77.18	1.77	1.39	0.92	9.34		
146.00			75.50	1.81	1.61	1.00	10.13		
148.00			73.82	1.86	1.85	1.09	10.91		
149.00	Appurtenance(s)		2174.1	1.89	1.98	1.14	336.85		
		Totals:	**23,579.3**				**845.5**	**Total Wind:**	**25,827.0**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 46	

Tower Engineering Solutions

Load Case: 0.9D + 1.0E

Gust Response Factor	1.10			**Sds**	0.12			**Iterations**	27
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.04			**Ss**	0.19
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.29	**SA**	0.01			**S1**	0.07
								Seismic Importance Factor	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-25.94	-0.94	0.00	-112.58	0.00	112.58	3031.07	1515.53	5947.06	2977.95		0.00	0.00	0.046
2.00	-25.58	-0.94	0.00	-110.70	0.00	110.70	3016.33	1508.17	5866.38	2937.55		0.00	0.00	0.046
4.00	-25.22	-0.94	0.00	-108.83	0.00	108.83	3001.40	1500.70	5785.81	2897.21		0.00	-0.01	0.046
6.00	-24.86	-0.93	0.00	-106.96	0.00	106.96	2986.25	1493.13	5705.37	2856.93		0.01	-0.01	0.046
8.00	-24.51	-0.93	0.00	-105.09	0.00	105.09	2970.91	1485.45	5625.07	2816.71		0.02	-0.02	0.046
10.00	-24.16	-0.92	0.00	-103.24	0.00	103.24	2955.36	1477.68	5544.90	2776.57		0.02	-0.02	0.045
12.00	-23.82	-0.92	0.00	-101.39	0.00	101.39	2939.60	1469.80	5464.90	2736.51		0.04	-0.03	0.045
14.00	-23.47	-0.91	0.00	-99.56	0.00	99.56	2923.65	1461.82	5385.06	2696.53		0.05	-0.03	0.045
16.00	-23.13	-0.91	0.00	-97.74	0.00	97.74	2907.49	1453.74	5305.39	2656.64		0.06	-0.04	0.045
18.00	-22.79	-0.90	0.00	-95.92	0.00	95.92	2891.12	1445.56	5225.92	2616.84		0.08	-0.04	0.045
20.00	-22.45	-0.89	0.00	-94.12	0.00	94.12	2874.56	1437.28	5146.64	2577.14		0.10	-0.05	0.044
22.00	-22.12	-0.89	0.00	-92.33	0.00	92.33	2857.79	1428.89	5067.57	2537.55		0.12	-0.05	0.044
24.00	-21.79	-0.88	0.00	-90.56	0.00	90.56	2840.81	1420.41	4988.71	2498.06		0.15	-0.06	0.044
26.00	-21.46	-0.88	0.00	-88.79	0.00	88.79	2823.63	1411.82	4910.09	2458.69		0.17	-0.06	0.044
28.00	-21.13	-0.87	0.00	-87.04	0.00	87.04	2806.25	1403.13	4831.70	2419.44		0.20	-0.07	0.044
30.00	-20.81	-0.86	0.00	-85.29	0.00	85.29	2788.67	1394.33	4753.57	2380.32		0.23	-0.07	0.043
32.00	-20.49	-0.86	0.00	-83.56	0.00	83.56	2770.88	1385.44	4675.69	2341.32		0.26	-0.08	0.043
34.00	-20.17	-0.85	0.00	-81.85	0.00	81.85	2752.89	1376.44	4598.09	2302.46		0.30	-0.09	0.043
36.00	-19.85	-0.85	0.00	-80.14	0.00	80.14	2734.69	1367.35	4520.77	2263.74		0.33	-0.09	0.043
38.00	-19.54	-0.84	0.00	-78.45	0.00	78.45	2716.29	1358.15	4443.74	2225.17		0.37	-0.10	0.042
40.00	-19.23	-0.83	0.00	-76.77	0.00	76.77	2697.69	1348.85	4367.01	2186.75		0.42	-0.10	0.042
42.00	-18.92	-0.83	0.00	-75.10	0.00	75.10	2678.89	1339.44	4290.59	2148.48		0.46	-0.11	0.042
44.00	-18.61	-0.82	0.00	-73.44	0.00	73.44	2659.88	1329.94	4214.50	2110.38		0.51	-0.11	0.042
46.00	-18.31	-0.81	0.00	-71.80	0.00	71.80	2640.67	1320.33	4138.74	2072.44		0.56	-0.12	0.042
47.55	-18.07	-0.81	0.00	-70.53	0.00	70.53	2625.60	1312.80	4080.13	2043.10		0.59	-0.12	0.041
48.00	-17.96	-0.81	0.00	-70.17	0.00	70.17	2621.25	1310.62	4063.32	2034.68		0.61	-0.13	0.041
50.00	-17.48	-0.79	0.00	-68.56	0.00	68.56	2601.63	1300.82	3988.26	1997.09		0.66	-0.13	0.041
51.75	-17.06	-0.78	0.00	-67.17	0.00	67.17	2584.30	1292.15	3922.88	1964.36		0.71	-0.14	0.027
52.00	-17.00	-0.78	0.00	-66.97	0.00	66.97	2581.81	1290.90	3913.56	1959.69		0.72	-0.14	0.020
52.97	-16.77	-0.77	0.00	-66.21	0.00	66.21	1914.68	957.34	2935.86	1470.11		0.74	-0.14	0.022
54.00	-16.64	-0.77	0.00	-65.42	0.00	65.42	1908.40	954.20	2909.37	1456.85		0.77	-0.14	0.024
56.00	-16.39	-0.77	0.00	-63.87	0.00	63.87	1896.06	948.03	2858.01	1431.13		0.83	-0.14	0.023
58.00	-16.14	-0.76	0.00	-62.34	0.00	62.34	1883.51	941.76	2806.77	1405.47		0.89	-0.15	0.023
60.00	-15.90	-0.76	0.00	-60.82	0.00	60.82	1870.76	935.38	2755.66	1379.88		0.96	-0.15	0.023
62.00	-15.65	-0.75	0.00	-59.30	0.00	59.30	1857.80	928.90	2704.70	1354.36		1.02	-0.15	0.023
64.00	-15.41	-0.75	0.00	-57.80	0.00	57.80	1844.65	922.32	2653.88	1328.91		1.08	-0.16	0.022
66.00	-15.17	-0.74	0.00	-56.30	0.00	56.30	1831.29	915.64	2603.23	1303.55		1.15	-0.16	0.022
66.67	-15.09	-0.74	0.00	-55.81	0.00	55.81	1826.76	913.38	2586.30	1295.07		1.17	-0.16	0.017
68.00	-14.93	-0.74	0.00	-54.82	0.00	54.82	1817.72	908.86	2552.75	1278.27		1.22	-0.16	0.022
68.25	-14.90	-0.74	0.00	-54.63	0.00	54.63	1816.01	908.01	2546.46	1275.12		1.22	-0.16	0.031
70.00	-14.70	-0.74	0.00	-53.33	0.00	53.33	1803.95	901.98	2502.46	1253.09		1.29	-0.17	0.030
72.00	-14.46	-0.74	0.00	-51.85	0.00	51.85	1789.98	894.99	2452.36	1228.00		1.36	-0.17	0.030
73.00	-14.34	-0.74	0.00	-51.11	0.00	51.11	1782.92	891.46	2427.38	1215.49		1.39	-0.17	0.030
74.00	-14.22	-0.74	0.00	-50.37	0.00	50.37	1775.81	887.90	2402.46	1203.02		1.43	-0.18	0.029
75.25	-14.08	-0.74	0.00	-49.45	0.00	49.45	1766.84	883.42	2371.38	1187.45		1.47	-0.18	0.029
75.25	-14.08	-0.74	0.00	-49.45	0.00	49.45	1766.84	883.42	2371.38	1187.45		1.47	-0.18	0.029
76.00	-13.99	-0.74	0.00	-48.90	0.00	48.90	1761.43	880.71	2352.78	1178.14		1.50	-0.18	0.049

Calculated Forces

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 47	

78.00	-13.77	-0.74	0.00	-47.41	0.00	47.41	1746.84	873.42	2303.32	1153.37	1.58	-0.19	0.049
80.00	-13.54	-0.74	0.00	-45.93	0.00	45.93	1732.06	866.03	2254.10	1128.72	1.66	-0.20	0.049
82.00	-13.32	-0.74	0.00	-44.44	0.00	44.44	1717.07	858.53	2205.12	1104.20	1.74	-0.20	0.048
84.00	-13.10	-0.75	0.00	-42.96	0.00	42.96	1701.88	850.94	2156.41	1079.81	1.83	-0.21	0.047
86.00	-12.88	-0.75	0.00	-41.47	0.00	41.47	1686.48	843.24	2107.95	1055.54	1.92	-0.22	0.047
88.00	-12.66	-0.75	0.00	-39.97	0.00	39.97	1670.88	835.44	2059.78	1031.42	2.02	-0.23	0.046
90.00	-12.44	-0.75	0.00	-38.48	0.00	38.48	1655.08	827.54	2011.90	1007.44	2.11	-0.24	0.046
92.00	-12.23	-0.75	0.00	-36.98	0.00	36.98	1639.07	819.54	1964.31	983.61	2.21	-0.25	0.045
94.00	-12.02	-0.75	0.00	-35.49	0.00	35.49	1622.86	811.43	1917.03	959.94	2.32	-0.25	0.044
96.00	-11.81	-0.75	0.00	-33.99	0.00	33.99	1606.45	803.22	1870.07	936.43	2.43	-0.26	0.044
96.18	-11.79	-0.75	0.00	-33.85	0.00	33.85	1604.99	802.49	1865.94	934.36	2.44	-0.26	0.044
98.00	-11.51	-0.75	0.00	-32.48	0.00	32.48	1589.83	794.91	1823.44	913.08	2.54	-0.27	0.043
99.00	-11.35	-0.75	0.00	-31.73	0.00	31.73	1581.44	790.72	1800.26	901.47	2.60	-0.27	0.024
100.00	-11.20	-0.75	0.00	-30.98	0.00	30.98	1573.01	786.50	1777.16	889.90	2.65	-0.28	0.024
100.34	-11.15	-0.75	0.00	-30.73	0.00	30.73	1075.68	537.84	1234.34	618.09	2.67	-0.28	0.027
102.00	-11.01	-0.75	0.00	-29.48	0.00	29.48	1068.04	534.02	1210.40	606.10	2.77	-0.28	0.030
103.00	-10.92	-0.75	0.00	-28.73	0.00	28.73	1063.37	531.68	1195.97	598.87	2.83	-0.28	0.029
103.00	-10.92	-0.75	0.00	-28.73	0.00	28.73	1063.37	531.68	1195.97	598.87	2.83	-0.28	0.029
104.00	-10.84	-0.75	0.00	-27.98	0.00	27.98	1058.64	529.32	1181.57	591.66	2.89	-0.29	0.058
106.00	-10.67	-0.75	0.00	-26.48	0.00	26.48	1049.03	524.52	1152.85	577.28	3.01	-0.30	0.056
108.00	-10.50	-0.75	0.00	-24.98	0.00	24.98	1039.22	519.61	1124.23	562.95	3.14	-0.31	0.054
110.00	-10.34	-0.75	0.00	-23.47	0.00	23.47	1029.21	514.60	1095.73	548.68	3.27	-0.32	0.053
112.00	-10.17	-0.76	0.00	-21.96	0.00	21.96	1018.99	509.50	1067.37	534.48	3.40	-0.33	0.051
114.00	-10.01	-0.76	0.00	-20.45	0.00	20.45	1008.57	504.29	1039.14	520.34	3.54	-0.34	0.049
115.00	-8.31	-0.75	0.00	-19.70	0.00	19.70	1003.28	501.64	1025.09	513.31	3.61	-0.34	0.047
116.00	-8.23	-0.75	0.00	-18.95	0.00	18.95	997.95	498.97	1011.07	506.29	3.68	-0.35	0.046
118.00	-8.08	-0.75	0.00	-17.46	0.00	17.46	987.12	493.56	983.16	492.31	3.83	-0.36	0.044
120.00	-7.92	-0.75	0.00	-15.96	0.00	15.96	976.09	488.04	955.42	478.42	3.98	-0.36	0.041
122.00	-7.77	-0.75	0.00	-14.47	0.00	14.47	964.85	482.43	927.87	464.62	4.14	-0.37	0.039
124.00	-7.62	-0.74	0.00	-12.98	0.00	12.98	953.42	476.71	900.51	450.92	4.29	-0.38	0.037
126.00	-7.47	-0.74	0.00	-11.49	0.00	11.49	941.77	470.89	873.35	437.32	4.46	-0.39	0.034
128.00	-7.32	-0.74	0.00	-10.01	0.00	10.01	929.93	464.96	846.40	423.83	4.62	-0.40	0.031
130.00	-4.01	-0.55	0.00	-8.53	0.00	8.53	917.88	458.94	819.69	410.45	4.79	-0.40	0.025
132.00	-3.90	-0.55	0.00	-7.43	0.00	7.43	905.63	452.81	793.20	397.19	4.96	-0.41	0.023
134.00	-3.80	-0.54	0.00	-6.33	0.00	6.33	893.17	446.59	766.97	384.05	5.13	-0.41	0.021
136.00	-3.69	-0.54	0.00	-5.25	0.00	5.25	880.51	440.26	740.98	371.04	5.30	-0.42	0.018
138.00	-2.34	-0.40	0.00	-4.18	0.00	4.18	867.65	433.83	715.27	358.17	5.48	-0.42	0.014
140.00	-2.26	-0.39	0.00	-3.38	0.00	3.38	854.59	427.29	689.83	345.43	5.66	-0.43	0.012
142.00	-2.18	-0.38	0.00	-2.59	0.00	2.59	841.32	420.66	664.68	332.84	5.84	-0.43	0.010
144.00	-2.11	-0.37	0.00	-1.82	0.00	1.82	827.84	413.92	639.83	320.39	6.02	-0.43	0.008
146.00	-2.03	-0.36	0.00	-1.08	0.00	1.08	814.17	407.08	615.29	308.10	6.20	-0.43	0.006
148.00	-1.96	-0.35	0.00	-0.35	0.00	0.35	796.71	398.35	588.42	294.65	6.38	-0.43	0.004
149.00	0.00	-0.34	0.00	0.00	0.00	0.00	787.55	393.77	574.90	287.88	6.47	-0.43	0.000

Wind Loading - Shaft

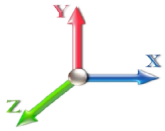
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 48	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 29

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	224.68	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	7.442	8.19	222.74	0.650	0.000	2.00	8.088	5.26	43.0	0.0	320.5
4.00		1.00	0.85	7.442	8.19	220.80	0.650	0.000	2.00	8.018	5.21	42.7	0.0	317.7
6.00		1.00	0.85	7.442	8.19	218.86	0.650	0.000	2.00	7.948	5.17	42.3	0.0	314.9
8.00		1.00	0.85	7.442	8.19	216.92	0.650	0.000	2.00	7.878	5.12	41.9	0.0	312.1
10.00		1.00	0.85	7.442	8.19	214.98	0.650	0.000	2.00	7.808	5.08	41.5	0.0	309.3
12.00		1.00	0.85	7.442	8.19	213.04	0.650	0.000	2.00	7.738	5.03	41.2	0.0	306.5
14.00		1.00	0.85	7.442	8.19	211.10	0.650	0.000	2.00	7.668	4.98	40.8	0.0	303.7
16.00		1.00	0.86	7.534	8.29	210.45	0.650	0.000	2.00	7.597	4.94	40.9	0.0	300.9
18.00		1.00	0.88	7.723	8.50	211.10	0.650	0.000	2.00	7.527	4.89	41.6	0.0	298.1
20.00		1.00	0.90	7.896	8.69	211.46	0.650	0.000	2.00	7.457	4.85	42.1	0.0	295.3
22.00		1.00	0.92	8.056	8.86	211.57	0.650	0.000	2.00	7.387	4.80	42.6	0.0	292.5
24.00		1.00	0.94	8.205	9.03	211.48	0.650	0.000	2.00	7.317	4.76	42.9	0.0	289.7
26.00		1.00	0.95	8.345	9.18	211.21	0.650	0.000	2.00	7.247	4.71	43.2	0.0	286.9
28.00		1.00	0.97	8.476	9.32	210.80	0.650	0.000	2.00	7.177	4.66	43.5	0.0	284.1
30.00		1.00	0.98	8.600	9.46	210.25	0.650	0.000	2.00	7.106	4.62	43.7	0.0	281.3
32.00		1.00	1.00	8.717	9.59	209.58	0.650	0.000	2.00	7.036	4.57	43.9	0.0	278.5
34.00		1.00	1.01	8.829	9.71	208.81	0.650	0.000	2.00	6.966	4.53	44.0	0.0	275.7
36.00		1.00	1.02	8.936	9.83	207.95	0.650	0.000	2.00	6.896	4.48	44.1	0.0	272.9
38.00		1.00	1.03	9.039	9.94	207.00	0.650	0.000	2.00	6.826	4.44	44.1	0.0	270.1
40.00		1.00	1.04	9.137	10.05	205.97	0.650	0.000	2.00	6.756	4.39	44.1	0.0	267.3
42.00		1.00	1.05	9.231	10.15	204.87	0.650	0.000	2.00	6.686	4.35	44.1	0.0	264.5
44.00		1.00	1.06	9.322	10.25	203.70	0.650	0.000	2.00	6.615	4.30	44.1	0.0	261.7
46.00		1.00	1.07	9.410	10.35	202.48	0.650	0.000	2.00	6.545	4.25	44.0	0.0	258.9
47.55	Bot - Section 2	1.00	1.08	9.476	10.42	201.48	0.650	0.000	1.55	5.035	3.27	34.1	0.0	199.2
48.00		1.00	1.08	9.494	10.44	201.19	0.650	0.000	0.45	1.459	0.95	9.9	0.0	103.2
50.00	Appurtenance(s)	1.00	1.09	9.576	10.53	199.86	0.650	0.000	2.00	6.490	4.22	44.4	0.0	459.1
51.75	RB1	1.00	1.10	9.646	10.61	198.65	0.650	0.000	1.75	5.621	3.65	38.8	0.0	397.6
52.00	RB2	1.00	1.10	9.656	10.62	198.48	0.650	0.000	0.25	0.799	0.52	5.5	0.0	56.5
52.97	Top - Section 1	1.00	1.11	9.693	10.66	197.79	0.650	0.000	0.97	3.088	2.01	21.4	0.0	218.4
54.00		1.00	1.11	9.733	10.71	199.72	0.650	0.000	1.03	3.261	2.12	22.7	0.0	103.4
56.00		1.00	1.12	9.807	10.79	198.26	0.650	0.000	2.00	6.279	4.08	44.0	0.0	199.0
58.00		1.00	1.13	9.880	10.87	196.76	0.650	0.000	2.00	6.209	4.04	43.9	0.0	196.8
60.00		1.00	1.14	9.951	10.95	195.22	0.650	0.000	2.00	6.139	3.99	43.7	0.0	194.5
62.00		1.00	1.14	10.020	11.02	193.65	0.650	0.000	2.00	6.069	3.94	43.5	0.0	192.3
64.00		1.00	1.15	10.087	11.10	192.04	0.650	0.000	2.00	5.999	3.90	43.3	0.0	190.1
66.00		1.00	1.16	10.153	11.17	190.39	0.650	0.000	2.00	5.929	3.85	43.0	0.0	187.8
66.67	RB3	1.00	1.16	10.174	11.19	189.84	0.650	0.000	0.67	1.970	1.28	14.3	0.0	62.4
68.00	RT2	1.00	1.17	10.217	11.24	188.72	0.650	0.000	1.33	3.888	2.53	28.4	0.0	123.2
68.25	RT1	1.00	1.17	10.225	11.25	188.51	0.650	0.000	0.25	0.727	0.47	5.3	0.0	23.0
70.00		1.00	1.17	10.279	11.31	187.02	0.650	0.000	1.75	5.061	3.29	37.2	0.0	160.3
72.00		1.00	1.18	10.340	11.37	185.28	0.650	0.000	2.00	5.718	3.72	42.3	0.0	181.1
73.00	Appurtenance(s)	1.00	1.18	10.370	11.41	184.41	0.650	0.000	1.00	2.833	1.84	21.0	0.0	89.7
74.00		1.00	1.19	10.400	11.44	183.53	0.650	0.000	1.00	2.815	1.83	20.9	0.0	89.2
75.25	RT3	1.00	1.19	10.437	11.48	182.41	0.650	0.000	1.25	3.494	2.27	26.1	0.0	110.7
76.00		1.00	1.19	10.459	11.50	181.74	0.650	0.000	0.75	2.083	1.35	15.6	0.0	66.0
78.00		1.00	1.20	10.516	11.57	179.93	0.650	0.000	2.00	5.508	3.58	41.4	0.0	174.4

Wind Loading - Shaft

Structure: CT12215-A-SBA | **Code:** EIA/TIA-222-G | 5/21/2019
Site Name: Litchfield 3, CT | **Exposure:** C
Height: 149.00 (ft) | **Crest Height:** 0.00
Base Elev: 0.000 (ft) | **Site Class:** B - Competent Rock
Gh: 1.1 | **Topography:** 1 | **Struct Class:** II | Page: 49

Tower Engineering Solutions

80.00		1.00	1.21	10.572	11.63	178.10	0.650	0.000	2.00	5.438	3.53	41.1	0.0	172.2
82.00		1.00	1.21	10.627	11.69	176.25	0.650	0.000	2.00	5.367	3.49	40.8	0.0	169.9
84.00		1.00	1.22	10.681	11.75	174.37	0.650	0.000	2.00	5.297	3.44	40.5	0.0	167.7
86.00		1.00	1.23	10.734	11.81	172.47	0.650	0.000	2.00	5.227	3.40	40.1	0.0	165.4
88.00		1.00	1.23	10.787	11.87	170.56	0.650	0.000	2.00	5.157	3.35	39.8	0.0	163.2
90.00		1.00	1.24	10.838	11.92	168.62	0.650	0.000	2.00	5.087	3.31	39.4	0.0	161.0
92.00		1.00	1.24	10.888	11.98	166.66	0.650	0.000	2.00	5.017	3.26	39.1	0.0	158.7
94.00		1.00	1.25	10.937	12.03	164.69	0.650	0.000	2.00	4.947	3.22	38.7	0.0	156.5
96.00		1.00	1.25	10.986	12.08	162.70	0.650	0.000	2.00	4.877	3.17	38.3	0.0	154.2
96.18	Bot - Section 3	1.00	1.26	10.990	12.09	162.52	0.650	0.000	0.18	0.427	0.28	3.4	0.0	13.5
98.00		1.00	1.26	11.034	12.14	160.69	0.650	0.000	1.82	4.437	2.88	35.0	0.0	244.0
99.00	RB4	1.00	1.26	11.057	12.16	159.68	0.677 *	0.000	1.00	2.409	1.63	19.8	0.0	132.4
100.00		1.00	1.27	11.081	12.19	158.66	0.679 *	0.000	1.00	2.391	1.62	19.8	0.0	131.4
100.34	Top - Section 2	1.00	1.27	11.089	12.20	158.32	0.680 *	0.000	0.34	0.817	0.56	6.8	0.0	44.9
102.00		1.00	1.27	11.127	12.24	158.77	0.679 *	0.000	1.66	3.913	2.66	32.5	0.0	93.0
103.00	RT4	1.00	1.27	11.150	12.26	157.75	0.681 *	0.000	1.00	2.338	1.59	19.5	0.0	55.6
104.00		1.00	1.28	11.173	12.29	156.72	0.683 *	0.000	1.00	2.321	1.58	19.5	0.0	55.2
106.00		1.00	1.28	11.218	12.34	154.65	0.650	0.000	2.00	4.589	2.98	36.8	0.0	109.1
108.00		1.00	1.29	11.262	12.39	152.57	0.650	0.000	2.00	4.519	2.94	36.4	0.0	107.4
110.00		1.00	1.29	11.305	12.44	150.47	0.650	0.000	2.00	4.449	2.89	36.0	0.0	105.7
112.00		1.00	1.30	11.348	12.48	148.36	0.650	0.000	2.00	4.379	2.85	35.5	0.0	104.0
114.00		1.00	1.30	11.391	12.53	146.24	0.650	0.000	2.00	4.309	2.80	35.1	0.0	102.4
115.00	Appurtenance(s)	1.00	1.30	11.412	12.55	145.17	0.650	0.000	1.00	2.128	1.38	17.4	0.0	50.5
116.00		1.00	1.31	11.432	12.58	144.10	0.650	0.000	1.00	2.111	1.37	17.3	0.0	50.1
118.00		1.00	1.31	11.474	12.62	141.95	0.650	0.000	2.00	4.168	2.71	34.2	0.0	99.0
120.00		1.00	1.32	11.514	12.67	139.79	0.650	0.000	2.00	4.098	2.66	33.7	0.0	97.3
122.00		1.00	1.32	11.554	12.71	137.62	0.650	0.000	2.00	4.028	2.62	33.3	0.0	95.6
124.00		1.00	1.32	11.594	12.75	135.43	0.650	0.000	2.00	3.958	2.57	32.8	0.0	94.0
126.00		1.00	1.33	11.633	12.80	133.24	0.650	0.000	2.00	3.888	2.53	32.3	0.0	92.3
128.00		1.00	1.33	11.672	12.84	131.03	0.650	0.000	2.00	3.818	2.48	31.9	0.0	90.6
130.00	Appurtenance(s)	1.00	1.34	11.710	12.88	128.81	0.650	0.000	2.00	3.748	2.44	31.4	0.0	88.9
132.00		1.00	1.34	11.748	12.92	126.58	0.650	0.000	2.00	3.678	2.39	30.9	0.0	87.2
134.00		1.00	1.35	11.785	12.96	124.34	0.650	0.000	2.00	3.607	2.34	30.4	0.0	85.6
136.00		1.00	1.35	11.822	13.00	122.09	0.650	0.000	2.00	3.537	2.30	29.9	0.0	83.9
138.00	Appurtenance(s)	1.00	1.35	11.858	13.04	119.83	0.650	0.000	2.00	3.467	2.25	29.4	0.0	82.2
140.00		1.00	1.36	11.894	13.08	117.55	0.650	0.000	2.00	3.397	2.21	28.9	0.0	80.5
142.00		1.00	1.36	11.930	13.12	115.27	0.650	0.000	2.00	3.327	2.16	28.4	0.0	78.9
144.00		1.00	1.37	11.965	13.16	112.98	0.650	0.000	2.00	3.257	2.12	27.9	0.0	77.2
146.00		1.00	1.37	12.000	13.20	110.68	0.650	0.000	2.00	3.187	2.07	27.3	0.0	75.5
148.00		1.00	1.37	12.034	13.24	108.38	0.650	0.000	2.00	3.116	2.03	26.8	0.0	73.8
149.00	Appurtenance(s)	1.00	1.38	12.051	13.26	107.22	0.650	0.000	1.00	1.532	1.00	13.2	0.0	36.3
								Totals:	**149.00**			**2,908.1**		**14,728.1**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

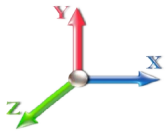
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 50	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 29

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	ACU-A20-N	4	12.102	13.312	0.40	0.80	0.22	4.00	0.000	3.000	2.98	0.00	8.95
2	149.00	800MHz Filter	3	12.102	13.312	0.40	0.80	0.94	26.40	0.000	3.000	12.46	0.00	37.38
3	149.00	TD-RRH8x20-25	3	12.102	13.312	0.40	0.80	4.86	210.00	0.000	3.000	64.70	0.00	194.09
4	149.00	800MHZ	3	12.102	13.312	0.40	0.80	3.17	178.50	0.000	3.000	42.17	0.00	126.52
5	149.00	1900MHz	3	12.102	13.312	0.40	0.80	3.32	180.00	0.000	3.000	44.25	0.00	132.75
6	149.00	APXVTM14-C-I20	3	12.102	13.312	0.63	0.80	12.02	168.00	0.000	3.000	160.02	0.00	480.06
7	149.00	APXVSPP18-C-A20	3	12.102	13.312	0.66	0.80	15.98	171.00	0.000	3.000	212.67	0.00	638.01
8	149.00	Low Profile Platform	1	12.051	13.256	1.00	1.00	25.00	1200.00	0.000	0.000	331.41	0.00	0.00
9	138.00	BXA-70063-6CF_2	3	11.858	13.044	0.58	0.80	13.26	51.00	0.000	0.000	173.00	0.00	0.00
10	138.00	BXA-171085-12B_2	3	11.858	13.044	0.67	0.80	9.56	45.00	0.000	0.000	124.65	0.00	0.00
11	138.00	LPA-80080/6CF	3	11.858	13.044	1.36	0.80	17.67	63.00	0.000	0.000	230.44	0.00	0.00
12	138.00	Low Profile Platform	1	11.858	13.044	1.00	1.00	25.00	1200.00	0.000	0.000	326.10	0.00	0.00
13	138.00	GPS Receiver	1	11.858	13.044	1.00	1.00	1.00	10.00	0.000	0.000	13.04	0.00	0.00
14	138.00	FD9R6004/2C-3L	6	11.858	13.044	0.40	0.80	0.86	18.60	0.000	0.000	11.27	0.00	0.00
15	130.00	(3) 12.5' - 2" Horizontal	1	11.710	12.881	0.75	1.00	4.45	137.25	0.000	0.000	57.36	0.00	0.00
16	130.00	XP-2020	24	11.710	12.881	0.56	0.75	9.31	240.00	0.000	0.000	119.99	0.00	0.00
17	130.00	VSRDual-TS-B-HD	2	11.710	12.881	0.56	0.75	4.61	296.80	0.000	0.000	59.41	0.00	0.00
18	130.00	DC6-48-60-0-8C-EV	1	11.710	12.881	0.38	0.75	1.79	16.00	0.000	0.000	23.09	0.00	0.00
19	130.00	DC6-48-60-18-8C	1	11.710	12.881	0.38	0.75	0.47	20.00	0.000	0.000	6.09	0.00	0.00
20	130.00	ABT-DF-DM-ADBH	1	11.710	12.881	0.75	0.75	0.04	1.10	0.000	0.000	0.48	0.00	0.00
21	130.00	7770.00	3	11.710	12.881	0.55	0.75	9.03	105.00	0.000	0.000	116.36	0.00	0.00
22	130.00	LGP 21401	12	11.710	12.881	0.38	0.75	0.00	210.00	0.000	0.000	0.00	0.00	0.00
23	130.00	DC6-48-60-18-8F	1	11.710	12.881	0.75	0.75	0.69	31.80	0.000	0.000	8.89	0.00	0.00
24	130.00	8843 B2/B66A	3	11.710	12.881	0.38	0.75	1.84	216.00	0.000	0.000	23.77	0.00	0.00
25	130.00	80010965	6	11.710	12.881	0.53	0.75	44.12	651.60	0.000	0.000	568.35	0.00	0.00
26	130.00	RRUS 4478 B14	3	11.710	12.881	0.38	0.75	1.86	178.20	0.000	0.000	23.91	0.00	0.00
27	130.00	4449 B5/B12	3	11.710	12.881	0.38	0.75	2.22	213.00	0.000	0.000	28.55	0.00	0.00
28	130.00	Low Profile Platform	1	11.710	12.881	1.00	1.00	25.00	1200.00	0.000	0.000	322.03	0.00	0.00
29	115.00	RRUS 11 (Band 4)	3	11.412	12.553	0.40	0.80	3.02	153.00	0.000	0.000	37.96	0.00	0.00
30	115.00	LNX-6515DS-A1M	3	11.412	12.553	0.64	0.80	22.02	149.40	0.000	0.000	276.44	0.00	0.00
31	115.00	APX16DWV-16DWVS-E-A	3	11.412	12.553	0.50	0.80	9.84	122.10	0.000	0.000	123.47	0.00	0.00
32	115.00	RRUS 11	3	11.412	12.553	0.40	0.80	3.53	162.00	0.000	0.000	44.29	0.00	0.00
33	115.00	RRUS 11 (Band 12)	3	11.412	12.553	0.40	0.80	3.02	162.00	0.000	0.000	37.96	0.00	0.00
34	115.00	T-Arm	3	11.412	12.553	0.56	0.75	13.50	1050.00	0.000	0.000	169.46	0.00	0.00
35	73.00	GPS Receiver	1	10.370	11.407	1.00	1.00	1.00	10.00	0.000	0.000	11.41	0.00	0.00
36	50.00	58532A	1	9.576	10.534	1.00	1.00	0.22	0.40	0.000	0.000	2.32	0.00	0.00
							Totals:		**8,851.15**			**3,810.72**		

Total Applied Force Summary

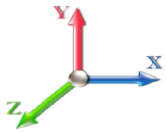
Structure:	CT12215-A-SBA		**Code:**	EIA/TIA-222-G	5/21/2019
Site Name:	Litchfield 3, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 51

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 29

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		43.04	399.24	0.00	0.00
4.00		42.66	396.45	0.00	0.00
6.00		42.29	393.65	0.00	0.00
8.00		41.92	390.85	0.00	0.00
10.00		41.55	388.06	0.00	0.00
12.00		41.17	385.26	0.00	0.00
14.00		40.80	382.46	0.00	0.00
16.00		40.92	379.66	0.00	0.00
18.00		41.56	376.87	0.00	0.00
20.00		42.10	374.07	0.00	0.00
22.00		42.55	371.27	0.00	0.00
24.00		42.93	368.47	0.00	0.00
26.00		43.24	365.68	0.00	0.00
28.00		43.49	362.88	0.00	0.00
30.00		43.70	360.08	0.00	0.00
32.00		43.86	357.28	0.00	0.00
34.00		43.98	354.49	0.00	0.00
36.00		44.06	351.69	0.00	0.00
38.00		44.11	348.89	0.00	0.00
40.00		44.13	346.09	0.00	0.00
42.00		44.13	343.30	0.00	0.00
44.00		44.09	340.50	0.00	0.00
46.00		44.04	337.70	0.00	0.00
47.55		34.11	260.35	0.00	0.00
48.00		9.90	120.80	0.00	0.00
50.00	(1) attachments	46.75	538.23	0.00	0.00
51.75		38.77	466.19	0.00	0.00
52.00		5.51	66.28	0.00	0.00
52.97		21.40	256.44	0.00	0.00
54.00		22.69	143.75	0.00	0.00
56.00		44.03	277.44	0.00	0.00
58.00		43.86	275.20	0.00	0.00
60.00		43.68	272.96	0.00	0.00
62.00		43.48	270.73	0.00	0.00
64.00		43.26	268.49	0.00	0.00
66.00		43.04	266.25	0.00	0.00
66.67		14.33	88.69	0.00	0.00
68.00		28.40	175.32	0.00	0.00
68.25		5.32	32.84	0.00	0.00
70.00		37.20	228.93	0.00	0.00
72.00		42.28	259.54	0.00	0.00
73.00	(1) attachments	32.41	138.93	0.00	0.00
74.00		20.93	128.21	0.00	0.00
75.25		26.08	159.48	0.00	0.00
76.00		15.58	95.27	0.00	0.00
78.00		41.41	252.50	0.00	0.00

Total Applied Force Summary

Structure:	CT12215-A-SBA		**Code:**	EIA/TIA-222-G	5/21/2019
Site Name:	Litchfield 3, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 52

Tower Engineering Solutions

80.00		41.10	250.26	0.00	0.00
82.00		40.79	248.03	0.00	0.00
84.00		40.46	245.79	0.00	0.00
86.00		40.12	243.55	0.00	0.00
88.00		39.77	241.31	0.00	0.00
90.00		39.42	239.07	0.00	0.00
92.00		39.06	236.84	0.00	0.00
94.00		38.68	234.60	0.00	0.00
96.00		38.30	232.36	0.00	0.00
96.18		3.36	20.42	0.00	0.00
98.00		35.00	315.19	0.00	0.00
99.00		19.84	171.48	0.00	0.00
100.00		19.78	170.50	0.00	0.00
100.34		6.78	58.31	0.00	0.00
102.00		32.50	157.71	0.00	0.00
103.00		19.53	94.64	0.00	0.00
104.00		19.47	94.22	0.00	0.00
106.00		36.81	187.18	0.00	0.00
108.00		36.39	185.50	0.00	0.00
110.00		35.96	183.82	0.00	0.00
112.00		35.53	182.14	0.00	0.00
114.00		35.09	180.46	0.00	0.00
115.00	(18) attachments	706.94	1888.10	0.00	0.00
116.00		17.25	86.98	0.00	0.00
118.00		34.20	172.71	0.00	0.00
120.00		33.74	171.03	0.00	0.00
122.00		33.28	169.35	0.00	0.00
124.00		32.81	167.67	0.00	0.00
126.00		32.34	165.99	0.00	0.00
128.00		31.86	164.32	0.00	0.00
130.00	(62) attachments	1389.65	3679.39	0.00	0.00
132.00		30.89	120.16	0.00	0.00
134.00		30.40	118.48	0.00	0.00
136.00		29.90	116.80	0.00	0.00
138.00	(17) attachments	907.89	1502.72	0.00	0.00
140.00		28.89	88.17	0.00	0.00
142.00		28.38	86.49	0.00	0.00
144.00		27.86	84.81	0.00	0.00
146.00		27.34	83.13	0.00	0.00
148.00		26.81	81.45	0.00	0.00
149.00	(23) attachments	883.86	2178.00	0.00	1617.75
	Totals:	**6,718.78**	**28,816.85**	**0.00**	**1,617.75**

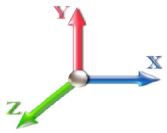
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 53	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	7.442	0.00	4.40
2.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.055	0.000	7.442	0.00	0.32
4.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	7.442	0.00	4.40
4.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.055	0.000	7.442	0.00	0.32
6.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.056	0.000	7.442	0.00	4.40
6.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.056	0.000	7.442	0.00	0.32
8.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.056	0.000	7.442	0.00	4.40
8.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.056	0.000	7.442	0.00	0.32
10.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	7.442	0.00	4.40
10.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.057	0.000	7.442	0.00	0.32
12.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	7.442	0.00	4.40
12.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.057	0.000	7.442	0.00	0.32
14.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	7.442	0.00	4.40
14.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.058	0.000	7.442	0.00	0.32
16.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	7.534	0.00	4.40
16.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.058	0.000	7.534	0.00	0.32
18.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	7.723	0.00	4.40
18.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.059	0.000	7.723	0.00	0.32
20.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	7.896	0.00	4.40
20.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.059	0.000	7.896	0.00	0.32
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	8.056	0.00	4.40
22.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.060	0.000	8.056	0.00	0.32
24.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	8.205	0.00	4.40
24.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.060	0.000	8.205	0.00	0.32
26.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.061	0.000	8.345	0.00	4.40
26.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.061	0.000	8.345	0.00	0.32
28.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	8.476	0.00	4.40
28.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.062	0.000	8.476	0.00	0.32
30.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	8.600	0.00	4.40
30.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.062	0.000	8.600	0.00	0.32
32.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	8.717	0.00	4.40
32.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.063	0.000	8.717	0.00	0.32
34.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	8.829	0.00	4.40
34.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.063	0.000	8.829	0.00	0.32
36.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	8.936	0.00	4.40
36.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.064	0.000	8.936	0.00	0.32
38.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	9.039	0.00	4.40
38.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.065	0.000	9.039	0.00	0.32
40.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	9.137	0.00	4.40
40.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.065	0.000	9.137	0.00	0.32
42.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	9.231	0.00	4.40
42.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.066	0.000	9.231	0.00	0.32
44.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	9.322	0.00	4.40
44.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.067	0.000	9.322	0.00	0.32
46.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	9.410	0.00	4.40
46.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.067	0.000	9.410	0.00	0.32
47.55	1 5/8" Hybrid	Yes	1.55	0.000	2.00	0.26	0.00	0.068	0.000	9.476	0.00	3.42

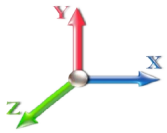
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 54	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
47.55	1/2" Coax	Yes	1.55	0.000	0.65	0.08	0.00	0.068	0.000	9.476	0.00	0.25
48.00	1 5/8" Hybrid	Yes	0.45	0.000	2.00	0.07	0.00	0.068	0.000	9.494	0.00	0.98
48.00	1/2" Coax	Yes	0.45	0.000	0.65	0.02	0.00	0.068	0.000	9.494	0.00	0.07
50.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.069	0.000	9.576	0.00	4.40
50.00	1/2" Coax	Yes	2.00	0.000	0.65	0.11	0.00	0.069	0.000	9.576	0.00	0.32
51.75	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.085	0.000	9.646	0.00	3.85
51.75	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.18	0.00	0.085	0.000	9.646	0.00	0.00
52.00	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.086	0.000	9.656	0.00	0.55
52.00	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.03	0.00	0.086	0.000	9.656	0.00	0.00
52.97	1 5/8" Hybrid	Yes	0.97	0.000	2.00	0.16	0.00	0.086	0.000	9.693	0.00	2.13
52.97	1.25" Reinforcing	Yes	0.97	0.000	1.25	0.10	0.00	0.086	0.000	9.693	0.00	0.00
54.00	1 5/8" Hybrid	Yes	1.03	0.000	2.00	0.17	0.00	0.086	0.000	9.733	0.00	2.27
54.00	1.25" Reinforcing	Yes	1.03	0.000	1.25	0.11	0.00	0.086	0.000	9.733	0.00	0.00
56.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.086	0.000	9.807	0.00	4.40
56.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.086	0.000	9.807	0.00	0.00
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.087	0.000	9.880	0.00	4.40
58.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.087	0.000	9.880	0.00	0.00
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.088	0.000	9.951	0.00	4.40
60.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.088	0.000	9.951	0.00	0.00
62.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.089	0.000	10.020	0.00	4.40
62.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.089	0.000	10.020	0.00	0.00
64.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.090	0.000	10.087	0.00	4.40
64.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.090	0.000	10.087	0.00	0.00
66.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.091	0.000	10.153	0.00	4.40
66.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.091	0.000	10.153	0.00	0.00
66.67	1 5/8" Hybrid	Yes	0.67	0.000	2.00	0.11	0.00	0.092	0.000	10.174	0.00	1.47
66.67	1.25" Reinforcing	Yes	0.67	0.000	1.25	0.07	0.00	0.092	0.000	10.174	0.00	0.00
68.00	1 5/8" Hybrid	Yes	1.33	0.000	2.00	0.22	0.00	0.093	0.000	10.217	0.00	2.93
68.00	1.25" Reinforcing	Yes	1.33	0.000	1.25	0.14	0.00	0.093	0.000	10.217	0.00	0.00
68.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.093	0.000	10.225	0.00	0.55
68.25	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.03	0.00	0.093	0.000	10.225	0.00	0.00
70.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.094	0.000	10.279	0.00	3.85
70.00	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.18	0.00	0.094	0.000	10.279	0.00	0.00
72.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.095	0.000	10.340	0.00	4.40
72.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.095	0.000	10.340	0.00	0.00
73.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.096	0.000	10.370	0.00	2.20
73.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.096	0.000	10.370	0.00	0.00
74.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.096	0.000	10.400	0.00	2.20
74.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.096	0.000	10.400	0.00	0.00
75.25	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.097	0.000	10.437	0.00	2.75
75.25	1.25" Reinforcing	Yes	1.25	0.000	1.25	0.13	0.00	0.097	0.000	10.437	0.00	0.00
76.00	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.097	0.000	10.459	0.00	1.65
76.00	1.25" Reinforcing	Yes	0.75	0.000	1.25	0.08	0.00	0.097	0.000	10.459	0.00	0.00
78.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.079	0.000	10.516	0.00	4.40
78.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.079	0.000	10.516	0.00	0.00
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.061	0.000	10.572	0.00	4.40
82.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	10.627	0.00	4.40

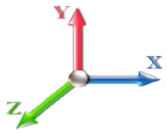
Linear Appurtenance Segment Forces (Factored)

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 55	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	10.681	0.00	4.40
86.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	10.734	0.00	4.40
88.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	10.787	0.00	4.40
90.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	10.838	0.00	4.40
92.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	10.888	0.00	4.40
94.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	10.937	0.00	4.40
96.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.068	0.000	10.986	0.00	4.40
96.18	1 5/8" Hybrid	Yes	0.18	0.000	2.00	0.03	0.00	0.069	0.000	10.990	0.00	0.39
98.00	1 5/8" Hybrid	Yes	1.82	0.000	2.00	0.30	0.00	0.093	0.000	11.034	0.00	4.01
98.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.093	0.000	11.034	0.00	0.00
99.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.114	1.042	11.057	0.00	2.20
99.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.114	1.042	11.057	0.00	0.00
100.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.115	1.044	11.081	0.00	2.20
100.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.115	1.044	11.081	0.00	0.00
100.34	1 5/8" Hybrid	Yes	0.34	0.000	2.00	0.06	0.00	0.115	1.046	11.089	0.00	0.76
100.34	1.25" Reinforcing	Yes	0.34	0.000	1.25	0.04	0.00	0.115	1.046	11.089	0.00	0.00
102.00	1 5/8" Hybrid	Yes	1.66	0.000	2.00	0.28	0.00	0.115	1.044	11.127	0.00	3.64
102.00	1.25" Reinforcing	Yes	1.66	0.000	1.25	0.17	0.00	0.115	1.044	11.127	0.00	0.00
103.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.116	1.047	11.150	0.00	2.20
103.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.116	1.047	11.150	0.00	0.00
104.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.117	1.050	11.173	0.00	2.20
104.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.117	1.050	11.173	0.00	0.00
106.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.095	0.000	11.218	0.00	4.40
106.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.095	0.000	11.218	0.00	0.00
108.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.074	0.000	11.262	0.00	4.40
110.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.075	0.000	11.305	0.00	4.40
112.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.076	0.000	11.348	0.00	4.40
114.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.077	0.000	11.391	0.00	4.40
115.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.078	0.000	11.412	0.00	2.20
										Totals:	**0.0**	**261.0**

Calculated Forces

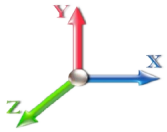
Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 56	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 29

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-28.81	-6.73	0.00	-751.40	0.00	751.40	3031.07	1515.53	5947.06	2977.95	0.00	0.000	0.000	0.262
2.00	-28.41	-6.70	0.00	-737.95	0.00	737.95	3016.33	1508.17	5866.38	2937.55	0.01	-0.031	0.000	0.261
4.00	-28.01	-6.67	0.00	-724.55	0.00	724.55	3001.40	1500.70	5785.81	2897.21	0.03	-0.063	0.000	0.259
6.00	-27.61	-6.64	0.00	-711.21	0.00	711.21	2986.25	1493.13	5705.37	2856.93	0.06	-0.094	0.000	0.258
8.00	-27.22	-6.62	0.00	-697.92	0.00	697.92	2970.91	1485.45	5625.07	2816.71	0.11	-0.126	0.000	0.257
10.00	-26.83	-6.59	0.00	-684.69	0.00	684.69	2955.36	1477.68	5544.90	2776.57	0.17	-0.158	0.000	0.256
12.00	-26.44	-6.56	0.00	-671.52	0.00	671.52	2939.60	1469.80	5464.90	2736.51	0.24	-0.191	0.000	0.254
14.00	-26.05	-6.53	0.00	-658.40	0.00	658.40	2923.65	1461.82	5385.06	2696.53	0.33	-0.224	0.000	0.253
16.00	-25.67	-6.51	0.00	-645.33	0.00	645.33	2907.49	1453.74	5305.39	2656.64	0.43	-0.256	0.000	0.252
18.00	-25.29	-6.48	0.00	-632.32	0.00	632.32	2891.12	1445.56	5225.92	2616.84	0.54	-0.290	0.000	0.250
20.00	-24.91	-6.45	0.00	-619.37	0.00	619.37	2874.56	1437.28	5146.64	2577.14	0.67	-0.323	0.000	0.249
22.00	-24.54	-6.42	0.00	-606.47	0.00	606.47	2857.79	1428.89	5067.57	2537.55	0.81	-0.357	0.000	0.248
24.00	-24.17	-6.39	0.00	-593.64	0.00	593.64	2840.81	1420.41	4988.71	2498.06	0.97	-0.391	0.000	0.246
26.00	-23.80	-6.35	0.00	-580.87	0.00	580.87	2823.63	1411.82	4910.09	2458.69	1.14	-0.425	0.000	0.245
28.00	-23.43	-6.32	0.00	-568.16	0.00	568.16	2806.25	1403.13	4831.70	2419.44	1.33	-0.460	0.000	0.243
30.00	-23.07	-6.29	0.00	-555.51	0.00	555.51	2788.67	1394.33	4753.57	2380.32	1.53	-0.494	0.000	0.242
32.00	-22.71	-6.26	0.00	-542.93	0.00	542.93	2770.88	1385.44	4675.69	2341.32	1.74	-0.529	0.000	0.240
34.00	-22.35	-6.22	0.00	-530.42	0.00	530.42	2752.89	1376.44	4598.09	2302.46	1.97	-0.564	0.000	0.239
36.00	-21.99	-6.19	0.00	-517.97	0.00	517.97	2734.69	1367.35	4520.77	2263.74	2.21	-0.600	0.000	0.237
38.00	-21.64	-6.15	0.00	-505.60	0.00	505.60	2716.29	1358.15	4443.74	2225.17	2.47	-0.636	0.000	0.235
40.00	-21.29	-6.12	0.00	-493.29	0.00	493.29	2697.69	1348.85	4367.01	2186.75	2.75	-0.671	0.000	0.233
42.00	-20.94	-6.09	0.00	-481.05	0.00	481.05	2678.89	1339.44	4290.59	2148.48	3.04	-0.708	0.000	0.232
44.00	-20.60	-6.05	0.00	-468.88	0.00	468.88	2659.88	1329.94	4214.50	2110.38	3.34	-0.744	0.000	0.230
46.00	-20.26	-6.01	0.00	-456.78	0.00	456.78	2640.67	1320.33	4138.74	2072.44	3.66	-0.781	0.000	0.228
47.55	-20.00	-5.98	0.00	-447.44	0.00	447.44	2625.60	1312.80	4080.13	2043.10	3.92	-0.809	0.000	0.227
48.00	-19.88	-5.98	0.00	-444.76	0.00	444.76	2621.25	1310.62	4063.32	2034.68	4.00	-0.818	0.000	0.226
50.00	-19.33	-5.94	0.00	-432.81	0.00	432.81	2601.63	1300.82	3988.26	1997.09	4.35	-0.855	0.000	0.224
51.75	-18.87	-5.90	0.00	-422.42	0.00	422.42	2584.30	1292.15	3922.88	1964.36	4.67	-0.887	0.000	0.147
52.00	-18.80	-5.89	0.00	-420.95	0.00	420.95	2581.81	1290.90	3913.56	1959.69	4.71	-0.891	0.000	0.109
52.97	-18.54	-5.87	0.00	-415.24	0.00	415.24	1914.68	957.34	2935.86	1470.11	4.89	-0.900	0.000	0.119
54.00	-18.40	-5.85	0.00	-409.19	0.00	409.19	1908.40	954.20	2909.37	1456.85	5.09	-0.909	0.000	0.128
56.00	-18.12	-5.81	0.00	-397.50	0.00	397.50	1896.06	948.03	2858.01	1431.13	5.47	-0.929	0.000	0.126
58.00	-17.84	-5.76	0.00	-385.88	0.00	385.88	1883.51	941.76	2806.77	1405.47	5.87	-0.949	0.000	0.124
60.00	-17.57	-5.72	0.00	-374.36	0.00	374.36	1870.76	935.38	2755.66	1379.88	6.27	-0.968	0.000	0.121
62.00	-17.30	-5.68	0.00	-362.92	0.00	362.92	1857.80	928.90	2704.70	1354.36	6.68	-0.988	0.000	0.119
64.00	-17.03	-5.64	0.00	-351.56	0.00	351.56	1844.65	922.32	2653.88	1328.91	7.10	-1.008	0.000	0.117
66.00	-16.76	-5.59	0.00	-340.28	0.00	340.28	1831.29	915.64	2603.23	1303.55	7.52	-1.027	0.000	0.114
66.67	-16.67	-5.58	0.00	-336.54	0.00	336.54	1826.76	913.38	2586.30	1295.07	7.67	-1.034	0.000	0.089
68.00	-16.50	-5.55	0.00	-329.12	0.00	329.12	1817.72	908.86	2552.75	1278.27	7.96	-1.044	0.000	0.114
68.25	-16.46	-5.55	0.00	-327.73	0.00	327.73	1816.01	908.01	2546.46	1275.12	8.01	-1.046	0.000	0.159
70.00	-16.23	-5.51	0.00	-318.02	0.00	318.02	1803.95	901.98	2502.46	1253.09	8.40	-1.070	0.000	0.156
72.00	-15.97	-5.47	0.00	-306.99	0.00	306.99	1789.98	894.99	2452.36	1228.00	8.86	-1.098	0.000	0.153
73.00	-15.83	-5.44	0.00	-301.52	0.00	301.52	1782.92	891.46	2427.38	1215.49	9.09	-1.111	0.000	0.152
74.00	-15.70	-5.42	0.00	-296.08	0.00	296.08	1775.81	887.90	2402.46	1203.02	9.32	-1.125	0.000	0.150
75.25	-15.54	-5.40	0.00	-289.30	0.00	289.30	1766.84	883.42	2371.38	1187.45	9.62	-1.142	0.000	0.148
75.25	-15.54	-5.40	0.00	-289.30	0.00	289.30	1766.84	883.42	2371.38	1187.45	9.62	-1.142	0.000	0.148
76.00	-15.44	-5.39	0.00	-285.26	0.00	285.26	1761.43	880.71	2352.78	1178.14	9.80	-1.153	0.000	0.251
78.00	-15.19	-5.35	0.00	-274.48	0.00	274.48	1746.84	873.42	2303.32	1153.37	10.29	-1.199	0.000	0.247

Calculated Forces

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 57	

Tower Engineering Solutions

80.00	-14.93	-5.32	0.00	-263.78	0.00	263.78	1732.06	866.03	2254.10	1128.72	10.80	-1.245	0.000	0.242
82.00	-14.68	-5.28	0.00	-253.14	0.00	253.14	1717.07	858.53	2205.12	1104.20	11.33	-1.291	0.000	0.238
84.00	-14.43	-5.25	0.00	-242.58	0.00	242.58	1701.88	850.94	2156.41	1079.81	11.89	-1.337	0.000	0.233
86.00	-14.19	-5.21	0.00	-232.08	0.00	232.08	1686.48	843.24	2107.95	1055.54	12.46	-1.383	0.000	0.228
88.00	-13.94	-5.18	0.00	-221.65	0.00	221.65	1670.88	835.44	2059.78	1031.42	13.05	-1.429	0.000	0.223
90.00	-13.70	-5.15	0.00	-211.29	0.00	211.29	1655.08	827.54	2011.90	1007.44	13.65	-1.474	0.000	0.218
92.00	-13.46	-5.11	0.00	-201.00	0.00	201.00	1639.07	819.54	1964.31	983.61	14.28	-1.519	0.000	0.213
94.00	-13.22	-5.08	0.00	-190.78	0.00	190.78	1622.86	811.43	1917.03	959.94	14.93	-1.564	0.000	0.207
96.00	-12.99	-5.04	0.00	-180.63	0.00	180.63	1606.45	803.22	1870.07	936.43	15.59	-1.608	0.000	0.201
96.18	-12.97	-5.04	0.00	-179.74	0.00	179.74	1604.99	802.49	1865.94	934.36	15.65	-1.612	0.000	0.200
98.00	-12.65	-5.00	0.00	-170.56	0.00	170.56	1589.83	794.91	1823.44	913.08	16.28	-1.652	0.000	0.195
99.00	-12.48	-4.98	0.00	-165.56	0.00	165.56	1581.44	790.72	1800.26	901.47	16.62	-1.674	0.000	0.108
100.00	-12.31	-4.96	0.00	-160.58	0.00	160.58	1573.01	786.50	1777.16	889.90	16.98	-1.686	0.000	0.106
100.34	-12.25	-4.95	0.00	-158.87	0.00	158.87	1075.68	537.84	1234.34	618.09	17.10	-1.691	0.000	0.119
102.00	-12.09	-4.92	0.00	-150.67	0.00	150.67	1068.04	534.02	1210.40	606.10	17.69	-1.710	0.000	0.130
103.00	-12.00	-4.90	0.00	-145.76	0.00	145.76	1063.37	531.68	1195.97	598.87	18.05	-1.724	0.000	0.127
103.00	-12.00	-4.90	0.00	-145.76	0.00	145.76	1063.37	531.68	1195.97	598.87	18.05	-1.724	0.000	0.127
104.00	-11.90	-4.88	0.00	-140.86	0.00	140.86	1058.64	529.32	1181.57	591.66	18.41	-1.737	0.000	0.249
106.00	-11.71	-4.85	0.00	-131.10	0.00	131.10	1049.03	524.52	1152.85	577.28	19.15	-1.788	0.000	0.238
108.00	-11.52	-4.82	0.00	-121.40	0.00	121.40	1039.22	519.61	1124.23	562.95	19.91	-1.838	0.000	0.227
110.00	-11.34	-4.78	0.00	-111.76	0.00	111.76	1029.21	514.60	1095.73	548.68	20.69	-1.887	0.000	0.215
112.00	-11.15	-4.75	0.00	-102.19	0.00	102.19	1018.99	509.50	1067.37	534.48	21.49	-1.933	0.000	0.202
114.00	-10.97	-4.72	0.00	-92.69	0.00	92.69	1008.57	504.29	1039.14	520.34	22.31	-1.978	0.000	0.189
115.00	-9.10	-3.95	0.00	-87.97	0.00	87.97	1003.28	501.64	1025.09	513.31	22.73	-2.000	0.000	0.181
116.00	-9.02	-3.93	0.00	-84.02	0.00	84.02	997.95	498.97	1011.07	506.29	23.15	-2.021	0.000	0.175
118.00	-8.84	-3.90	0.00	-76.16	0.00	76.16	987.12	493.56	983.16	492.31	24.00	-2.061	0.000	0.164
120.00	-8.67	-3.86	0.00	-68.36	0.00	68.36	976.09	488.04	955.42	478.42	24.87	-2.100	0.000	0.152
122.00	-8.50	-3.83	0.00	-60.63	0.00	60.63	964.85	482.43	927.87	464.62	25.76	-2.136	0.000	0.139
124.00	-8.33	-3.80	0.00	-52.97	0.00	52.97	953.42	476.71	900.51	450.92	26.66	-2.169	0.000	0.126
126.00	-8.16	-3.76	0.00	-45.38	0.00	45.38	941.77	470.89	873.35	437.32	27.58	-2.200	0.000	0.112
128.00	-8.00	-3.73	0.00	-37.85	0.00	37.85	929.93	464.96	846.40	423.83	28.51	-2.227	0.000	0.098
130.00	-4.38	-2.20	0.00	-30.40	0.00	30.40	917.88	458.94	819.69	410.45	29.45	-2.251	0.000	0.079
132.00	-4.26	-2.16	0.00	-26.01	0.00	26.01	905.63	452.81	793.20	397.19	30.39	-2.272	0.000	0.070
134.00	-4.14	-2.13	0.00	-21.68	0.00	21.68	893.17	446.59	766.97	384.05	31.35	-2.290	0.000	0.061
136.00	-4.02	-2.09	0.00	-17.43	0.00	17.43	880.51	440.26	740.98	371.04	32.31	-2.307	0.000	0.052
138.00	-2.56	-1.13	0.00	-13.24	0.00	13.24	867.65	433.83	715.27	358.17	33.28	-2.320	0.000	0.040
140.00	-2.47	-1.10	0.00	-10.98	0.00	10.98	854.59	427.29	689.83	345.43	34.25	-2.331	0.000	0.035
142.00	-2.39	-1.06	0.00	-8.79	0.00	8.79	841.32	420.66	664.68	332.84	35.23	-2.341	0.000	0.029
144.00	-2.30	-1.03	0.00	-6.66	0.00	6.66	827.84	413.92	639.83	320.39	36.22	-2.349	0.000	0.024
146.00	-2.22	-1.00	0.00	-4.60	0.00	4.60	814.17	407.08	615.29	308.10	37.20	-2.356	0.000	0.018
148.00	-2.14	-0.97	0.00	-2.59	0.00	2.59	796.71	398.35	588.42	294.65	38.19	-2.360	0.000	0.011
149.00	0.00	-0.88	0.00	-1.62	0.00	1.62	787.55	393.77	574.90	287.88	38.68	-2.361	0.000	0.006

Final Analysis Summary

Structure:	CT12215-A-SBA	**Code:**	EIA/TIA-222-G	5/21/2019	
Site Name:	Litchfield 3, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 58	

Tower Engineering Solutions

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 93 mph Wind	25.9	0.00	34.55	0.00	0.00	2910.31
0.9D + 1.6W 93 mph Wind	25.9	0.00	25.91	0.00	0.00	2864.57
1.2D + 1.0Di + 1.0Wi 40 mph Wind	5.5	0.00	65.05	0.00	0.00	656.38
1.2D + 1.0E	0.9	0.00	34.58	0.00	0.00	114.53
0.9D + 1.0E	0.9	0.00	25.94	0.00	0.00	112.58
1.0D + 1.0W 60 mph Wind	6.7	0.00	28.81	0.00	0.00	751.40

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 93 mph Wind	-34.55	-25.86	0.00	-2910.3	0.00	-2910.3	3031.07	1515.5	5947.06	2977.95	0.00	0.989
0.9D + 1.6W 93 mph Wind	-25.91	-25.85	0.00	-2864.5	0.00	-2864.5	3031.07	1515.5	5947.06	2977.95	0.00	0.971
1.2D + 1.0Di + 1.0Wi 40 mph Wind	-32.43	-4.39	0.00	-128.64	0.00	-128.64	1058.64	529.32	1181.57	591.66	104.00	0.248
1.2D + 1.0E	-14.45	-0.77	0.00	-28.63	0.00	-28.63	1058.64	529.32	1181.57	591.66	104.00	0.062
0.9D + 1.0E	-10.84	-0.75	0.00	-27.98	0.00	-27.98	1058.64	529.32	1181.57	591.66	104.00	0.058
1.0D + 1.0W 60 mph Wind	-28.81	-6.73	0.00	-751.40	0.00	-751.40	3031.07	1515.5	5947.06	2977.95	0.00	0.262

Additional Steel Summary

			Intermediate Connectors			Lower Termination				Upper Termination				Max Member			
Elev From (ft)	Elev To (ft)	Member	VQ/I (lb/in)	Vu (kips)	phi Vn (kips)	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	Pu (kips)	phi Pn (kips)	phi Tn (kips)	Ratio
51.8	68.3	(3) PLT-4.5"x 1-1/4"(1.25"ho	263.0	6.31	37.1	225.9	37.1	7	8	163.3	37.1	5	8	225.89	296.2	243.75	0.927
52.0	68.0	(3) LNP-LP6X100-G-20TT	238.3	5.72	25.3	176.2	25.3	7	8	133.0	25.3	6	8	189.02	297.8	292.50	0.646
66.7	75.3	(3) PLT-4.5"x 1-1/4"(1.25"ho	337.2	8.09	37.1	127.1	37.1	4	8	216.8	37.1	6	8	229.21	296.2	243.75	0.940
99.0	103.0	(3) PLT-4x1.25 (1.25 Hole)	441.0	9.70	37.1	150.3	37.1	5	9	157.3	37.1	5	9	160.83	267.8	206.25	0.780

Monopole Mat Foundation Design

Customer Name:	AT&T	**EIA/TIA Standard:**	EIA-222-G
Site Name:	Litchfield 3, CT	**Structure Height (Ft.):**	149
Site Number:	CT12215-A-SBA	**Engineer Name:**	B. Davis
Engr. Number:	75424	**Engineer Login ID:**	

Date 5/21/2019

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

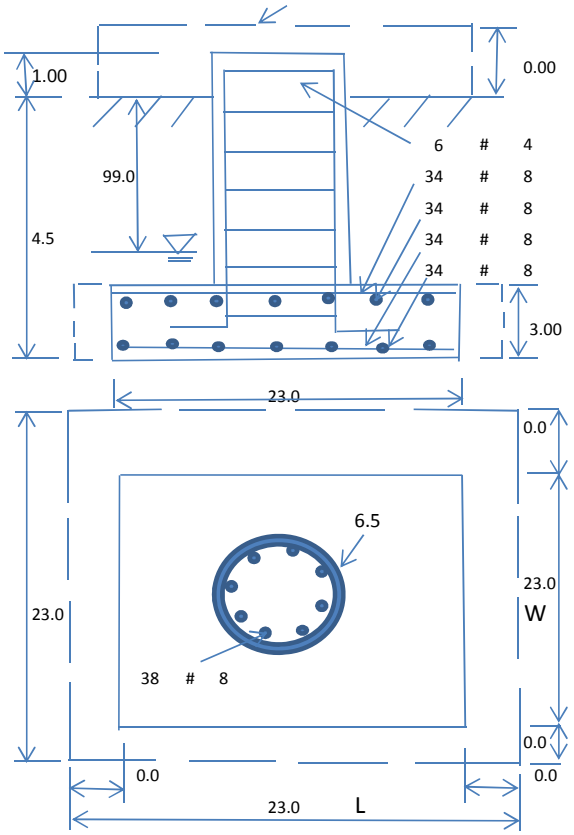
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	34.6	Shear Force (Kips):	25.9
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2910.3
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	6.5	Depth of Base BG (ft.):	4.5
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft):	3.00
Length of Pad (ft.):	23	Width of Pad (ft.):	23
Final Length of pad (ft)	23.0	Final width of pad (ft):	23.0
Control Value for Cell D18:	0	Control Value for Cell F18:	0



Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	38	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	34	Qty. of Rebar in Pad (W):	34	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	34	Qty. of Rebar in Pad (W):	34	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	110.0	Soil Buoyant Weight:	50.0	Pcf		
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	12000	Ultimate Skin Friction:		Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:			1.00	

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.75

Total Dry Soil Volume (cu. Ft.):	743.73	Total Dry Soil Weight (Kips):	81.81
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	81.81	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1669.96	Total Dry Concrete Weight (Kips):	250.49
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	250.49	Total Vertical Load on Base (Kips):	366.90

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	2998	<	Allowable Factored Soil Bearing (psf):	9000	0.33	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	3837.2	>	Design Factored Momont (kips-ft):	3053	0.80	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.26	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 compresion):	0.65		Wind Load Factor on Concrete Design:	1.00		
					Load/ Capacity Ratio	
(1) Concrete Pier:						
Vertical Steel Rebar Area (sq. in./each):	0.79		Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	4704.5	>	Design Factored Moment (Mu, Kips-Ft	2975.1	0.63	OK!
Calculated Shear Capacity (Kips):	578.1	>	Design Factored Shear (Kips):	25.9	0.04	OK!
Calculated Tension Capacity (Tn, Kips):	1621.1	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	8395.1	>	Design Factored Axial Load (Pu Kips):	34.6	0.00	OK!
Moment & Axial Strength Combination:	0.63	OK!	Check Tie Spacing (Design/Required):		1	OK!
Pier Reinforcement Ratio:	0.006		Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	851.0	>	One-Way Factored Shear (L-D. Kips):	197.8	0.23	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	851.0	>	One-Way Factored Shear (W-D., Kips)	197.8	0.23	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	762.6	>	One-Way Factored Shear (C-C, Kips):	196.1	0.26	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0030	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0030		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	3824.5	>	Moment at Bottom (L-Dir. K-Ft):	979.3	0.26	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	3824.5	>	Moment at Bottom (W-Dir. K-Ft):	979.3	0.26	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	5372.0	>	Moment at Bottom (C-C Dir. K-Ft):	1384.9	0.26	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0030	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0030		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	3824.5	>	Moment at the top (L-Dir K-Ft):	459.6	0.12	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	3824.5	>	Moment at the top (W-Dir K-Ft):	459.6	0.12	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	5372.0	>	Moment at the top (C-C Dir. K-Ft):	431.3	0.08	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	1164.1	k-ft.	Max. factored shear stress v_{u_CD}:		4.2	Psi
Max. factored shear stress v_{u_AB}:	8.9	Psi	Factored shear Strength ϕv_n:		189.7	Psi
Max. factored shear stress v_u:	8.9	Psi	Check Usage of Punching Shear Capacity:		0.05	OK!

February 26, 2019

Angie Bruce
SAI Communications, Inc.
12 Industrial Way
Salem, NH 03079
(603) 952-8468

B+T Group
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Tulsa, OK 74119
(918) 587-4630
btwo@btgrp.com

Subject:	**Appurtenance Mount Modification Report**	
Carrier Designation:	**Site Number:**	10087534
	Site Name:	CT1035
Engineering Firm Designation:	**B+T Group Project Number:**	130653.003.01
Site Data:	**1291 Bantam Road, Litchfield, CT, 06759, Litchfield County** **Latitude *41.71717*°, Longitude *-73.26093*°** **Monopole** **14.167' Platform Mount**	

Dear Ms. Bruce,

B+T Group is pleased to submit this **"Appurtenance Mount Modification Report"** to determine the structural integrity of the antenna mount on the above-mentioned structure.

The purpose of the analysis is to determine acceptability of the mount's stress level. Based on our analysis we have determined the stress level for the mount under the following load case to be:

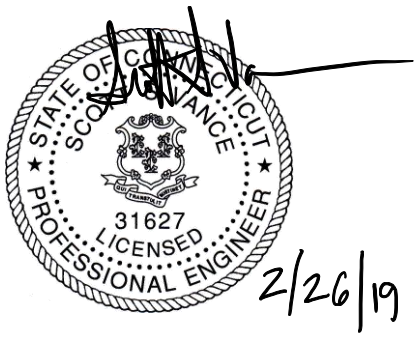
Existing + Proposed Equipment Note: See Table 1 for the final loading configuration	**Sufficient Capacity** (Passing at 79.5%)

This analysis has been performed in accordance with the 2018 International Building Code based upon an ultimate 3-second gust wind speed of 115 mph. Exposure Category C and Risk Category II were used in this analysis.

Mount structural modification prepared by: Suman Rana, E.I.T

Respectfully submitted by: B&T Engineering, Inc.
COA: PEC.0001564 Expires: 02/10/2020

Scott S. Vance, P.E.



2/26/19

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1) INTRODUCTION

The appurtenance mount consists of platform mount at 126.5ft., attached to monopole at 1291 Bantam Road, Litchfield, CT, 06759, Litchfield County. The proposed antenna loading information was obtained from SAI Communications, Inc. All information provided to B+T Group was assumed accurate and complete.

2) ANALYSIS CRITERIA

The structural analysis was performed for this mount in accordance with the ANSI/TIA-222-H-2017 Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures using a 3-second gust wind speed of 115 mph with no ice and 50 mph with 1 inch escalated ice thickness Exposure Category C with topographic factor 1 and Risk Category II were used in this analysis. In addition, the platform mount has been analyzed for various live loading conditions consisting of a 250-lb man live load applied individually at the midpoint and cantilevered ends of horizontal members as well as a 250-pound man live load applied individually at mount pipe locations using a 3-second gust of 30mph. The mount was analyzed under 30º increments in the wind direction. The analyzed loading is detailed in Table 1.

Table 1 – Proposed and Existing Equipment Information

Loading	RAD Center Elev. (ft.)	Position	Qty.	Manufacturer	Model / Type	Note
Proposed	129	3,5	6	Kathrein	800-10965	1
		3	3	Ericsson	B14 4478	3
		5	3	Ericsson	B5/B12 4449	2
			3	Ericsson	B2/B66A 8843	
		-	1	Raycap	DC6-48-60-0-8C-EV	3
Existing	129	1	3	Powerwave	7770	4
			6	Powerwave	LGP 21401	
		-	1	Raycap	DC6-48-60-18-8C	

Note:
(1) Proposed Antenna to be installed on the existing Mount Pipe.
(2) Proposed Equipment to be installed side by side with RRUS Support, directly behind the Antenna
(3) Proposed Equipment to be installed on the mount
(4) Existing Equipment installed on the Mount.

Table 2 - Documents Provided

Documents	Remarks	Reference	Source
RFDS	Existing Loading Proposed Loading	Date: 12/27/2018	SAI Communications, Inc.
Scoping Details	Existing Loading Proposed Loading	Date: 01/08/2019	SAI Communications, Inc.
Mount Mapping	B+T Group	Date: 01/31/2019	On File
Mount Analysis	B+T Group	Date: 02/08/2019	On File

3) ANALYSIS PROCEDURE

3.1) Analysis Method

RISA-3D (Version 17.0.0), a commercially available analysis software package, was used to create a three-dimensional model of the mount and calculate member stresses and deflections for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1. The mount was built in accordance with the manufacturer's specifications.
2. The mount has been maintained in accordance with the manufacturer's specifications and is free of damage.
3. The configuration of antennas and other appurtenances are as specified in Table 1.
4. All mount components have been assumed to be in sufficient condition to carry their full design capacity for the analysis.
5. Mount areas and weights are determined from field measurements, standard material properties, and/or manufacturer product data.

Component	Section	Length	Note
New Mount Pipes at the proposed antenna location	2" Std. Pipe	8'-0"	-

6. Serviceability with respect to antenna twist, tilt, roll or lateral translation is not checked and is left to the carrier or tower owner to ensure conformance.
7. All prior structural modifications, if any are assumed to be correctly installed and fully effective.
8. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
9. The following material grades were assumed (Unless Noted Otherwise):
   a. Channels — ASTM A36 (GR 36)
   b. Solid Rods — ASTM A36 (GR 36)
   c. Angles — ASTM A36 (GR 36)
   d. Plates — ASTM A36 (GR 36)
   e. HSS (Rectangular) — ASTM 500 (GR B-46)
   f. HSS (Round) — ASTM 500 (GR B-42)
   g. Pipes — ASTM A53 (GR 35)
   h. Connection Bolts — ASTM A325

This analysis may be affected if any assumptions are not valid or have been made in error. B+T Group should be notified to determine the effect on the structural integrity of the antenna mounting system.

4) ANALYSIS RESULTS

Table 3 – Mount Component Stresses vs. Capacity

Notes	Component	Elevation (ft.)	% Capacity	Pass / Fail
-	Main Horizontals	126.5	79.5	Pass
-	Supporting Angles	126.5	35.2	Pass
-	Supporting Tubes	126.5	20.7	Pass
-	Mount Pipes	126.5	22.9	Pass
Proposed	New Horizontal Pipe	126.5	34.3	Pass
Proposed	Stabilizer kit	126.5	73.7	Pass

4.1) Structural Notes:

1) All modifications proposed in this report shall be installed in accordance with the attached drawing for the determined available structural capacity to be effective.
2) If the loading differs from that described in Table 1 of this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
3) B+T Group certifies that carrier's entire antenna structure will support the equipment deployment.

4) No erection or modification of the structure shall be made without approval of the structural engineer.

APPENDIX A

(RISA-3D Output)

PROJECT	**130653.003.01 - Litchfield, Ba**		**SR**
SUBJECT	**Platform Mount - Mount Analysis**		
DATE	**02/26/19**	PAGE	OF

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Manufacturer	Model	Qty	Aspect Ratio	C_a flat/round	A_A (ft^2) Normal	A_A (ft^2) Trans.	$A_{A\text{-}Ice}$ (ft^2) Normal	$A_{A\text{-}ice}$ (ft^2) Trans.	$F_{A\ No\ Ice\ (N)}$	$F_{A\ No\ Ice\ (T)}$	$F_{A\ Ice\ (N)}$	$F_{A\ Ice\ (T)}$
Powerwave	7770	0.5	5.00	1.31	2.10	0.95	2.64	1.45	0.12	0.06	0.02	0.01
Powerwave	7770	0.5	5.00	1.31	2.10	0.95	2.64	1.45	0.12	0.06	0.02	0.01
Powerwave	LGP21401	2	5.19	1.32	0.53	1.36	1.13	2.10	0.03	0.07	0.01	0.01
Kathrein	800-10965	0.5	3.94	1.26	5.47	1.89	6.27	2.58	0.30	0.13	0.06	0.02
Kathrein	800-10965	0.5	3.94	1.26	5.47	1.89	6.27	2.58	0.30	0.13	0.06	0.02
Ericsson	B14 4478	1	1.23	1.20	1.54	0.88	2.05	1.30	0.08	0.05	0.01	0.01
Kathrein	800-10965	0.5	3.94	1.26	5.47	1.89	6.27	2.58	0.30	0.13	0.06	0.02
Kathrein	800-10965	0.5	3.94	1.26	5.47	1.89	6.27	2.58	0.30	0.13	0.06	0.02
Ericsson	B5/B12 4449	1	1.43	1.20	1.08	1.37	1.52	1.85	0.06	0.07	0.01	0.01
Ericsson	B2/B66A 8843	1	1.35	1.20	1.15	1.37	1.60	1.86	0.06	0.07	0.01	0.01
Raycap	DC6-48-60-18-8C	1	3.07	0.51	2.23	2.23	2.93	2.93	0.05	0.05	0.01	0.01
Raycap	DC6-48-60-18-8C-EV	1	3.07	0.51	2.23	2.23	2.93	2.93	0.05	0.05	0.01	0.01
Powerwave	7770	0.5	5.00	1.31	2.10	0.95	2.64	1.45	0.12	0.06	0.02	0.01
Powerwave	7770	0.5	5.00	1.31	2.10	0.95	2.64	1.45	0.12	0.06	0.02	0.01
Powerwave	LGP21401	1	5.19	1.32	0.26	0.68	0.56	1.05	0.01	0.04	0.00	0.01

PROJECT	**130653.003.01 - Litchfield, Ba**		**SR**
SUBJECT	**Platform Mount - Mount Analysis**		
DATE	**02/26/19**	PAGE	OF

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Manufacturer	Model	Qty	Aspect Ratio	C_a flat/round	A_A (ft^2) Normal	A_A (ft^2) Trans.	$A_{A\text{-}Ice}$ (ft^2) Normal	$A_{A\text{-}ice}$ (ft^2) Trans.	$F_{A\ No\ Ice\ (N)}$	$F_{A\ No\ Ice\ (T)}$	$F_{A\ Ice\ (N)}$	$F_{A\ Ice\ (T)}$
Kathrein	800-10965	0.5	3.94	1.26	5.47	1.89	6.27	2.58	0.00	0.13	0.06	0.02
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Ericsson	B14 4478	1	1.23	1.20	1.54	0.88	2.05	1.30	0.00	0.05	0.01	0.01
Kathrein	800-10965	0.5	3.94	1.26	5.47	1.89	6.27	2.58	0.00	0.13	0.06	0.02
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Ericsson	B5/B12 4449	1	1.43	1.20	1.08	1.37	1.52	1.85	0.00	0.07	0.01	0.01
Ericsson	B2/B66A 8843	1	1.35	1.20	1.15	1.37	1.60	1.86	0.00	0.07	0.01	0.01
Powerwave	7770	0.5	5.00	1.31	2.10	0.95	2.64	1.45	0.00	0.06	0.02	0.01
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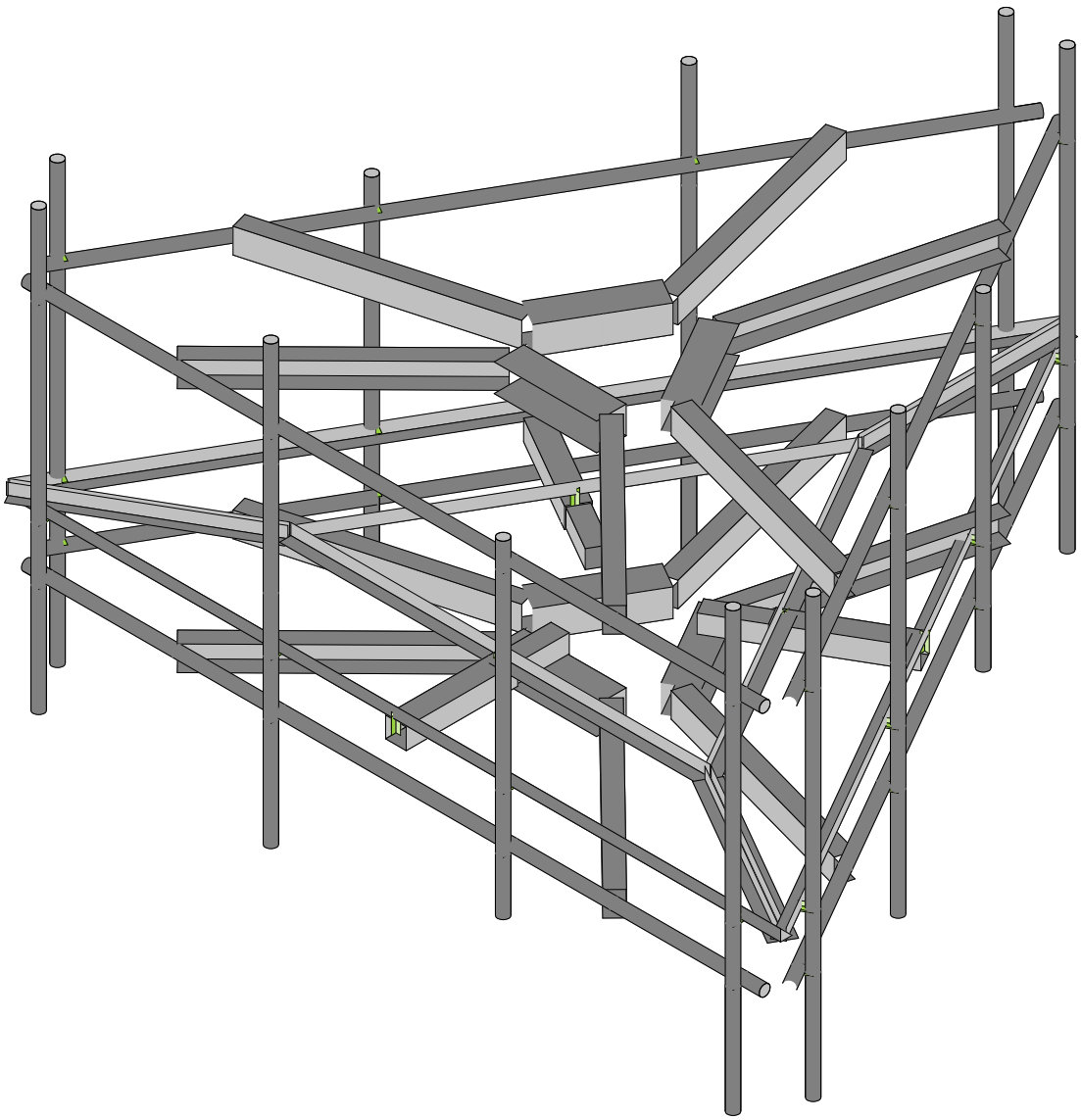
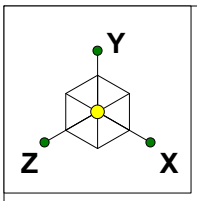
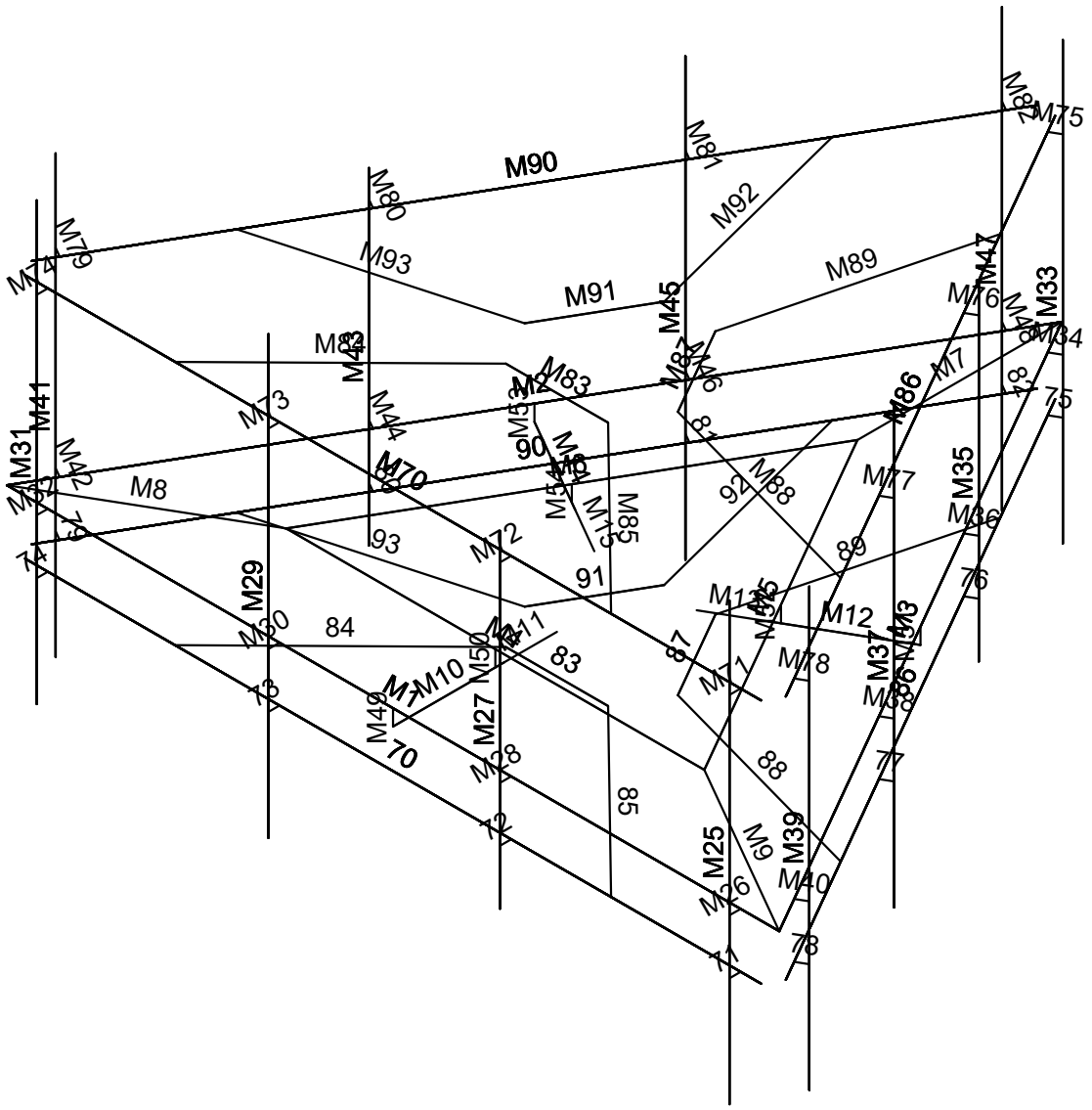
Powerwave	LGP21401	1	5.19	1.32	0.26	0.68	0.56	1.05	0.00	0.04	0.00	0.01
Kathrein	800-10965	0.5	3.94	1.26	5.47	1.89	6.27	2.58	0.00	0.13	0.06	0.02
Kathrein	800-10965	0.5	3.94	1.26	5.47	1.89	6.27	2.58	0.00	0.13	0.06	0.02
Ericsson	B14 4478	1	1.23	1.20	1.54	0.88	2.05	1.30	0.00	0.05	0.01	0.01
Kathrein	800-10965	0.5	3.94	1.26	5.47	1.89	6.27	2.58	0.00	0.13	0.06	0.02
Kathrein	800-10965	0.5	3.94	1.26	5.47	1.89	6.27	2.58	0.00	0.13	0.06	0.02
Ericsson	B5/B12 4449	1	1.43	1.20	1.08	1.37	1.52	1.85	0.00	0.07	0.01	0.01
Ericsson	B2/B66A 8843	1	1.35	1.20	1.15	1.37	1.60	1.86	0.00	0.07	0.01	0.01



Envelope Only Solution

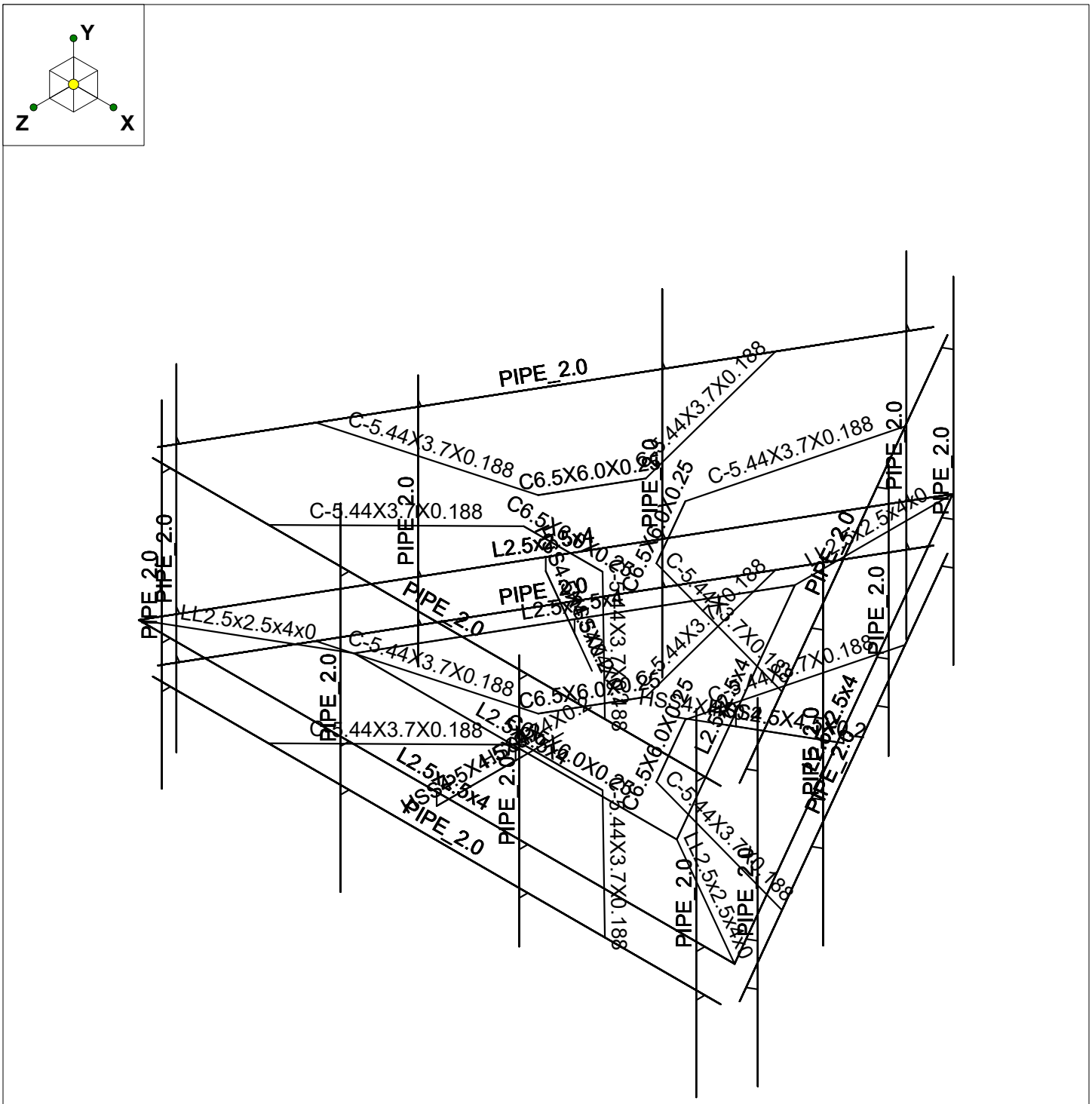
B+T Group	10087534 - Litchfield, Bantam Rdr	SK - 3
SR		Feb 26, 2019 at 11:17 AM
130653.003.01		130653_003_01_Litchfield, Banta...





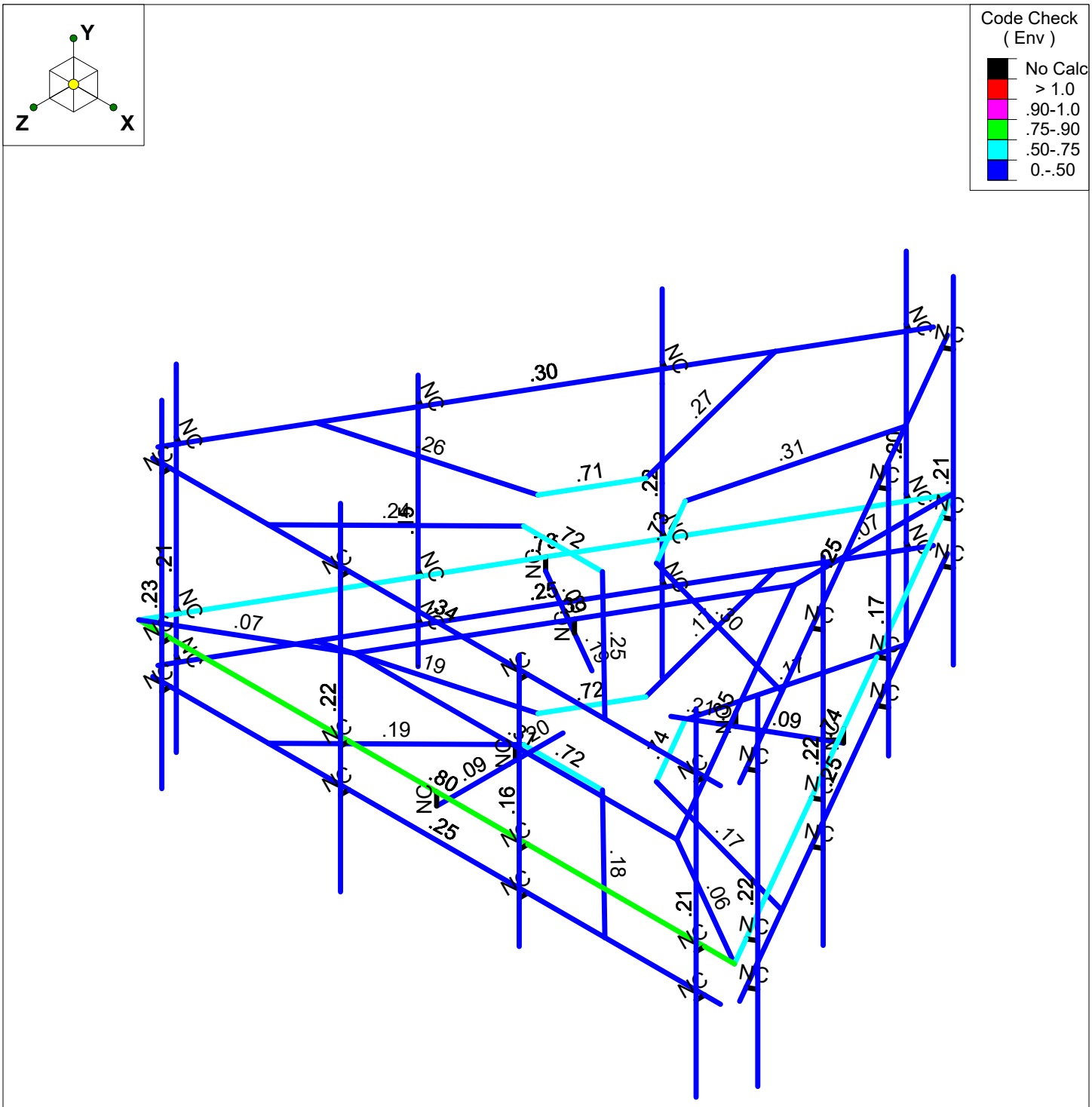
Envelope Only Solution

B+T Group	10087534 - Litchfield, Bantam Rdr	SK - 4
SR		Feb 26, 2019 at 11:17 AM
130653.003.01		130653_003_01_Litchfield, Banta...



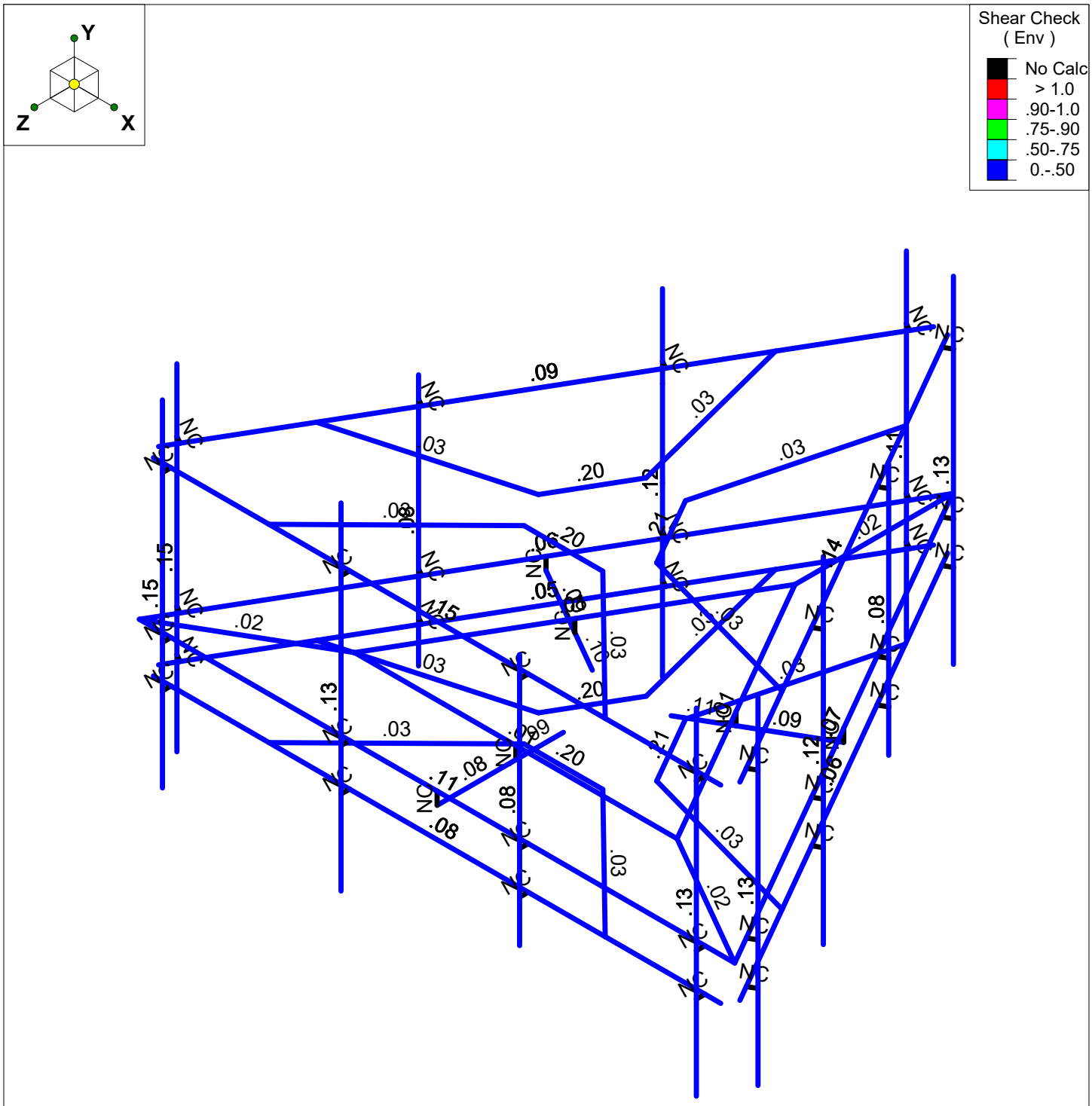
Envelope Only Solution

B+T Group	10087534 - Litchfield, Bantam Rdr	SK - 5
SR		Feb 26, 2019 at 11:18 AM
130653.003.01		130653_003_01_Litchfield, Banta...



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group	10087534 - Litchfield, Bantam Rdr	SK - 6
SR		Feb 26, 2019 at 11:18 AM
130653.003.01		130653_003_01_Litchfield, Banta...



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group	10087534 - Litchfield, Bantam Rdr	SK - 7
SR		Feb 26, 2019 at 11:18 AM
130653.003.01		130653_003_01_Litchfield, Banta...

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	MF-H1	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
2	F1-SA1	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
3	F1-SA2	LL2.5x2.5x4x0	Beam	Double Angle (No G...	A36 Gr.36	Typical	2.38	2.57	1.38	.052
4	F1-ST1	HSS4X4X0.2	Beam	Tube	A500 Gr.B Rect	Typical	3.184	7.645	7.645	11.432
5	F1-ST2	HSS4.5X4.5X0.2	Beam	Tube	A500 Gr.B Rect	Typical	3.44	10.624	10.624	15.901
6	MF-P1	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
7	NEW HA...	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
8	NEW CH...	C-5.44X3.7X0.188	Beam	Channel	A36 Gr.36	Typical	2.343	3.333	11.632	.027
9	NEW CH...	C6.5X6.0X0.25	Beam	Channel	A36 Gr.36	Typical	4.375	16.8	28.279	.089
10	HR PIPE	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N1	0	0	0	0	
2	N2	-0.	0	-98.149546	0	
3	N3	-0.	0	-53.149546	0	
4	N4	-85	0	49.074773	0	
5	N5	-46.028857	0	26.574773	0	
6	N6	85	0	49.074773	0	
7	N7	46.028857	0	26.574773	0	
8	N8	0.	-3.4992	24.575573	0	
9	N9	0.	-3.4992	12.99996	0	
10	N10	21.28307	-3.4992	-12.287786	0	
11	N11	11.258296	-3.4992	-6.49998	0	
12	N12	-21.28307	-3.4992	-12.287786	0	
13	N13	-11.258296	-3.4992	-6.49998	0	
14	N14	-24.9992	5.88e-14	47.514733	0	
15	N16	-24.9992	36.569627	51.514733	0	
16	N18	-24.9992	12	51.514733	0	
17	N22	57.112667	36.569627	-4.107424	0	
18	N24	57.112667	12	-4.107424	0	
19	N27	-28.649366	48	-45.407309	0	
20	N28	-32.113467	36.569627	-47.407309	0	
21	N30	-32.113467	12	-47.407309	0	
22	N32	76.5004	60	51.514733	0	
23	N33	76.5004	-36	51.514733	0	
24	N34	76.5004	0	49.074773	0	
25	N35	76.5004	0	51.514733	0	
26	N36	26.0008	48	51.514733	0	
27	N37	26.0008	-24	51.514733	0	
28	N38	26.0008	0	49.074773	0	
29	N39	26.0008	0	51.514733	0	
30	N40	-24.9992	60	51.514733	0	
31	N41	-24.9992	-36	51.514733	0	
32	N42	-24.9992	0	49.074773	0	
33	N43	-24.9992	0	51.514733	0	
34	N44	-75.9992	60	51.514733	0	
35	N45	-75.9992	-36	51.514733	0	
36	N46	-75.9992	0	49.074773	0	
37	N47	-75.9992	0	51.514733	0	
38	N48	6.362867	60	-92.008656	0	
39	N49	6.362867	-36	-92.008656	0	
40	N50	4.2498	0	-90.788676	0	
41	N51	6.362867	0	-92.008656	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
42	N52	31.612667	48	-48.27472	0	
43	N53	31.612667	-24	-48.27472	0	
44	N54	29.4996	0	-47.05474	0	
45	N55	31.612667	0	-48.27472	0	
46	N56	57.112667	60	-4.107424	0	
47	N57	57.112667	-36	-4.107424	0	
48	N58	54.9996	0	-2.887444	0	
49	N59	57.112667	0	-4.107424	0	
50	N60	82.612667	60	40.059871	0	
51	N61	82.612667	-36	40.059871	0	
52	N62	80.4996	0	41.279851	0	
53	N63	82.612667	0	40.059871	0	
54	N64	-82.863267	60	40.493923	0	
55	N65	-82.863267	-36	40.493923	0	
56	N66	-80.7502	0	41.713903	0	
57	N67	-82.863267	0	40.493923	0	
58	N68	-57.613467	48	-3.240013	0	
59	N69	-57.613467	-24	-3.240013	0	
60	N70	-55.5004	0	-2.020033	0	
61	N71	-57.613467	0	-3.240013	0	
62	N72	-32.113467	60	-47.407309	0	
63	N73	-32.113467	-36	-47.407309	0	
64	N74	-30.0004	0	-46.187329	0	
65	N75	-32.113467	0	-47.407309	0	
66	N76	-6.613467	60	-91.574604	0	
67	N77	-6.613467	-36	-91.574604	0	
68	N78	-4.5004	0	-90.354624	0	
69	N79	-6.613467	0	-91.574604	0	
70	N80	0.	0	49.074773	0	
71	N81	0.	-3.4992	49.074773	0	
72	N82	0.	0	26.574773	0	
73	N83	0.	-3.4992	26.574773	0	
74	N84	42.5	0	-24.537386	0	
75	N85	42.5	-3.4992	-24.537386	0	
76	N86	23.014428	0	-13.287386	0	
77	N87	23.014428	-3.4992	-13.287386	0	
78	N88	-42.5	0	-24.537386	0	
79	N89	-42.5	-3.4992	-24.537386	0	
80	N90	-23.014428	0	-13.287386	0	
81	N91	-23.014428	-3.4992	-13.287386	0	
82	128	-0.	-12	-98.149546	0	
83	129	-81	-12	49.074773	0	
84	130	81	-12	49.074773	0	
85	131	76.5004	-12	49.074773	0	
86	132	76.5004	-12	51.514733	0	
87	133	26.0008	-12	49.074773	0	
88	134	26.0008	-12	51.514733	0	
89	135	-24.9992	-12	49.074773	0	
90	136	-24.9992	-12	51.514733	0	
91	137	-75.9992	-12	49.074773	0	
92	138	-75.9992	-12	51.514733	0	
93	139	4.2498	-12	-90.788676	0	
94	140	6.362867	-12	-92.008656	0	
95	141	29.4996	-12	-47.05474	0	
96	142	31.612667	-12	-48.27472	0	
97	143	54.9996	-12	-2.887444	0	
98	144	57.112667	-12	-4.107424	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
99	145	80.4996	-12	41.279851	0	
100	146	82.612667	-12	40.059871	0	
101	147	-80.7502	-12	41.713903	0	
102	148	-82.863267	-12	40.493923	0	
103	149	-55.5004	-12	-2.020033	0	
104	150	-57.613467	-12	-3.240013	0	
105	151	-30.0004	-12	-46.187329	0	
106	152	-32.113467	-12	-47.407309	0	
107	153	-4.5004	-12	-90.354624	0	
108	154	-6.613467	-12	-91.574604	0	
109	155	0.	-11.9992	12.99996	0	
110	156	11.258296	-11.9992	-6.49998	0	
111	157	-11.258296	-11.9992	-6.49998	0	
112	158	-11.25	-11.9992	12.99996	0	
113	159	11.25	-11.9992	12.99996	0	
114	160	-48.	-12	49.074773	0	
115	161	48.	-12	49.074773	0	
116	162	83	-12	45.610671	0	
117	163	2.	-12	-94.685444	0	
118	164	16.883296	-11.9992	3.242806	0	
119	165	5.633296	-11.9992	-16.242766	0	
120	166	66.5	-12	17.031833	0	
121	167	18.5	-12	-66.106606	0	
122	168	-2.	-12	-94.685444	0	
123	169	-83	-12	45.610671	0	
124	170	-5.633296	-11.9992	-16.242766	0	
125	171	-16.883296	-11.9992	3.242806	0	
126	172	-18.5	-12	-66.106606	0	
127	173	-66.5	-12	17.031833	0	
128	N128	-0.	42	-98.149546	0	
129	N129	-81	42	49.074773	0	
130	N130	81	42	49.074773	0	
131	N131	76.5004	42	49.074773	0	
132	N132	76.5004	42	51.514733	0	
133	N133	26.0008	42	49.074773	0	
134	N134	26.0008	42	51.514733	0	
135	N135	-24.9992	42	49.074773	0	
136	N136	-24.9992	42	51.514733	0	
137	N137	-75.9992	42	49.074773	0	
138	N138	-75.9992	42	51.514733	0	
139	N139	4.2498	42	-90.788676	0	
140	N140	6.362867	42	-92.008656	0	
141	N141	29.4996	42	-47.05474	0	
142	N142	31.612667	42	-48.27472	0	
143	N143	54.9996	42	-2.887444	0	
144	N144	57.112667	42	-4.107424	0	
145	N145	80.4996	42	41.279851	0	
146	N146	82.612667	42	40.059871	0	
147	N147	-80.7502	42	41.713903	0	
148	N148	-82.863267	42	40.493923	0	
149	N149	-55.5004	42	-2.020033	0	
150	N150	-57.613467	42	-3.240013	0	
151	N151	-30.0004	42	-46.187329	0	
152	N152	-32.113467	42	-47.407309	0	
153	N153	-4.5004	42	-90.354624	0	
154	N154	-6.613467	42	-91.574604	0	
155	N155	0.	42.0008	12.99996	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
156	N156	11.258296	42.0008	-6.49998	0	
157	N157	-11.258296	42.0008	-6.49998	0	
158	N158	-11.25	42.0008	12.99996	0	
159	N159	11.25	42.0008	12.99996	0	
160	N160	-48.	42	49.074773	0	
161	N161	48.	42	49.074773	0	
162	N162	83	42	45.610671	0	
163	N163	2.	42	-94.685444	0	
164	N164	16.883296	42.0008	3.242806	0	
165	N165	5.633296	42.0008	-16.242766	0	
166	N166	66.5	42	17.031833	0	
167	N167	18.5	42	-66.106606	0	
168	N168	-2.	42	-94.685444	0	
169	N169	-83	42	45.610671	0	
170	N170	-5.633296	42.0008	-16.242766	0	
171	N171	-16.883296	42.0008	3.242806	0	
172	N172	-18.5	42	-66.106606	0	
173	N173	-66.5	42	17.031833	0	

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N4	N6		270	MF-H1	Beam	Single Angle	A36 Gr.36	Typical
2	M2	N4	N2			MF-H1	Beam	Single Angle	A36 Gr.36	Typical
3	M3	N2	N6			MF-H1	Beam	Single Angle	A36 Gr.36	Typical
4	M4	N5	N7			F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
5	M5	N7	N3			F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
6	M6	N3	N5			F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
7	M7	N2	N3		180	F1-SA2	Beam	Double Angle (...	A36 Gr.36	Typical
8	M8	N4	N5		180	F1-SA2	Beam	Double Angle (...	A36 Gr.36	Typical
9	M9	N6	N7		180	F1-SA2	Beam	Double Angle (...	A36 Gr.36	Typical
10	M10	N81	N8			F1-ST2	Beam	Tube	A500 Gr.B...	Typical
11	M11	N8	N9			F1-ST1	Beam	Tube	A500 Gr.B...	Typical
12	M12	N85	N10			F1-ST2	Beam	Tube	A500 Gr.B...	Typical
13	M13	N10	N11			F1-ST1	Beam	Tube	A500 Gr.B...	Typical
14	M14	N89	N12			F1-ST2	Beam	Tube	A500 Gr.B...	Typical
15	M15	N12	N13			F1-ST1	Beam	Tube	A500 Gr.B...	Typical
16	M25	N32	N33			MF-P1	Column	Pipe	A53 Gr.B	Typical
17	M26	N34	N35			RIGID	None	None	RIGID	Typical
18	M27	N36	N37			MF-P1	Column	Pipe	A53 Gr.B	Typical
19	M28	N38	N39			RIGID	None	None	RIGID	Typical
20	M29	N40	N41			MF-P1	Column	Pipe	A53 Gr.B	Typical
21	M30	N42	N43			RIGID	None	None	RIGID	Typical
22	M31	N44	N45			MF-P1	Column	Pipe	A53 Gr.B	Typical
23	M32	N46	N47			RIGID	None	None	RIGID	Typical
24	M33	N48	N49			MF-P1	Column	Pipe	A53 Gr.B	Typical
25	M34	N50	N51			RIGID	None	None	RIGID	Typical
26	M35	N52	N53			MF-P1	Column	Pipe	A53 Gr.B	Typical
27	M36	N54	N55			RIGID	None	None	RIGID	Typical
28	M37	N56	N57			MF-P1	Column	Pipe	A53 Gr.B	Typical
29	M38	N58	N59			RIGID	None	None	RIGID	Typical
30	M39	N60	N61			MF-P1	Column	Pipe	A53 Gr.B	Typical
31	M40	N62	N63			RIGID	None	None	RIGID	Typical
32	M41	N64	N65			MF-P1	Column	Pipe	A53 Gr.B	Typical
33	M42	N66	N67			RIGID	None	None	RIGID	Typical
34	M43	N68	N69			MF-P1	Column	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
35	M44	N70	N71			RIGID	None	None	RIGID	Typical
36	M45	N72	N73			MF-P1	Column	Pipe	A53 Gr.B	Typical
37	M46	N74	N75			RIGID	None	None	RIGID	Typical
38	M47	N76	N77			MF-P1	Column	Pipe	A53 Gr.B	Typical
39	M48	N78	N79			RIGID	None	None	RIGID	Typical
40	M49	N80	N81			RIGID	None	None	RIGID	Typical
41	M50	N82	N83			RIGID	None	None	RIGID	Typical
42	M51	N84	N85			RIGID	None	None	RIGID	Typical
43	M52	N86	N87			RIGID	None	None	RIGID	Typical
44	M53	N88	N89			RIGID	None	None	RIGID	Typical
45	M54	N90	N91			RIGID	None	None	RIGID	Typical
46	70	129	130		270	NEW HANDR...	Beam	Pipe	A53 Gr.B	Typical
47	71	131	132			RIGID	None	None	RIGID	Typical
48	72	133	134			RIGID	None	None	RIGID	Typical
49	73	135	136			RIGID	None	None	RIGID	Typical
50	74	137	138			RIGID	None	None	RIGID	Typical
51	75	139	140			RIGID	None	None	RIGID	Typical
52	76	141	142			RIGID	None	None	RIGID	Typical
53	77	143	144			RIGID	None	None	RIGID	Typical
54	78	145	146			RIGID	None	None	RIGID	Typical
55	79	147	148			RIGID	None	None	RIGID	Typical
56	80	149	150			RIGID	None	None	RIGID	Typical
57	81	151	152			RIGID	None	None	RIGID	Typical
58	82	153	154			RIGID	None	None	RIGID	Typical
59	83	158	159			NEW CH CON...	Beam	Channel	A36 Gr.36	Typical
60	84	160	158			NEW CHANN...	Beam	Channel	A36 Gr.36	Typical
61	85	161	159		180	NEW CHANN...	Beam	Channel	A36 Gr.36	Typical
62	86	162	163		270	NEW HANDR...	Beam	Pipe	A53 Gr.B	Typical
63	87	164	165			NEW CH CON...	Beam	Channel	A36 Gr.36	Typical
64	88	166	164			NEW CHANN...	Beam	Channel	A36 Gr.36	Typical
65	89	167	165		180	NEW CHANN...	Beam	Channel	A36 Gr.36	Typical
66	90	168	169		270	NEW HANDR...	Beam	Pipe	A53 Gr.B	Typical
67	91	170	171			NEW CH CON...	Beam	Channel	A36 Gr.36	Typical
68	92	172	170			NEW CHANN...	Beam	Channel	A36 Gr.36	Typical
69	93	173	171		180	NEW CHANN...	Beam	Channel	A36 Gr.36	Typical
70	M70	N129	N130		270	NEW HANDR...	Beam	Pipe	A53 Gr.B	Typical
71	M71	N131	N132			RIGID	None	None	RIGID	Typical
72	M72	N133	N134			RIGID	None	None	RIGID	Typical
73	M73	N135	N136			RIGID	None	None	RIGID	Typical
74	M74	N137	N138			RIGID	None	None	RIGID	Typical
75	M75	N139	N140			RIGID	None	None	RIGID	Typical
76	M76	N141	N142			RIGID	None	None	RIGID	Typical
77	M77	N143	N144			RIGID	None	None	RIGID	Typical
78	M78	N145	N146			RIGID	None	None	RIGID	Typical
79	M79	N147	N148			RIGID	None	None	RIGID	Typical
80	M80	N149	N150			RIGID	None	None	RIGID	Typical
81	M81	N151	N152			RIGID	None	None	RIGID	Typical
82	M82	N153	N154			RIGID	None	None	RIGID	Typical
83	M83	N158	N159			NEW CH CON...	Beam	Channel	A36 Gr.36	Typical
84	M84	N160	N158			NEW CHANN...	Beam	Channel	A36 Gr.36	Typical
85	M85	N161	N159		180	NEW CHANN...	Beam	Channel	A36 Gr.36	Typical
86	M86	N162	N163		270	NEW HANDR...	Beam	Pipe	A53 Gr.B	Typical
87	M87	N164	N165			NEW CH CON...	Beam	Channel	A36 Gr.36	Typical
88	M88	N166	N164			NEW CHANN...	Beam	Channel	A36 Gr.36	Typical
89	M89	N167	N165		180	NEW CHANN...	Beam	Channel	A36 Gr.36	Typical
90	M90	N168	N169		270	NEW HANDR...	Beam	Pipe	A53 Gr.B	Typical
91	M91	N170	N171			NEW CH CON...	Beam	Channel	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
92	M92	N172	N170			NEW CHANN...	Beam	Channel	A36 Gr.36	Typical
93	M93	N173	N171		180	NEW CHANN...	Beam	Channel	A36 Gr.36	Typical

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Dead	DL		-1			55		3	
2	0 Wind - No Ice	WLZ					55	51		
3	90 Wind - No Ice	WLX					55	51		
4	0 Wind - Ice	WLZ					55	51		
5	90 Wind - Ice	WLX					55	51		
6	0 Wind - Service	WLZ					55	51		
7	90 Wind - Service	WLX					55	51		
8	Ice	OL1					55	51	3	
9	Live Load a	LL				1				
10	Live Load b	LL				1				
11	Live Load c	LL				1				
12	Live Load d	LL				1				
13	Maint LL 1	LL					1			
14	Maint LL 2	LL					1			
15	Maint LL 3	LL					1			
16	Maint LL 4	LL					1			
17	Maint LL 5	LL					1			
18	Maint LL 6	LL					1			
19	Maint LL 7	LL					1			
20	Maint LL 8	LL					1			
21	Maint LL 9	LL					1			
22	Maint LL 10	LL								
23	Maint LL 11	LL								
24	Maint LL 12	LL								
25	BLC 1 Transient Area...	None						30		
26	BLC 8 Transient Area...	None						30		

Load Combinations

	Description	S...	PDelta	S...	B...	Factor	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...
1	1.4 Dead	Y...	Y		1	1.4																				
2	1.2 D + 1.0 - 0 W	Y...	Y		1	1.2	2	1																		
3	1.2 D + 1.0 - 30 W	Y...	Y		1	1.2	2	.8...	3	.5																
4	1.2 D + 1.0 - 60 W	Y...	Y		1	1.2	3	.8...	2	.5																
5	1.2 D + 1.0 - 90 W	Y...	Y		1	1.2	3	1																		
6	1.2 D + 1.0 - 120 W	Y...	Y		1	1.2	3	.8...	2	-.5																
7	1.2 D + 1.0 - 150 W	Y...	Y		1	1.2	2	-....	3	.5																
8	1.2 D + 1.0 - 180 W	Y...	Y		1	1.2	2	-1																		
9	1.2 D + 1.0 - 210 W	Y...	Y		1	1.2	2	-....	3	-.5																
10	1.2 D + 1.0 - 240 W	Y...	Y		1	1.2	3	-....	2	-.5																
11	1.2 D + 1.0 - 270 W	Y...	Y		1	1.2	3	-1																		
12	1.2 D + 1.0 - 300 W	Y...	Y		1	1.2	3	-....	2	.5																
13	1.2 D + 1.0 - 330 W	Y...	Y		1	1.2	2	.8...	3	-.5																
14	1.2 D + 1.0 - 0 W/Ice	Y...	Y		1	1.2	4	1			8	1														
15	1.2 D + 1.0 - 30 W/Ice	Y...	Y		1	1.2	4	.8...	5	.5	8	1														
16	1.2 D + 1.0 - 60 W/Ice	Y...	Y		1	1.2	5	.8...	4	.5	8	1														
17	1.2 D + 1.0 - 90 W/Ice	Y...	Y		1	1.2	5	1			8	1														
18	1.2 D + 1.0 - 120 W/Ice	Y...	Y		1	1.2	5	.8...	4	-.5	8	1														
19	1.2 D + 1.0 - 150 W/Ice	Y...	Y		1	1.2	4	-....	5	.5	8	1														
20	1.2 D + 1.0 - 180 W/Ice	Y...	Y		1	1.2	4	-1			8	1														

Load Combinations (Continued)

	Description	S...	PDelta	S..	B..	Factor	B..	F...	B..	F...	B..	F...	B..	F...	B..	F...	B..	F...	B..	F...	B..	F...	B..	F...	B..	F...
21	1.2 D + 1.0 - 210 W/Ice	Y...	Y		1	1.2	4	-....	5	-.5	8	1														
22	1.2 D + 1.0 - 240 W/Ice	Y...	Y		1	1.2	5	-....	4	-.5	8	1														
23	1.2 D + 1.0 - 270 W/Ice	Y...	Y		1	1.2	5	-1			8	1														
24	1.2 D + 1.0 - 300 W/Ice	Y...	Y		1	1.2	5	-....	4	.5	8	1														
25	1.2 D + 1.0 - 330 W/Ice	Y...	Y		1	1.2	4	.8...	5	-.5	8	1														
26	1.2 D + 1.5 LL a + Service - 0 W	Y...	Y		1	1.2	6	1			9	1.5														
27	1.2 D + 1.5 LL a + Service - 30 W	Y...	Y		1	1.2	6	.8...	7	.5	9	1.5														
28	1.2 D + 1.5 LL a + Service - 60 W	Y...	Y		1	1.2	7	.8...	6	.5	9	1.5														
29	1.2 D + 1.5 LL a + Service - 90 W	Y...	Y		1	1.2	7	1			9	1.5														
30	1.2 D + 1.5 LL a + Service - 120 W	Y...	Y		1	1.2	7	.8...	6	-.5	9	1.5														
31	1.2 D + 1.5 LL a + Service - 150 W	Y...	Y		1	1.2	6	-....	7	.5	9	1.5														
32	1.2 D + 1.5 LL a + Service - 180 W	Y...	Y		1	1.2	6	-1			9	1.5														
33	1.2 D + 1.5 LL a + Service - 210 W	Y...	Y		1	1.2	6	-....	7	-.5	9	1.5														
34	1.2 D + 1.5 LL a + Service - 240 W	Y...	Y		1	1.2	7	-....	6	-.5	9	1.5														
35	1.2 D + 1.5 LL a + Service - 270 W	Y...	Y		1	1.2	7	-1			9	1.5														
36	1.2 D + 1.5 LL a + Service - 300 W	Y...	Y		1	1.2	7	-....	6	.5	9	1.5														
37	1.2 D + 1.5 LL a + Service - 330 W	Y...	Y		1	1.2	6	.8...	7	-.5	9	1.5														
38	1.2 D + 1.5 LL b + Service - 0 W	Y...	Y		1	1.2	6	1			10	1.5														
39	1.2 D + 1.5 LL b + Service - 30 W	Y...	Y		1	1.2	6	.8...	7	.5	10	1.5														
40	1.2 D + 1.5 LL b + Service - 60 W	Y...	Y		1	1.2	7	.8...	6	.5	10	1.5														
41	1.2 D + 1.5 LL b + Service - 90 W	Y...	Y		1	1.2	7	1			10	1.5														
42	1.2 D + 1.5 LL b + Service - 120 W	Y...	Y		1	1.2	7	.8...	6	-.5	10	1.5														
43	1.2 D + 1.5 LL b + Service - 150 W	Y...	Y		1	1.2	6	-....	7	.5	10	1.5														
44	1.2 D + 1.5 LL b + Service - 180 W	Y...	Y		1	1.2	6	-1			10	1.5														
45	1.2 D + 1.5 LL b + Service - 210 W	Y...	Y		1	1.2	6	-....	7	-.5	10	1.5														
46	1.2 D + 1.5 LL b + Service - 240 W	Y...	Y		1	1.2	7	-....	6	-.5	10	1.5														
47	1.2 D + 1.5 LL b + Service - 270 W	Y...	Y		1	1.2	7	-1			10	1.5														
48	1.2 D + 1.5 LL b + Service - 300 W	Y...	Y		1	1.2	7	-....	6	.5	10	1.5														
49	1.2 D + 1.5 LL b + Service - 330 W	Y...	Y		1	1.2	6	.8...	7	-.5	10	1.5														
50	1.2 D + 1.5 LL c + Service - 0 W	Y...	Y		1	1.2	6	1			11	1.5														
51	1.2 D + 1.5 LL c + Service - 30 W	Y...	Y		1	1.2	6	.8...	7	.5	11	1.5														
52	1.2 D + 1.5 LL c + Service - 60 W	Y...	Y		1	1.2	7	.8...	6	.5	11	1.5														
53	1.2 D + 1.5 LL c + Service - 90 W	Y...	Y		1	1.2	7	1			11	1.5														
54	1.2 D + 1.5 LL c + Service - 120 W	Y...	Y		1	1.2	7	.8...	6	-.5	11	1.5														
55	1.2 D + 1.5 LL c + Service - 150 W	Y...	Y		1	1.2	6	-....	7	.5	11	1.5														
56	1.2 D + 1.5 LL c + Service - 180 W	Y...	Y		1	1.2	6	-1			11	1.5														
57	1.2 D + 1.5 LL c + Service - 210 W	Y...	Y		1	1.2	6	-....	7	-.5	11	1.5														
58	1.2 D + 1.5 LL c + Service - 240 W	Y...	Y		1	1.2	7	-....	6	-.5	11	1.5														
59	1.2 D + 1.5 LL c + Service - 270 W	Y...	Y		1	1.2	7	-1			11	1.5														
60	1.2 D + 1.5 LL c + Service - 300 W	Y...	Y		1	1.2	7	-....	6	.5	11	1.5														
61	1.2 D + 1.5 LL c + Service - 330 W	Y...	Y		1	1.2	6	.8...	7	-.5	11	1.5														
62	1.2 D + 1.5 LL d + Service - 0 W	Y...	Y		1	1.2	6	1			12	1.5														
63	1.2 D + 1.5 LL d + Service - 30 W	Y...	Y		1	1.2	6	.8...	7	.5	12	1.5														
64	1.2 D + 1.5 LL d + Service - 60 W	Y...	Y		1	1.2	7	.8...	6	.5	12	1.5														
65	1.2 D + 1.5 LL d + Service - 90 W	Y...	Y		1	1.2	7	1			12	1.5														
66	1.2 D + 1.5 LL d + Service - 120 W	Y...	Y		1	1.2	7	.8...	6	-.5	12	1.5														
67	1.2 D + 1.5 LL d + Service - 150 W	Y...	Y		1	1.2	6	-....	7	.5	12	1.5														
68	1.2 D + 1.5 LL d + Service - 180 W	Y...	Y		1	1.2	6	-1			12	1.5														
69	1.2 D + 1.5 LL d + Service - 210 W	Y...	Y		1	1.2	6	-....	7	-.5	12	1.5														
70	1.2 D + 1.5 LL d + Service - 240 W	Y...	Y		1	1.2	7	-....	6	-.5	12	1.5														
71	1.2 D + 1.5 LL d + Service - 270 W	Y...	Y		1	1.2	7	-1			12	1.5														
72	1.2 D + 1.5 LL d + Service - 300 W	Y...	Y		1	1.2	7	-....	6	.5	12	1.5														
73	1.2 D + 1.5 LL d + Service - 330 W	Y...	Y		1	1.2	6	.8...	7	-.5	12	1.5														
74	1.2 D + 1.5 LL Maint (1)	Y...	Y		1	1.2					13	1.5														
75	1.2 D + 1.5 LL Maint (2)	Y...	Y		1	1.2					14	1.5														
76	1.2 D + 1.5 LL Maint (3)	Y...	Y		1	1.2					15	1.5														
77	1.2 D + 1.5 LL Maint (4)	Y...	Y		1	1.2					16	1.5														

Load Combinations (Continued)

	Description	S...	PDelta	S...	B...	Factor	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...
78	1.2 D + 1.5 LL Maint (5)	Y...	Y		1	1.2					17	1.5														
79	1.2 D + 1.5 LL Maint (6)	Y...	Y		1	1.2					18	1.5														
80	1.2 D + 1.5 LL Maint (7)	Y...	Y		1	1.2					19	1.5														
81	1.2 D + 1.5 LL Maint (8)	Y...	Y		1	1.2					20	1.5														
82	1.2 D + 1.5 LL Maint (9)	Y...	Y		1	1.2					21	1.5														
83	1.2 D + 1.5 LL Maint (10)	Y...	Y		1	1.2					22	1.5														
84	1.2 D + 1.5 LL Maint (11)	Y...	Y		1	1.2					23	1.5														
85	1.2 D + 1.5 LL Maint (12)	Y...	Y		1	1.2					24	1.5														

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M25	Y	-.018	%10
2	M25	Y	-.018	%70
3	M25	Y	-.035	%30
4	M25	Y	0	0
5	M25	Y	0	0
6	M29	Y	-.054	%10
7	M29	Y	-.054	%80
8	M29	Y	-.06	%50
9	M29	Y	0	0
10	M29	Y	0	0
11	M31	Y	-.054	%10
12	M31	Y	-.054	%80
13	M31	Y	-.073	%35
14	M31	Y	-.075	%35
15	M31	Y	0	0
16	M35	Y	-.026	%55
17	M35	Y	0	0
18	M35	Y	0	0
19	M35	Y	0	0
20	M35	Y	0	0
21	M27	Y	-.026	%55
22	M27	Y	0	0
23	M27	Y	0	0
24	M27	Y	0	0
25	M27	Y	0	0
26	M41	Y	-.018	%10
27	M41	Y	-.018	%70
28	M41	Y	-.018	%30
29	M41	Y	0	0
30	M41	Y	0	0
31	M45	Y	-.054	%10
32	M45	Y	-.054	%80
33	M45	Y	-.06	%50
34	M45	Y	0	0
35	M45	Y	0	0
36	M47	Y	-.054	%10
37	M47	Y	-.054	%80
38	M47	Y	-.073	%35
39	M47	Y	-.075	%35
40	M47	Y	0	0
41	M33	Y	-.018	%10
42	M33	Y	-.018	%70
43	M33	Y	-.018	%30
44	M33	Y	0	0

Member Point Loads (BLC 1 : Dead) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
45	M33	Y	0	0
46	M37	Y	-.054	%10
47	M37	Y	-.054	%80
48	M37	Y	-.06	%50
49	M37	Y	0	0
50	M37	Y	0	0
51	M39	Y	-.054	%10
52	M39	Y	-.054	%80
53	M39	Y	-.073	%35
54	M39	Y	-.075	%35
55	M39	Y	0	0

Member Point Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M25	Z	-.118	%10
2	M25	Z	-.118	%70
3	M25	Z	-.03	%30
4	M25	Z	0	0
5	M25	Z	0	0
6	M29	Z	-.297	%10
7	M29	Z	-.297	%80
8	M29	Z	-.079	%50
9	M29	Z	0	0
10	M29	Z	0	0
11	M31	Z	-.297	%10
12	M31	Z	-.297	%80
13	M31	Z	-.056	%35
14	M31	Z	-.059	%35
15	M31	Z	0	0
16	M35	Z	-.049	%55
17	M35	Z	0	0
18	M35	Z	0	0
19	M35	Z	0	0
20	M35	Z	0	0
21	M27	Z	-.049	%55
22	M27	Z	0	0
23	M27	Z	0	0
24	M27	Z	0	0
25	M27	Z	0	0
26	M41	Z	-.118	%10
27	M41	Z	-.118	%70
28	M41	Z	-.015	%30
29	M41	Z	0	0
30	M41	Z	0	0
31	M45	Z	-.297	%10
32	M45	Z	-.297	%80
33	M45	Z	-.079	%50
34	M45	Z	0	0
35	M45	Z	0	0
36	M47	Z	-.297	%10
37	M47	Z	-.297	%80
38	M47	Z	-.056	%35
39	M47	Z	-.059	%35
40	M47	Z	0	0
41	M33	Z	-.118	%10
42	M33	Z	-.118	%70

Member Point Loads (BLC 2 : 0 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
43	M33	Z	-.015	%30
44	M33	Z	0	0
45	M33	Z	0	0
46	M37	Z	-.297	%10
47	M37	Z	-.297	%80
48	M37	Z	-.079	%50
49	M37	Z	0	0
50	M37	Z	0	0
51	M39	Z	-.297	%10
52	M39	Z	-.297	%80
53	M39	Z	-.056	%35
54	M39	Z	-.059	%35
55	M39	Z	0	0

Member Point Loads (BLC 3 : 90 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M25	X	-.063	%10
2	M25	X	-.063	%70
3	M25	X	-.07	%30
4	M25	X	0	0
5	M25	X	0	0
6	M29	X	-.125	%10
7	M29	X	-.125	%80
8	M29	X	-.045	%50
9	M29	X	0	0
10	M29	X	0	0
11	M31	X	-.125	%10
12	M31	X	-.125	%80
13	M31	X	-.071	%35
14	M31	X	-.071	%35
15	M31	X	0	0
16	M35	X	-.049	%55
17	M35	X	0	0
18	M35	X	0	0
19	M35	X	0	0
20	M35	X	0	0
21	M27	X	-.049	%55
22	M27	X	0	0
23	M27	X	0	0
24	M27	X	0	0
25	M27	X	0	0
26	M41	X	-.063	%10
27	M41	X	-.063	%70
28	M41	X	-.035	%30
29	M41	X	0	0
30	M41	X	0	0
31	M45	X	-.125	%10
32	M45	X	-.125	%80
33	M45	X	-.045	%50
34	M45	X	0	0
35	M45	X	0	0
36	M47	X	-.125	%10
37	M47	X	-.125	%80
38	M47	X	-.071	%35
39	M47	X	-.071	%35
40	M47	X	0	0

Member Point Loads (BLC 3 : 90 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
41	M33	X	-.063	%10
42	M33	X	-.063	%70
43	M33	X	-.035	%30
44	M33	X	0	0
45	M33	X	0	0
46	M37	X	-.125	%10
47	M37	X	-.125	%80
48	M37	X	-.045	%50
49	M37	X	0	0
50	M37	X	0	0
51	M39	X	-.125	%10
52	M39	X	-.125	%80
53	M39	X	-.071	%35
54	M39	X	-.071	%35
55	M39	X	0	0

Member Point Loads (BLC 4 : 0 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M25	Z	-.022	%10
2	M25	Z	-.022	%70
3	M25	Z	-.005	%30
4	M25	Z	0	0
5	M25	Z	0	0
6	M29	Z	-.056	%10
7	M29	Z	-.056	%80
8	M29	Z	-.015	%50
9	M29	Z	0	0
10	M29	Z	0	0
11	M31	Z	-.056	%10
12	M31	Z	-.056	%80
13	M31	Z	-.011	%35
14	M31	Z	-.011	%35
15	M31	Z	0	0
16	M35	Z	-.009	%55
17	M35	Z	0	0
18	M35	Z	0	0
19	M35	Z	0	0
20	M35	Z	0	0
21	M27	Z	-.009	%55
22	M27	Z	0	0
23	M27	Z	0	0
24	M27	Z	0	0
25	M27	Z	0	0
26	M41	Z	-.022	%10
27	M41	Z	-.022	%70
28	M41	Z	-.003	%30
29	M41	Z	0	0
30	M41	Z	0	0
31	M45	Z	-.056	%10
32	M45	Z	-.056	%80
33	M45	Z	-.015	%50
34	M45	Z	0	0
35	M45	Z	0	0
36	M47	Z	-.056	%10
37	M47	Z	-.056	%80
38	M47	Z	-.011	%35

Member Point Loads (BLC 4 : 0 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
39	M47	Z	-.011	%35
40	M47	Z	0	0
41	M33	Z	-.022	%10
42	M33	Z	-.022	%70
43	M33	Z	-.003	%30
44	M33	Z	0	0
45	M33	Z	0	0
46	M37	Z	-.056	%10
47	M37	Z	-.056	%80
48	M37	Z	-.015	%50
49	M37	Z	0	0
50	M37	Z	0	0
51	M39	Z	-.056	%10
52	M39	Z	-.056	%80
53	M39	Z	-.011	%35
54	M39	Z	-.011	%35
55	M39	Z	0	0

Member Point Loads (BLC 5 : 90 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M25	X	-.012	%10
2	M25	X	-.012	%70
3	M25	X	-.013	%30
4	M25	X	0	0
5	M25	X	0	0
6	M29	X	-.024	%10
7	M29	X	-.024	%80
8	M29	X	-.009	%50
9	M29	X	0	0
10	M29	X	0	0
11	M31	X	-.024	%10
12	M31	X	-.024	%80
13	M31	X	-.013	%35
14	M31	X	-.013	%35
15	M31	X	0	0
16	M35	X	-.009	%55
17	M35	X	0	0
18	M35	X	0	0
19	M35	X	0	0
20	M35	X	0	0
21	M27	X	-.009	%55
22	M27	X	0	0
23	M27	X	0	0
24	M27	X	0	0
25	M27	X	0	0
26	M41	X	-.012	%10
27	M41	X	-.012	%70
28	M41	X	-.007	%30
29	M41	X	0	0
30	M41	X	0	0
31	M45	X	-.024	%10
32	M45	X	-.024	%80
33	M45	X	-.009	%50
34	M45	X	0	0
35	M45	X	0	0
36	M47	X	-.024	%10

Member Point Loads (BLC 5 : 90 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
37	M47	X	-.024	%80
38	M47	X	-.013	%35
39	M47	X	-.013	%35
40	M47	X	0	0
41	M33	X	-.012	%10
42	M33	X	-.012	%70
43	M33	X	-.007	%30
44	M33	X	0	0
45	M33	X	0	0
46	M37	X	-.024	%10
47	M37	X	-.024	%80
48	M37	X	-.009	%50
49	M37	X	0	0
50	M37	X	0	0
51	M39	X	-.024	%10
52	M39	X	-.024	%80
53	M39	X	-.013	%35
54	M39	X	-.013	%35
55	M39	X	0	0

Member Point Loads (BLC 6 : 0 Wind - Service)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M25	Z	-.008	%10
2	M25	Z	-.008	%70
3	M25	Z	-.002	%30
4	M25	Z	0	0
5	M25	Z	0	0
6	M29	Z	-.02	%10
7	M29	Z	-.02	%80
8	M29	Z	-.005	%50
9	M29	Z	0	0
10	M29	Z	0	0
11	M31	Z	-.02	%10
12	M31	Z	-.02	%80
13	M31	Z	-.004	%35
14	M31	Z	-.004	%35
15	M31	Z	0	0
16	M35	Z	-.003	%55
17	M35	Z	0	0
18	M35	Z	0	0
19	M35	Z	0	0
20	M35	Z	0	0
21	M27	Z	-.003	%55
22	M27	Z	0	0
23	M27	Z	0	0
24	M27	Z	0	0
25	M27	Z	0	0
26	M41	Z	-.008	%10
27	M41	Z	-.008	%70
28	M41	Z	-.001	%30
29	M41	Z	0	0
30	M41	Z	0	0
31	M45	Z	-.02	%10
32	M45	Z	-.02	%80
33	M45	Z	-.005	%50
34	M45	Z	0	0

Member Point Loads (BLC 6 : 0 Wind - Service) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
35	M45	Z	0	0
36	M47	Z	-.02	%10
37	M47	Z	-.02	%80
38	M47	Z	-.004	%35
39	M47	Z	-.004	%35
40	M47	Z	0	0
41	M33	Z	-.008	%10
42	M33	Z	-.008	%70
43	M33	Z	-.001	%30
44	M33	Z	0	0
45	M33	Z	0	0
46	M37	Z	-.02	%10
47	M37	Z	-.02	%80
48	M37	Z	-.005	%50
49	M37	Z	0	0
50	M37	Z	0	0
51	M39	Z	-.02	%10
52	M39	Z	-.02	%80
53	M39	Z	-.004	%35
54	M39	Z	-.004	%35
55	M39	Z	0	0

Member Point Loads (BLC 7 : 90 Wind - Service)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M25	X	-.004	%10
2	M25	X	-.004	%70
3	M25	X	-.005	%30
4	M25	X	0	0
5	M25	X	0	0
6	M29	X	-.009	%10
7	M29	X	-.009	%80
8	M29	X	-.003	%50
9	M29	X	0	0
10	M29	X	0	0
11	M31	X	-.009	%10
12	M31	X	-.009	%80
13	M31	X	-.005	%35
14	M31	X	-.005	%35
15	M31	X	0	0
16	M35	X	-.003	%55
17	M35	X	0	0
18	M35	X	0	0
19	M35	X	0	0
20	M35	X	0	0
21	M27	X	-.003	%55
22	M27	X	0	0
23	M27	X	0	0
24	M27	X	0	0
25	M27	X	0	0
26	M41	X	-.004	%10
27	M41	X	-.004	%70
28	M41	X	-.002	%30
29	M41	X	0	0
30	M41	X	0	0
31	M45	X	-.009	%10
32	M45	X	-.009	%80

Member Point Loads (BLC 7 : 90 Wind - Service) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
33	M45	X	-.003	%50
34	M45	X	0	0
35	M45	X	0	0
36	M47	X	-.009	%10
37	M47	X	-.009	%80
38	M47	X	-.005	%35
39	M47	X	-.005	%35
40	M47	X	0	0
41	M33	X	-.004	%10
42	M33	X	-.004	%70
43	M33	X	-.002	%30
44	M33	X	0	0
45	M33	X	0	0
46	M37	X	-.009	%10
47	M37	X	-.009	%80
48	M37	X	-.003	%50
49	M37	X	0	0
50	M37	X	0	0
51	M39	X	-.009	%10
52	M39	X	-.009	%80
53	M39	X	-.005	%35
54	M39	X	-.005	%35
55	M39	X	0	0

Member Point Loads (BLC 8 : Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M25	Y	-.042	%10
2	M25	Y	-.042	%70
3	M25	Y	-.028	%30
4	M25	Y	0	0
5	M25	Y	0	0
6	M29	Y	-.102	%10
7	M29	Y	-.102	%80
8	M29	Y	-.032	%50
9	M29	Y	0	0
10	M29	Y	0	0
11	M31	Y	-.102	%10
12	M31	Y	-.102	%80
13	M31	Y	-.031	%35
14	M31	Y	-.032	%35
15	M31	Y	0	0
16	M35	Y	-.042	%55
17	M35	Y	0	0
18	M35	Y	0	0
19	M35	Y	0	0
20	M35	Y	0	0
21	M27	Y	-.042	%55
22	M27	Y	0	0
23	M27	Y	0	0
24	M27	Y	0	0
25	M27	Y	0	0
26	M41	Y	-.042	%10
27	M41	Y	-.042	%70
28	M41	Y	-.014	%30
29	M41	Y	0	0
30	M41	Y	0	0

Member Point Loads (BLC 8 : Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
31	M45	Y	-.102	%10
32	M45	Y	-.102	%80
33	M45	Y	-.032	%50
34	M45	Y	0	0
35	M45	Y	0	0
36	M47	Y	-.102	%10
37	M47	Y	-.102	%80
38	M47	Y	-.031	%35
39	M47	Y	-.032	%35
40	M47	Y	0	0
41	M33	Y	-.042	%10
42	M33	Y	-.042	%70
43	M33	Y	-.014	%30
44	M33	Y	0	0
45	M33	Y	0	0
46	M37	Y	-.102	%10
47	M37	Y	-.102	%80
48	M37	Y	-.032	%50
49	M37	Y	0	0
50	M37	Y	0	0
51	M39	Y	-.102	%10
52	M39	Y	-.102	%80
53	M39	Y	-.031	%35
54	M39	Y	-.032	%35
55	M39	Y	0	0

Member Point Loads (BLC 13 : Maint LL 1)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M1	Y	-.25	%5

Member Point Loads (BLC 14 : Maint LL 2)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M1	Y	-.25	%95

Member Point Loads (BLC 15 : Maint LL 3)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M2	Y	-.25	%5

Member Point Loads (BLC 16 : Maint LL 4)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M2	Y	-.25	%95

Member Point Loads (BLC 17 : Maint LL 5)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M3	Y	-.25	%5

Member Point Loads (BLC 18 : Maint LL 6)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M3	Y	-.25	%95

Member Point Loads (BLC 19 : Maint LL 7)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M8	Y	-.25	%5

Member Point Loads (BLC 20 : Maint LL 8)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M7	Y	-.25	%5

Member Point Loads (BLC 21 : Maint LL 9)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M9	Y	-.25	%5

Member Distributed Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	Z	-.018	-.018	0	0
2	M2	Z	-.018	-.018	0	0
3	M3	Z	-.018	-.018	0	0
4	M4	Z	-.018	-.018	0	0
5	M5	Z	-.018	-.018	0	0
6	M6	Z	-.018	-.018	0	0
7	M7	Z	-.016	-.016	0	0
8	M8	Z	-.016	-.016	0	0
9	M9	Z	-.016	-.016	0	0
10	M10	Z	-.021	-.021	0	0
11	M11	Z	-.017	-.017	0	0
12	M12	Z	-.021	-.021	0	0
13	M13	Z	-.017	-.017	0	0
14	M14	Z	-.021	-.021	0	0
15	M15	Z	-.017	-.017	0	0
16	M25	Z	-.01	-.01	0	0
17	M27	Z	-.01	-.01	0	0
18	M29	Z	-.01	-.01	0	0
19	M31	Z	-.01	-.01	0	0
20	M33	Z	-.01	-.01	0	0
21	M35	Z	-.01	-.01	0	0
22	M37	Z	-.01	-.01	0	0
23	M39	Z	-.01	-.01	0	0
24	M41	Z	-.01	-.01	0	0
25	M43	Z	-.01	-.01	0	0
26	M45	Z	-.01	-.01	0	0
27	M47	Z	-.01	-.01	0	0
28	70	Z	-.01	-.01	0	0
29	83	Z	-.029	-.029	0	0
30	84	Z	-.028	-.028	0	0
31	85	Z	-.028	-.028	0	0
32	86	Z	-.01	-.01	0	0
33	87	Z	-.029	-.029	0	0
34	88	Z	-.028	-.028	0	0
35	89	Z	-.028	-.028	0	0
36	90	Z	-.01	-.01	0	0
37	91	Z	-.029	-.029	0	0
38	92	Z	-.028	-.028	0	0
39	93	Z	-.028	-.028	0	0
40	M70	Z	-.01	-.01	0	0
41	M83	Z	-.029	-.029	0	0
42	M84	Z	-.028	-.028	0	0
43	M85	Z	-.028	-.028	0	0
44	M86	Z	-.01	-.01	0	0
45	M87	Z	-.029	-.029	0	0
46	M88	Z	-.028	-.028	0	0
47	M89	Z	-.028	-.028	0	0

Member Distributed Loads (BLC 2 : 0 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
48	M90	Z	-.01	-.01	0	0
49	M91	Z	-.029	-.029	0	0
50	M92	Z	-.028	-.028	0	0
51	M93	Z	-.028	-.028	0	0

Member Distributed Loads (BLC 3 : 90 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.018	-.018	0	0
2	M2	X	-.018	-.018	0	0
3	M3	X	-.018	-.018	0	0
4	M4	X	-.018	-.018	0	0
5	M5	X	-.018	-.018	0	0
6	M6	X	-.018	-.018	0	0
7	M7	X	-.016	-.016	0	0
8	M8	X	-.016	-.016	0	0
9	M9	X	-.016	-.016	0	0
10	M10	X	-.021	-.021	0	0
11	M11	X	-.017	-.017	0	0
12	M12	X	-.021	-.021	0	0
13	M13	X	-.017	-.017	0	0
14	M14	X	-.021	-.021	0	0
15	M15	X	-.017	-.017	0	0
16	M25	X	-.01	-.01	0	0
17	M27	X	-.01	-.01	0	0
18	M29	X	-.01	-.01	0	0
19	M31	X	-.01	-.01	0	0
20	M33	X	-.01	-.01	0	0
21	M35	X	-.01	-.01	0	0
22	M37	X	-.01	-.01	0	0
23	M39	X	-.01	-.01	0	0
24	M41	X	-.01	-.01	0	0
25	M43	X	-.01	-.01	0	0
26	M45	X	-.01	-.01	0	0
27	M47	X	-.01	-.01	0	0
28	70	X	-.01	-.01	0	0
29	83	X	-.029	-.029	0	0
30	84	X	-.028	-.028	0	0
31	85	X	-.028	-.028	0	0
32	86	X	-.01	-.01	0	0
33	87	X	-.029	-.029	0	0
34	88	X	-.028	-.028	0	0
35	89	X	-.028	-.028	0	0
36	90	X	-.01	-.01	0	0
37	91	X	-.029	-.029	0	0
38	92	X	-.028	-.028	0	0
39	93	X	-.028	-.028	0	0
40	M70	X	-.01	-.01	0	0
41	M83	X	-.029	-.029	0	0
42	M84	X	-.028	-.028	0	0
43	M85	X	-.028	-.028	0	0
44	M86	X	-.01	-.01	0	0
45	M87	X	-.029	-.029	0	0
46	M88	X	-.028	-.028	0	0
47	M89	X	-.028	-.028	0	0
48	M90	X	-.01	-.01	0	0
49	M91	X	-.029	-.029	0	0

Member Distributed Loads (BLC 3 : 90 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
50	M92	X	-.028	-.028	0	0
51	M93	X	-.028	-.028	0	0

Member Distributed Loads (BLC 4 : 0 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	Z	-.007	-.007	0	0
2	M2	Z	-.007	-.007	0	0
3	M3	Z	-.007	-.007	0	0
4	M4	Z	-.007	-.007	0	0
5	M5	Z	-.007	-.007	0	0
6	M6	Z	-.007	-.007	0	0
7	M7	Z	-.006	-.006	0	0
8	M8	Z	-.006	-.006	0	0
9	M9	Z	-.006	-.006	0	0
10	M10	Z	-.007	-.007	0	0
11	M11	Z	-.006	-.006	0	0
12	M12	Z	-.007	-.007	0	0
13	M13	Z	-.006	-.006	0	0
14	M14	Z	-.007	-.007	0	0
15	M15	Z	-.006	-.006	0	0
16	M25	Z	-.002	-.002	0	0
17	M27	Z	-.002	-.002	0	0
18	M29	Z	-.002	-.002	0	0
19	M31	Z	-.002	-.002	0	0
20	M33	Z	-.002	-.002	0	0
21	M35	Z	-.002	-.002	0	0
22	M37	Z	-.002	-.002	0	0
23	M39	Z	-.002	-.002	0	0
24	M41	Z	-.002	-.002	0	0
25	M43	Z	-.002	-.002	0	0
26	M45	Z	-.002	-.002	0	0
27	M47	Z	-.002	-.002	0	0
28	70	Z	-.002	-.002	0	0
29	83	Z	-.008	-.008	0	0
30	84	Z	-.008	-.008	0	0
31	85	Z	-.008	-.008	0	0
32	86	Z	-.002	-.002	0	0
33	87	Z	-.008	-.008	0	0
34	88	Z	-.008	-.008	0	0
35	89	Z	-.008	-.008	0	0
36	90	Z	-.002	-.002	0	0
37	91	Z	-.008	-.008	0	0
38	92	Z	-.008	-.008	0	0
39	93	Z	-.008	-.008	0	0
40	M70	Z	-.002	-.002	0	0
41	M83	Z	-.008	-.008	0	0
42	M84	Z	-.008	-.008	0	0
43	M85	Z	-.008	-.008	0	0
44	M86	Z	-.002	-.002	0	0
45	M87	Z	-.008	-.008	0	0
46	M88	Z	-.008	-.008	0	0
47	M89	Z	-.008	-.008	0	0
48	M90	Z	-.002	-.002	0	0
49	M91	Z	-.008	-.008	0	0
50	M92	Z	-.008	-.008	0	0
51	M93	Z	-.008	-.008	0	0

Member Distributed Loads (BLC 5 : 90 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.007	-.007	0	0
2	M2	X	-.007	-.007	0	0
3	M3	X	-.007	-.007	0	0
4	M4	X	-.007	-.007	0	0
5	M5	X	-.007	-.007	0	0
6	M6	X	-.007	-.007	0	0
7	M7	X	-.006	-.006	0	0
8	M8	X	-.006	-.006	0	0
9	M9	X	-.006	-.006	0	0
10	M10	X	-.007	-.007	0	0
11	M11	X	-.006	-.006	0	0
12	M12	X	-.007	-.007	0	0
13	M13	X	-.006	-.006	0	0
14	M14	X	-.007	-.007	0	0
15	M15	X	-.006	-.006	0	0
16	M25	X	-.002	-.002	0	0
17	M27	X	-.002	-.002	0	0
18	M29	X	-.002	-.002	0	0
19	M31	X	-.002	-.002	0	0
20	M33	X	-.002	-.002	0	0
21	M35	X	-.002	-.002	0	0
22	M37	X	-.002	-.002	0	0
23	M39	X	-.002	-.002	0	0
24	M41	X	-.002	-.002	0	0
25	M43	X	-.002	-.002	0	0
26	M45	X	-.002	-.002	0	0
27	M47	X	-.002	-.002	0	0
28	70	X	-.002	-.002	0	0
29	83	X	-.008	-.008	0	0
30	84	X	-.008	-.008	0	0
31	85	X	-.008	-.008	0	0
32	86	X	-.002	-.002	0	0
33	87	X	-.008	-.008	0	0
34	88	X	-.008	-.008	0	0
35	89	X	-.008	-.008	0	0
36	90	X	-.002	-.002	0	0
37	91	X	-.008	-.008	0	0
38	92	X	-.008	-.008	0	0
39	93	X	-.008	-.008	0	0
40	M70	X	-.002	-.002	0	0
41	M83	X	-.008	-.008	0	0
42	M84	X	-.008	-.008	0	0
43	M85	X	-.008	-.008	0	0
44	M86	X	-.002	-.002	0	0
45	M87	X	-.008	-.008	0	0
46	M88	X	-.008	-.008	0	0
47	M89	X	-.008	-.008	0	0
48	M90	X	-.002	-.002	0	0
49	M91	X	-.008	-.008	0	0
50	M92	X	-.008	-.008	0	0
51	M93	X	-.008	-.008	0	0

Member Distributed Loads (BLC 6 : 0 Wind - Service)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	Z	-.001	-.001	0	0
2	M2	Z	-.001	-.001	0	0

Member Distributed Loads (BLC 6 : 0 Wind - Service) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
3	M3	Z	-.001	-.001	0	0
4	M4	Z	-.001	-.001	0	0
5	M5	Z	-.001	-.001	0	0
6	M6	Z	-.001	-.001	0	0
7	M7	Z	-.001	-.001	0	0
8	M8	Z	-.001	-.001	0	0
9	M9	Z	-.001	-.001	0	0
10	M10	Z	-.001	-.001	0	0
11	M11	Z	-.001	-.001	0	0
12	M12	Z	-.001	-.001	0	0
13	M13	Z	-.001	-.001	0	0
14	M14	Z	-.001	-.001	0	0
15	M15	Z	-.001	-.001	0	0
16	M25	Z	-.0003	-.0003	0	0
17	M27	Z	-.0003	-.0003	0	0
18	M29	Z	-.0003	-.0003	0	0
19	M31	Z	-.0003	-.0003	0	0
20	M33	Z	-.0003	-.0003	0	0
21	M35	Z	-.0003	-.0003	0	0
22	M37	Z	-.0003	-.0003	0	0
23	M39	Z	-.0003	-.0003	0	0
24	M41	Z	-.0003	-.0003	0	0
25	M43	Z	-.0003	-.0003	0	0
26	M45	Z	-.0003	-.0003	0	0
27	M47	Z	-.0003	-.0003	0	0
28	70	Z	-.0003	-.0003	0	0
29	83	Z	-.002	-.002	0	0
30	84	Z	-.002	-.002	0	0
31	85	Z	-.002	-.002	0	0
32	86	Z	-.0003	-.0003	0	0
33	87	Z	-.002	-.002	0	0
34	88	Z	-.002	-.002	0	0
35	89	Z	-.002	-.002	0	0
36	90	Z	-.0003	-.0003	0	0
37	91	Z	-.002	-.002	0	0
38	92	Z	-.002	-.002	0	0
39	93	Z	-.002	-.002	0	0
40	M70	Z	-.0003	-.0003	0	0
41	M83	Z	-.002	-.002	0	0
42	M84	Z	-.002	-.002	0	0
43	M85	Z	-.002	-.002	0	0
44	M86	Z	-.0003	-.0003	0	0
45	M87	Z	-.002	-.002	0	0
46	M88	Z	-.002	-.002	0	0
47	M89	Z	-.002	-.002	0	0
48	M90	Z	-.0003	-.0003	0	0
49	M91	Z	-.002	-.002	0	0
50	M92	Z	-.002	-.002	0	0
51	M93	Z	-.002	-.002	0	0

Member Distributed Loads (BLC 7 : 90 Wind - Service)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.001	-.001	0	0
2	M2	X	-.001	-.001	0	0
3	M3	X	-.001	-.001	0	0
4	M4	X	-.001	-.001	0	0

Member Distributed Loads (BLC 7 : 90 Wind - Service) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
5	M5	X	-.001	-.001	0	0
6	M6	X	-.001	-.001	0	0
7	M7	X	-.001	-.001	0	0
8	M8	X	-.001	-.001	0	0
9	M9	X	-.001	-.001	0	0
10	M10	X	-.001	-.001	0	0
11	M11	X	-.001	-.001	0	0
12	M12	X	-.001	-.001	0	0
13	M13	X	-.001	-.001	0	0
14	M14	X	-.001	-.001	0	0
15	M15	X	-.001	-.001	0	0
16	M25	X	-.0003	-.0003	0	0
17	M27	X	-.0003	-.0003	0	0
18	M29	X	-.0003	-.0003	0	0
19	M31	X	-.0003	-.0003	0	0
20	M33	X	-.0003	-.0003	0	0
21	M35	X	-.0003	-.0003	0	0
22	M37	X	-.0003	-.0003	0	0
23	M39	X	-.0003	-.0003	0	0
24	M41	X	-.0003	-.0003	0	0
25	M43	X	-.0003	-.0003	0	0
26	M45	X	-.0003	-.0003	0	0
27	M47	X	-.0003	-.0003	0	0
28	70	X	-.0003	-.0003	0	0
29	83	X	-.002	-.002	0	0
30	84	X	-.002	-.002	0	0
31	85	X	-.002	-.002	0	0
32	86	X	-.0003	-.0003	0	0
33	87	X	-.002	-.002	0	0
34	88	X	-.002	-.002	0	0
35	89	X	-.002	-.002	0	0
36	90	X	-.0003	-.0003	0	0
37	91	X	-.002	-.002	0	0
38	92	X	-.002	-.002	0	0
39	93	X	-.002	-.002	0	0
40	M70	X	-.0003	-.0003	0	0
41	M83	X	-.002	-.002	0	0
42	M84	X	-.002	-.002	0	0
43	M85	X	-.002	-.002	0	0
44	M86	X	-.0003	-.0003	0	0
45	M87	X	-.002	-.002	0	0
46	M88	X	-.002	-.002	0	0
47	M89	X	-.002	-.002	0	0
48	M90	X	-.0003	-.0003	0	0
49	M91	X	-.002	-.002	0	0
50	M92	X	-.002	-.002	0	0
51	M93	X	-.002	-.002	0	0

Member Distributed Loads (BLC 8 : Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	Y	-.007	-.007	0	0
2	M2	Y	-.007	-.007	0	0
3	M3	Y	-.007	-.007	0	0
4	M4	Y	-.007	-.007	0	0
5	M5	Y	-.007	-.007	0	0
6	M6	Y	-.007	-.007	0	0

Member Distributed Loads (BLC 8 : Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
7	M7	Y	-.009	-.009	0	0
8	M8	Y	-.009	-.009	0	0
9	M9	Y	-.009	-.009	0	0
10	M10	Y	-.011	-.011	0	0
11	M11	Y	-.01	-.01	0	0
12	M12	Y	-.011	-.011	0	0
13	M13	Y	-.01	-.01	0	0
14	M14	Y	-.011	-.011	0	0
15	M15	Y	-.01	-.01	0	0
16	M25	Y	-.005	-.005	0	0
17	M27	Y	-.005	-.005	0	0
18	M29	Y	-.005	-.005	0	0
19	M31	Y	-.005	-.005	0	0
20	M33	Y	-.005	-.005	0	0
21	M35	Y	-.005	-.005	0	0
22	M37	Y	-.005	-.005	0	0
23	M39	Y	-.005	-.005	0	0
24	M41	Y	-.005	-.005	0	0
25	M43	Y	-.005	-.005	0	0
26	M45	Y	-.005	-.005	0	0
27	M47	Y	-.005	-.005	0	0
28	70	Y	-.005	-.005	0	0
29	83	Y	-.011	-.011	0	0
30	84	Y	-.011	-.011	0	0
31	85	Y	-.011	-.011	0	0
32	86	Y	-.005	-.005	0	0
33	87	Y	-.011	-.011	0	0
34	88	Y	-.011	-.011	0	0
35	89	Y	-.011	-.011	0	0
36	90	Y	-.005	-.005	0	0
37	91	Y	-.011	-.011	0	0
38	92	Y	-.011	-.011	0	0
39	93	Y	-.011	-.011	0	0
40	M70	Y	-.005	-.005	0	0
41	M83	Y	-.011	-.011	0	0
42	M84	Y	-.011	-.011	0	0
43	M85	Y	-.011	-.011	0	0
44	M86	Y	-.005	-.005	0	0
45	M87	Y	-.011	-.011	0	0
46	M88	Y	-.011	-.011	0	0
47	M89	Y	-.011	-.011	0	0
48	M90	Y	-.005	-.005	0	0
49	M91	Y	-.011	-.011	0	0
50	M92	Y	-.011	-.011	0	0
51	M93	Y	-.011	-.011	0	0

Member Distributed Loads (BLC 25 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	Y	-.0001842	-.006	0	24.286
2	M1	Y	-.006	-.009	24.286	48.571
3	M1	Y	-.009	-.009	48.571	72.857
4	M1	Y	-.009	-.009	72.857	97.143
5	M1	Y	-.009	-.009	97.143	121.429
6	M1	Y	-.009	-.006	121.429	145.714
7	M1	Y	-.006	-.0001842	145.714	170
8	M4	Y	-.01	-.01	.278	91.78

Member Distributed Loads (BLC 25 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
9	M8	Y	-.002	-.009	0	22.5
10	M8	Y	-.009	-.017	22.5	45
11	M9	Y	-.002	-.009	0	22.5
12	M9	Y	-.009	-.017	22.5	45
13	M2	Y	-.0001842	-.006	0	24.286
14	M2	Y	-.006	-.009	24.286	48.571
15	M2	Y	-.009	-.009	48.571	72.857
16	M2	Y	-.009	-.009	72.857	97.143
17	M2	Y	-.009	-.009	97.143	121.429
18	M2	Y	-.009	-.006	121.429	145.714
19	M2	Y	-.006	-.0001842	145.714	170
20	M6	Y	-.01	-.01	.278	91.78
21	M7	Y	-.002	-.009	0	22.5
22	M7	Y	-.009	-.017	22.5	45
23	M3	Y	-.0001842	-.006	0	24.286
24	M3	Y	-.006	-.009	24.286	48.571
25	M3	Y	-.009	-.009	48.571	72.857
26	M3	Y	-.009	-.009	72.857	97.143
27	M3	Y	-.009	-.009	97.143	121.429
28	M3	Y	-.009	-.006	121.429	145.714
29	M3	Y	-.006	-.0001842	145.714	170
30	M5	Y	-.01	-.01	.278	91.78

Member Distributed Loads (BLC 26 : BLC 8 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	Y	-.000101	-.003	0	24.286
2	M1	Y	-.003	-.005	24.286	48.571
3	M1	Y	-.005	-.005	48.571	72.857
4	M1	Y	-.005	-.005	72.857	97.143
5	M1	Y	-.005	-.005	97.143	121.429
6	M1	Y	-.005	-.003	121.429	145.714
7	M1	Y	-.003	-.000101	145.714	170
8	M4	Y	-.005	-.005	.278	91.78
9	M8	Y	-.0009404	-.005	0	22.5
10	M8	Y	-.005	-.009	22.5	45
11	M9	Y	-.0009404	-.005	0	22.5
12	M9	Y	-.005	-.009	22.5	45
13	M2	Y	-9.208e-5	-.003	0	24.286
14	M2	Y	-.003	-.005	24.286	48.571
15	M2	Y	-.005	-.005	48.571	72.857
16	M2	Y	-.005	-.005	72.857	97.143
17	M2	Y	-.005	-.005	97.143	121.429
18	M2	Y	-.005	-.003	121.429	145.714
19	M2	Y	-.003	-9.208e-5	145.714	170
20	M6	Y	-.005	-.005	.278	91.78
21	M7	Y	-.0008971	-.005	0	22.5
22	M7	Y	-.005	-.008	22.5	45
23	M3	Y	-9.208e-5	-.003	0	24.286
24	M3	Y	-.003	-.005	24.286	48.571
25	M3	Y	-.005	-.005	48.571	72.857
26	M3	Y	-.005	-.005	72.857	97.143
27	M3	Y	-.005	-.005	97.143	121.429
28	M3	Y	-.005	-.003	121.429	145.714
29	M3	Y	-.003	-9.208e-5	145.714	170
30	M5	Y	-.005	-.005	.278	91.78

Member Area Loads (BLC 1 : Dead)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N4	N5	N7	N6	Y	Two Way	-.01
2	N2	N3	N5	N4	Y	Two Way	-.01
3	N6	N7	N3	N2	Y	Two Way	-.01

Member Area Loads (BLC 8 : Ice)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N4	N5	N7	N6	Y	Two Way	-.005
2	N2	N3	N5	N4	Y	Two Way	-.005
3	N6	N7	N3	N2	Y	Two Way	-.005

Joint Loads and Enforced Displacements (BLC 9 : Live Load a)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/i...
1	N46	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 10 : Live Load b)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/i...
1	N42	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 11 : Live Load c)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/i...
1	N38	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 12 : Live Load d)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/i...
1	N34	L	Y	-.25

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N9	max	1.778	5	1.123	19	.481	2	-1.195	2	1.522	5	.358	11
2		min	-1.797	11	.555	2	-.434	8	-2.708	20	-1.495	11	-.454	5
3	N13	max	.986	6	1.086	14	1.767	13	1.501	25	1.7	13	-.868	12
4		min	-1.01	12	.542	9	-1.806	7	.276	7	-1.681	7	-2.219	18
5	N11	max	1.118	3	1.118	17	1.928	2	1.341	15	1.894	9	2.433	21
6		min	-1.068	9	.555	30	-1.934	8	.169	8	-1.874	3	.942	3
7	155	max	.554	6	.961	20	.9	2	-.913	2	.408	4	.343	59
8		min	-.548	12	.353	2	-.878	8	-2.319	20	-.321	10	-.837	29
9	156	max	.692	5	.953	24	.663	2	.973	14	.489	8	2.12	22
10		min	-.668	11	.396	6	-.662	8	.258	82	-.421	2	.891	4
11	157	max	.603	5	.931	15	.809	2	1.354	14	.312	12	-.746	10
12		min	-.616	11	.37	9	-.825	8	.273	32	-.233	6	-1.826	16
13	N155	max	.819	5	.951	17	1.266	2	-.941	13	1.505	4	.347	57
14		min	-.808	11	.448	10	-1.434	8	-2.256	20	-1.617	10	-.813	27
15	N156	max	.893	5	.956	22	1.102	2	.94	14	1.996	8	2.088	22
16		min	-1.052	11	.43	3	-1.046	8	.188	8	-2.068	2	.847	4
17	N157	max	.952	5	.926	15	1.256	2	1.342	25	1.348	12	-.699	10
18		min	-.829	11	.443	82	-1.156	8	.297	31	-1.449	6	-1.773	16
19	Totals:	max	7.728	5	8.934	19	10.057	2						
20		min	-7.728	11	4.507	12	-10.057	8						

Envelope AISC 15th(360-16): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear C...	Loc[in]	Dir	LC	phi*...	phi*...	phi*...	phi*...	...	Eqn
1	M1	L2.5x2.5x4	.795	162.9...	9	.108	0	z	28	2.161	38.5...	1.114	1.936	...	H2-1
2	M2	L2.5x2.5x4	.732	161.1...	3	.062	170	y	77	2.161	38.5...	1.114	1.91	...	H2-1
3	M3	L2.5x2.5x4	.740	7.083	13	.070	170	z	8	2.161	38.5...	1.114	1.882	...	H2-1
4	M4	L2.5x2.5x4	.313	46.029	4	.013	46.029	y	18	7.37	38.5...	1.114	2.19	...	H2-1
5	M5	L2.5x2.5x4	.352	46.029	8	.013	46.029	y	21	7.37	38.5...	1.114	2.196	...	H2-1
6	M6	L2.5x2.5x4	.332	46.029	7	.013	46.029	y	14	7.37	38.5...	1.114	2.213	...	H2-1
7	M7	LL2.5x2.5x4x0	.065	16.406	16	.019	0	y	81	64.1...	77.1...	4.441	3.103	...	H1-...
8	M8	LL2.5x2.5x4x0	.069	0	32	.019	0	y	80	64.1...	77.1...	4.441	3.103	...	H1-...
9	M9	LL2.5x2.5x4x0	.065	16.406	24	.019	0	y	82	64.1...	77.1...	4.441	3.103	...	H1-...
10	M10	HSS4.5X4.5X0.2	.090	24.499	22	.075	24.499	z	5	140....	142....	19.1...	19.1...	...	H1-...
11	M11	HSS4X4X0.2	.198	11.576	17	.091	11.576	z	5	131....	131....	15.6...	15.6...	...	H1-...
12	M12	HSS4.5X4.5X0.2	.089	24.499	14	.094	24.499	z	9	140....	142....	19.1...	19.1...	...	H1-...
13	M13	HSS4X4X0.2	.207	11.576	9	.113	11.576	z	9	131....	131....	15.6...	15.6...	...	H1-...
14	M14	HSS4.5X4.5X0.2	.086	24.499	19	.087	24.499	z	13	140....	142....	19.1...	19.1...	...	H1-...
15	M15	HSS4X4X0.2	.194	11.576	13	.105	11.576	z	13	131....	131....	15.6...	15.6...	...	H1-...
16	M25	PIPE_2.0	.214	72	20	.134	60		21	14.9...	32.13	1.872	1.872	...	H1-...
17	M27	PIPE_2.0	.164	48	21	.085	48		14	20.8...	32.13	1.872	1.872	...	H1-...
18	M29	PIPE_2.0	.220	60	18	.126	72		2	14.9...	32.13	1.872	1.872	...	H1-...
19	M31	PIPE_2.0	.229	72	26	.146	18		8	14.9...	32.13	1.872	1.872	...	H1-...
20	M33	PIPE_2.0	.209	72	25	.135	60		25	14.9...	32.13	1.872	1.872	...	H1-...
21	M35	PIPE_2.0	.168	48	8	.083	48		17	20.8...	32.13	1.872	1.872	...	H1-...
22	M37	PIPE_2.0	.223	60	21	.119	60		18	14.9...	32.13	1.872	1.872	...	H1-...
23	M39	PIPE_2.0	.217	60	8	.132	18		13	14.9...	32.13	1.872	1.872	...	H1-...
24	M41	PIPE_2.0	.213	72	29	.146	60		30	14.9...	32.13	1.872	1.872	...	H1-...
25	M43	PIPE_2.0	.152	48	18	.082	48		21	20.8...	32.13	1.872	1.872	...	H1-...
26	M45	PIPE_2.0	.216	60	14	.118	60		22	14.9...	32.13	1.872	1.872	...	H1-...
27	M47	PIPE_2.0	.198	72	20	.107	60		4	14.9...	32.13	1.872	1.872	...	H1-...
28	70	PIPE_2.0	.253	5.063	29	.077	33.75		8	5.397	32.13	1.872	1.872	...	H1-...
29	83	C6.5X6.0X0.25	.721	0	20	.204	11.25	z	19	109....	141....	8.465	28.3...	...	H1-...
30	84	C-5.44X3.7X0.1...	.188	51.497	34	.031	26.821	y	31	57.9...	75.9...	4.02	13.1...	...	H1-...
31	85	C-5.44X3.7X0.1...	.177	51.497	18	.028	28.967	y	21	57.9...	75.9...	4.02	13.1...	...	H1-...
32	86	PIPE_2.0	.246	156.9...	25	.058	33.75		13	5.397	32.13	1.872	1.872	...	H1-...
33	87	C6.5X6.0X0.25	.737	0	24	.208	11.25	z	23	109....	141....	8.465	28.3...	...	H1-...
34	88	C-5.44X3.7X0.1...	.174	51.497	14	.029	29.504	y	21	57.9...	75.9...	4.02	13.1...	...	H1-...
35	89	C-5.44X3.7X0.1...	.170	51.497	21	.028	28.967	y	14	57.9...	75.9...	4.02	13.1...	...	H1-...
36	90	PIPE_2.0	.255	156.9...	29	.054	32.062		2	5.397	32.13	1.872	1.872	...	H1-...
37	91	C6.5X6.0X0.25	.718	0	16	.204	11.25	z	15	109....	141....	8.465	28.3...	...	H1-...
38	92	C-5.44X3.7X0.1...	.165	51.497	19	.029	29.504	y	14	57.9...	75.9...	4.02	13.1...	...	H1-...
39	93	C-5.44X3.7X0.1...	.186	51.497	26	.029	26.821	y	29	57.9...	75.9...	4.02	13.1...	...	H1-...
40	M70	PIPE_2.0	.343	32.063	8	.151	32.063		3	5.397	32.13	1.872	1.872	...	H1-...
41	M83	C6.5X6.0X0.25	.715	0	21	.202	11.25	z	19	109....	141....	8.465	28.3...	...	H1-...
42	M84	C-5.44X3.7X0.1...	.242	51.497	10	.031	26.821	y	27	57.9...	75.9...	4.02	13.1...	...	H1-...
43	M85	C-5.44X3.7X0.1...	.248	51.497	4	.028	28.967	y	22	57.9...	75.9...	4.02	13.1...	...	H1-...
44	M86	PIPE_2.0	.255	33.75	13	.137	32.062		7	5.397	32.13	1.872	1.872	...	H1-...
45	M87	C6.5X6.0X0.25	.732	0	25	.206	11.25	z	23	109....	141....	8.465	28.3...	...	H1-...
46	M88	C-5.44X3.7X0.1...	.300	51.497	2	.031	29.504	y	20	57.9...	75.9...	4.02	13.1...	...	H1-...
47	M89	C-5.44X3.7X0.1...	.310	51.497	8	.027	28.967	y	14	57.9...	75.9...	4.02	13.1...	...	H1-...
48	M90	PIPE_2.0	.299	32.062	3	.091	32.062		11	5.397	32.13	1.872	1.872	...	H1-...
49	M91	C6.5X6.0X0.25	.712	0	18	.202	11.25	z	15	109....	141....	8.465	28.3...	...	H1-...
50	M92	C-5.44X3.7X0.1...	.272	51.497	7	.029	29.504	y	24	57.9...	75.9...	4.02	13.1...	...	H1-...
51	M93	C-5.44X3.7X0.1...	.256	51.497	13	.027	26.821	y	30	57.9...	75.9...	4.02	13.1...	...	H1-...

APPENDIX B

(Modification Drawings)

MI CHECKLIST

REQUIRED	REPORT ITEM	BRIEF DESCRIPTION
		PRE-CONSTRUCTION
X	MI CHECKLIST DRAWING	THIS CHECKLIST SHALL BE INCLUDED IN THE MI REPORT.
N/A	EOR APPROVED SHOP DRAWINGS	FABRICATION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW. THE CONTRACTOR SHALL PROVIDE APPROVED SHOP DRAWINGS TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	ASSEMBLY DRAWINGS	ONCE THE PRE-MODIFICATION MAPPING IS COMPLETE, PRIOR TO FABRICATION, THE CONTRACTOR SHALL PROVIDE DETAILED ASSEMBLY DRAWINGS. THESE ARE TO INCLUDE, BUT ARE NOT LIMITED TO, A VISUAL LAYOUT OF NEW REINFORCEMENT, EXISTING REINFORCEMENT CONFIGURATION, PORTHOLES, MOUNTS, STEP PEGS, SAFETY CLIMBS AND ANY OTHER MISCELLANEOUS ITEMS WHICH MAY AFFECT SUCCESSFUL INSTALLATION OF MODIFICATIONS ON THE TOWER. THESE DRAWINGS SHALL BE SUBMITTED TO THE EOR FOR APPROVAL. APPROVED ASSEMBLY DRAWINGS SHALL BE SUBMITTED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	FABRICATION INSPECTION	A LETTER FROM THE FABRICATOR, STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND THE CONTRACT DOCUMENTS SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	FABRICATOR CERTIFIED WELD INSPECTION	A VISUAL OBSERVATION BY CWI OF A PORTION OF WELDING ON THE PROPOSED STRUCTURAL MEMBERS IS REQUIRED AND A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	MATERIAL TEST REPORT (MTR)	MILL CERTIFICATION SHALL BE PROVIDED FOR ALL STEEL AS SPECIFIED IN THE MODIFICATION DRAWINGS AND THIS DOCUMENTATION SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	FABRICATOR NDE INSPECTION	CRITICAL SHOP WELDS THAT REQUIRE TESTING ARE NOTED ON THESE CONTRACT DRAWINGS. A CERTIFIED WELD INSPECTOR SHALL PERFORM NON-DESTRUCTIVE EXAMINATION AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	PACKING SLIPS	THE MATERIAL SHIPPING LIST SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
		CONSTRUCTION (PERFORMED BY CONTRACTOR)
X	CONSTRUCTION INSPECTIONS	A LETTER FROM THE GENERAL CONTRACTOR STATING THAT THE WORKMANSHIP WAS PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND THESE CONTRACT DRAWINGS SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	CONTRACTOR'S CERTIFIED WELD INSPECTION	A CERTIFIED WELD INSPECTOR SHALL INSPECT AND TEST AS NECESSARY ALL FIELD WELDS. A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	ON SITE COLD GALVANIZING VERIFICATION	THE GENERAL CONTRACTOR SHALL PROVIDE DOCUMENTATION TO THE MI INSPECTOR VERIFYING THAT ANY ON-SITE COLD GALVANIZING WAS APPLIED AS SPECIFIED IN THE MODIFICATION DRAWINGS.
X	GC AS-BUILT DOCUMENTS	THE GENERAL CONTRACTOR SHALL SUBMIT A COPY OF THE CONTRACT DRAWINGS EITHER STATING "INSTALLED AS DESIGNED" OR NOTING ANY CHANGES THAT WERE REQUIRED AND APPROVED BY THE ENGINEER OF RECORD DUE TO FIELD CONDITIONS.
		POST-CONSTRUCTION
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)	THE MI INSPECTOR SHALL OBSERVE AND REPORT ANY DISCREPANCIES BETWEEN THE CONTRACTORS REDLINE DRAWING AND THE ACTUAL COMPLETED INSTALLATION.
X	PHOTOGRAPHS	PHOTOGRAPHS SHALL BE SUBMITTED TO THE MI WHICH DOCUMENT ALL PHASES OF THE CONSTRUCTION. THE PHOTOS SHALL BE ORGANIZED IN A MANNER THAT EASILY IDENTIFIES THE EXACT LOCATION OF THE PHOTO.
ADDITIONAL TESTING AND INSPECTIONS:		
NOTE: X DENOTES A DOCUMENT NEEDED FOR THE MI REPORT AND N/A DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE MI REPORT		

MODIFICATION INSPECTION NOTES:

GENERAL

THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT B+T GROUP.

MI INSPECTOR

THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ONSITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS

THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR (GC) INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT.

GENERAL CONTRACTOR

THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE MI INSPECTIONS
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS

THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST.

RECOMMENDATIONS

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING A MI REPORT:

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

CANCELLATION OR DELAYS IN SCHEDULED MI

IF THE GC AND MI INSPECTOR AGREE TO A DATE ON WHICH THE MI WILL BE CONDUCTED, AND EITHER PARTY CANCELS OR DELAYS, CARRIER SHALL NOT BE RESPONSIBLE FOR ANY COSTS, FEES, LOSS OF DEPOSITS AND/OR OTHER PENALTIES RELATED TO THE CANCELLATION OR DELAY INCURRED BY EITHER PARTY FOR ANY TIME (E.G. TRAVEL AND LODGING, COSTS OF KEEPING EQUIPMENT ON-SITE, ETC.). IF CARRIER CONTRACTS DIRECTLY FOR A THIRD PARTY MI, EXCEPTIONS MAY BE MADE IN THE EVENT THAT THE DELAY/CANCELLATION IS CAUSED BY WEATHER OR OTHER CONDITIONS THAT MAY COMPROMISE THE SAFETY OF THE PARTIES INVOLVED.

CORRECTION OF FAILING MI'S

IF THE MODIFICATION INSPECTOR FAILS THE MI ("FAILED MI"), THE GC SHALL WORK WITH CARRIER TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:

- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.
- OR, WITH CARRIER'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION
- THE ADDITIONAL COST INCURRED IN THE SECOND SUPERVISION PROCESS WOULD BE BORNE BY THE GENERAL CONTRACTOR.

MI VERIFICATION INSPECTIONS

CARRIER RESERVES THE RIGHT TO CONDUCT A MI VERIFICATION INSPECTION TO VERIFY THE ACCURACY AND COMPLETENESS OF PREVIOUSLY COMPLETED MI INSPECTION(S) ON TOWER MODIFICATION PROJECTS.

ALL VERIFICATION INSPECTIONS SHALL BE HELD TO THE SAME SPECIFICATIONS AND REQUIREMENTS IN THE CONTRACT DOCUMENTS.

VERIFICATION INSPECTION MAY BE CONDUCTED BY AN INDEPENDENT FIRM AFTER A MODIFICATION PROJECT IS COMPLETED, AS MARKED BY THE DATE OF AN ACCEPTED "PASSING MI" OR "PASS AS NOTED MI" REPORT FOR THE ORIGINAL PROJECT.

REQUIRED PHOTOS

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
  - RAW MATERIALS
  - PHOTOS OF ALL CRITICAL DETAILS
  - FOUNDATION MODIFICATIONS
  - WELD PREPARATION
  - BOLT INSTALLATION AND TORQUE
  - FINAL INSTALLED CONDITION
  - SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
  - PHOTOS OF MODIFIED SECTIONS INDIVIDUALLY INDICATING ELEVATION
  - FINAL INFIELD CONDITION

PHOTOS OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

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SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

AT&T

SAI

CT1035
1291 BANTAM ROAD
LITCHFIELD, CT 06759
LITCHFIELD
EXISTING PLATFORM
AT 126'-6"

PROJECT NO:	130653.003.01
CHECKED BY:	SR

ISSUED FOR:

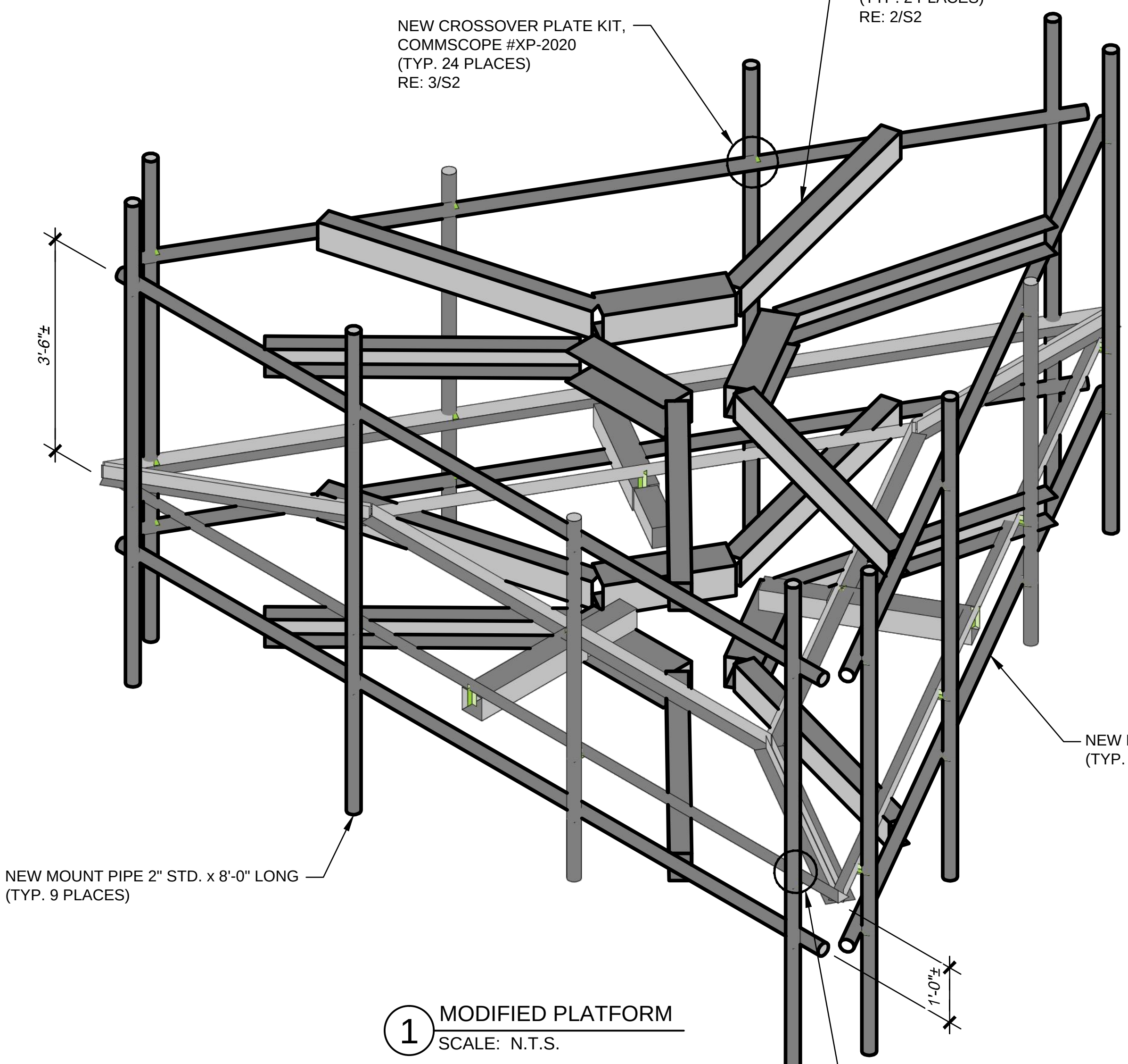
REV	DATE	DRWN	DESCRIPTION
0	02/26/19	NGR	CONSTRUCTION

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/20

STATE OF CONNECTICUT
31627
LICENSED
PROFESSIONAL ENGINEER
2/26/19

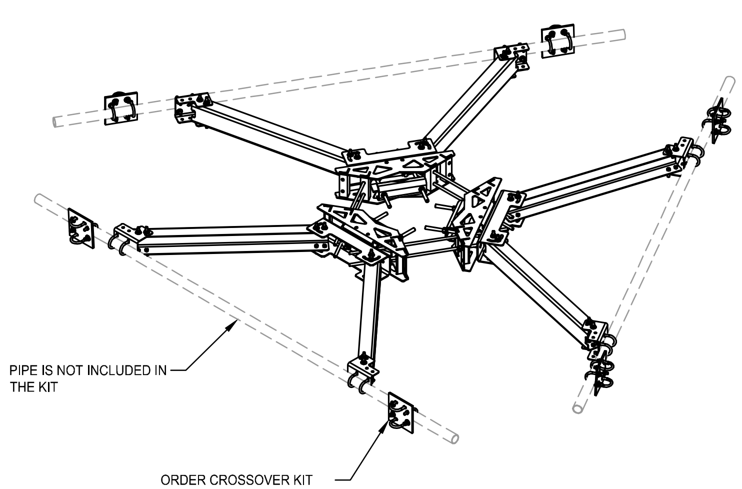
SHEET NUMBER:	REVISION:
S1	0

MODIFICATIONS BASED ON THE FAILING STRUCTURAL ANALYSIS FROM B+T GROUP DATED 02/08/19 AND ACCOMPANIED BY ANALYSIS FROM B+T GROUP DATED 02/26/19

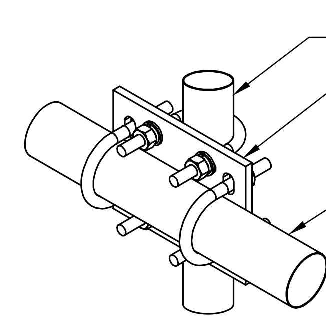


STRUCTURE NOTE:
REMOVE ALL THE EXISTING RRU PIPE AND RELOCATE THE RRU'S ON MOUNT PIPE

1 MODIFIED PLATFORM
SCALE: N.T.S.



2 COMMSCOPE VSR-MS-B REINFORCEMENT KIT
SCALE: N.T.S.



3 COMMSCOPE XP-2020 CROSSOVER PLATE KIT
SCALE: N.T.S.

GENERAL NOTES

1.1 CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO THE MOBILIZING ON THE SITE FOR INSTALLATION OF THE MOUNT MODIFICATION AND SHALL NOTIFY THE ENGINEER OF RECORD IF THE FIELD CONDITIONS VARY FROM WHAT IS SHOWN ON THE DRAWINGS. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD PRIOR TO MOBILIZING AT THE SITE IF THE MOUNT REINFORCEMENT SHOWN WILL NEED TO BE REVISED TO SATISFY FIELD CONDITIONS

1.2 CONTRACTOR SHALL RELOCATE NON-ANTENNA EQUIPMENT ALONG THE EXISTING PIPE MOUNT THAT IT IS MOUNTED TO, TO ALLOW FOR INSTALLATION OF MOUNT REINFORCEMENT. ENGINEER OF RECORD WILL BE NOTIFIED IF NON-ANTENNA EQUIPMENT NEEDS TO BE RELOCATED TO ANY OTHER EXISTING MEMBERS TO ALLOW FOR INSTALLATION OF MOUNT MODIFICATION.

1.3 MODIFICATION SHALL BE COMPLETED PRIOR TO ADDING THE PROPOSED APPURTENANCES.

1.4 ALL WORK SHALL COMPLY WITH THE TIA-222-H STANDARD, TIA-1019-A STANDARD, AS WELL AS ANY OTHER GOVERNING BUILDING CODES.

1.5 FIELD WORK WILL BE DONE AROUND EXISTING COAXIAL CABLE AND EQUIPMENT. ALL WORK SHALL BE DONE IN A MANNER SUCH THAT NO DAMAGE OCCURS TO THE EXISTING EQUIPMENT OR THE STRUCTURE.

1.6 A MINIMUM OF TWO COATS OF ZINGA COLD GALVANIZING COMPOUND (OR APPROVED EQUIVALENT) SHALL BE APPLIED TO ANY FIELD CUTS OR FIELD DRILLED HOLES.

1.7 THE USE OF A GAS TORCH OR WELDER WILL NOT BE PERMITTED ON THE TOWER WITHOUT THE CONSENT OF THE OWNER.

1.8 ALL FIELD CONNECTIONS SHALL BE MADE WITH A325N BOLTS, U.N.O.

1.9 IN LIEU OF TEMPORARY BRACING, CONTRACTOR MAY HAVE A STABILITY ANALYSIS PERFORMED BY AN ENGINEER LICENSED IN THE STATE THE TOWER IS LOCATED. THE ANALYSIS SHALL USE A MINIMUM WIND SPEED OF 45 mph (3-SEC) PER TIA-1019.

1.10 ALL CUTTING AND WELDING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH CCUSA POLICY "CUTTING AND WELDING PLAN" (DOC #ENG-PLN-10015) ON AN ONGOING BASIS THROUGHOUT THE ENTIRE LIFE OF THE PROJECT.

1.11 DIMENSIONS WITH "±" MUST BE WITHIN 3" OF THE INDICATED DIMENSION.

FABRICATION

2.1 ALL WORK SHALL BE DONE IN ACCORDANCE WITH A.I.S.C. "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."

2.2 STRUCTURAL STEEL SHALL MEET THE FOLLOWING SPECIFICATIONS:

	YIELD	ASTM SPECS
STEEL PIPE, U.N.O.	35ksi	A53 GR.B

2.3 ALL NEW MATERIAL INCLUDING STRUCTURAL STEEL AND FASTENERS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 AND A153.

2.4 WELDING SHALL MEET ANSI/AWS D1.1 STRUCTURAL WELDING CODE (LATEST REVISION). ELECTRODES SHALL BE E80 SERIES.

2.5 CONTRACTOR SHALL PROVIDE SHOP FABRICATION DRAWINGS TO B+T GROUP 5 DAYS PRIOR TO FABRICATION.

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SAI

CT1035

1291 BANTAM ROAD
LITCHFIELD, CT 06759
LITCHFIELD

EXISTING PLATFORM
AT 126'-6"

PROJECT NO:	130653.003.01
CHECKED BY:	SR

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
0	02/26/19	NGR	CONSTRUCTION

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/20

STATE OF CONNECTICUT · PROFESSIONAL ENGINEER · LICENSED · 31627
2/26/19

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER:	REVISION:
S2	0

130653_003_01_Mount MOD Drawing.dwg — Sheet:S2 — User: SUMANTH — Feb 26, 2019 — 5:14pm

1293 BANTAM RD

Location	1293 BANTAM RD	**Mblu**	61/ 87/ 42/ /
Acct#	008045	**Owner**	HAMMER ROBERT & JUDITH ET AL
Assessment	$883,500	**PID**	1384
Building Count	4		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$638,430	$245,070	$883,500

Owner of Record

Owner	HAMMER ROBERT & JUDITH ET AL	**Sale Price**	$300,000
Co-Owner		**Certificate**	
		Book & Page	307/ 353
		Sale Date	03/14/2007
		Instrument	08

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
HAMMER ROBERT & JUDITH ET AL	$300,000		307/ 353	08	03/14/2007
HAMMER ROBERT ET AL	$0		307/ 350		03/14/2007
HAMMER ROBERT & JOHN JR	$0		135/ 574	25	04/19/1969

Building Information

Building 1 : Section 1

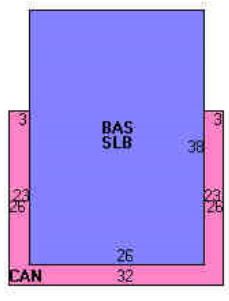
Year Built:	1970
Living Area:	988
Replacement Cost:	$221,961
Building Percent Good:	70
Replacement Cost Less Depreciation:	$155,370

Building Attributes	
Field	**Description**
STYLE	Restaurant
MODEL	Comm/Ind
Grade	D
Stories	1
Occupancy	1
Exterior Wall 1	Brick
Exterior Wall 2	Concr/Cinder
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Ceramic Tile
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Forced Hot Air
Central Air	None
Sprinkler %	0
Bldg Use	Commercial
Total Rooms	0
Full Baths	0
Half Baths	0
Extra Fixtures	0
Total Fixtures	0
1st Floor Use	
Heat/AC	None
Frame Type	Reinf. Concr
Baths/Plumbing	Average
Common Wall	0
Wall Height	10

Building Photo

(http://images.vgsi.com/photos/LitchfieldCTPhotos//\00\00\92/37.jpg)

Building Layout



(http://images.vgsi.com/photos/LitchfieldCTPhotos//Sketches/

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	988	988
CAN	Canopy	234	0
SLB	Slab	988	0
		2,210	988

Perimeter	128

Building 2 : Section 1

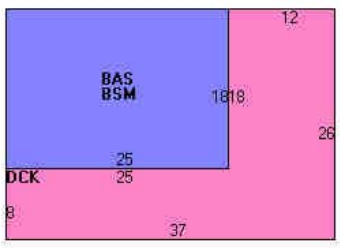
Year Built: 1977
Living Area: 450
Replacement Cost: $107,423
Building Percent Good: 84
Replacement Cost Less Depreciation: $90,240

Building Attributes : Bldg 2 of 4	
Field	**Description**
STYLE	Office
MODEL	Comm/Ind
Grade	D
Stories	1
Occupancy	1
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Arch Shingles
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Hardwood
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Elec Baseboard
Central Air	None
Sprinkler %	0
Bldg Use	Commercial
Total Rooms	0
Full Baths	0
Half Baths	1
Extra Fixtures	0
Total Fixtures	2
1st Floor Use	
Heat/AC	None
Frame Type	Wood Frame
Baths/Plumbing	Average
Common Wall	0
Wall Height	9
Perimeter	86

Building Photo

(http://images.vgsi.com/photos/LitchfieldCTPhotos//\00\00\92/38.jpg)

Building Layout



(http://images.vgsi.com/photos/LitchfieldCTPhotos//Sketches/

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	450	450
BSM	Basement	450	0
DCK	Deck	512	0
		1,412	450

Building 3 : Section 1

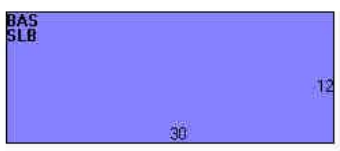
Year Built: 2005
Living Area: 360
Replacement Cost: $33,787
Building Percent Good: 87
Replacement Cost Less Depreciation: $29,390

Building Attributes : Bldg 3 of 4	
Field	**Description**
STYLE	Pre-Eng Warehs
MODEL	Comm/Ind
Grade	A
Stories	1
Occupancy	1
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Rolled
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete
Interior Floor 2	
Heating Fuel	None
Heating Type	None
Central Air	None
Sprinkler %	0
Bldg Use	Commercial
Total Rooms	0
Full Baths	0
Half Baths	0

Building Photo

(http://images.vgsi.com/photos/LitchfieldCTPhotos//\00\00\92/39.jpg)

Building Layout



(http://images.vgsi.com/photos/LitchfieldCTPhotos//Sketches/

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**

Extra Fixtures	0
Total Fixtures	0
1st Floor Use	
Heat/AC	None
Frame Type	Reinf. Concr
Baths/Plumbing	Average
Common Wall	0
Wall Height	10
Perimeter	84

BAS	First Floor	360	360
SLB	Slab	360	0
		720	360

Building 4 : Section 1

Year Built: 2005
Living Area: 240
Replacement Cost: $23,950
Building Percent Good: 87
Replacement Cost Less Depreciation: $20,840

Building Attributes : Bldg 4 of 4	
Field	**Description**
STYLE	Pre-Eng Warehs
MODEL	Comm/Ind
Grade	A
Stories	1
Occupancy	0
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Rolled
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Average
Interior Floor 2	
Heating Fuel	None
Heating Type	None
Central Air	None
Sprinkler %	0
Bldg Use	Commercial
Total Rooms	0
Full Baths	0
Half Baths	0
Extra Fixtures	0
Total Fixtures	0
1st Floor Use	
Heat/AC	None
Frame Type	Reinf. Concr
Baths/Plumbing	Average
Common Wall	0
Wall Height	10
Perimeter	64

Building Photo

(http://images.vgsi.com/photos/LitchfieldCTPhotos//\00\00\92/40.jpg)

Building Layout

(http://images.vgsi.com/photos/LitchfieldCTPhotos//Sketches/13

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	240	240
SLB	Slab	240	0
		480	240

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 201
Description Commercial
Zone 5
Neighborhood 200
Category

Land Line Valuation

Size (Acres) 12.51
Frontage
Depth
Assessed Value $245,070

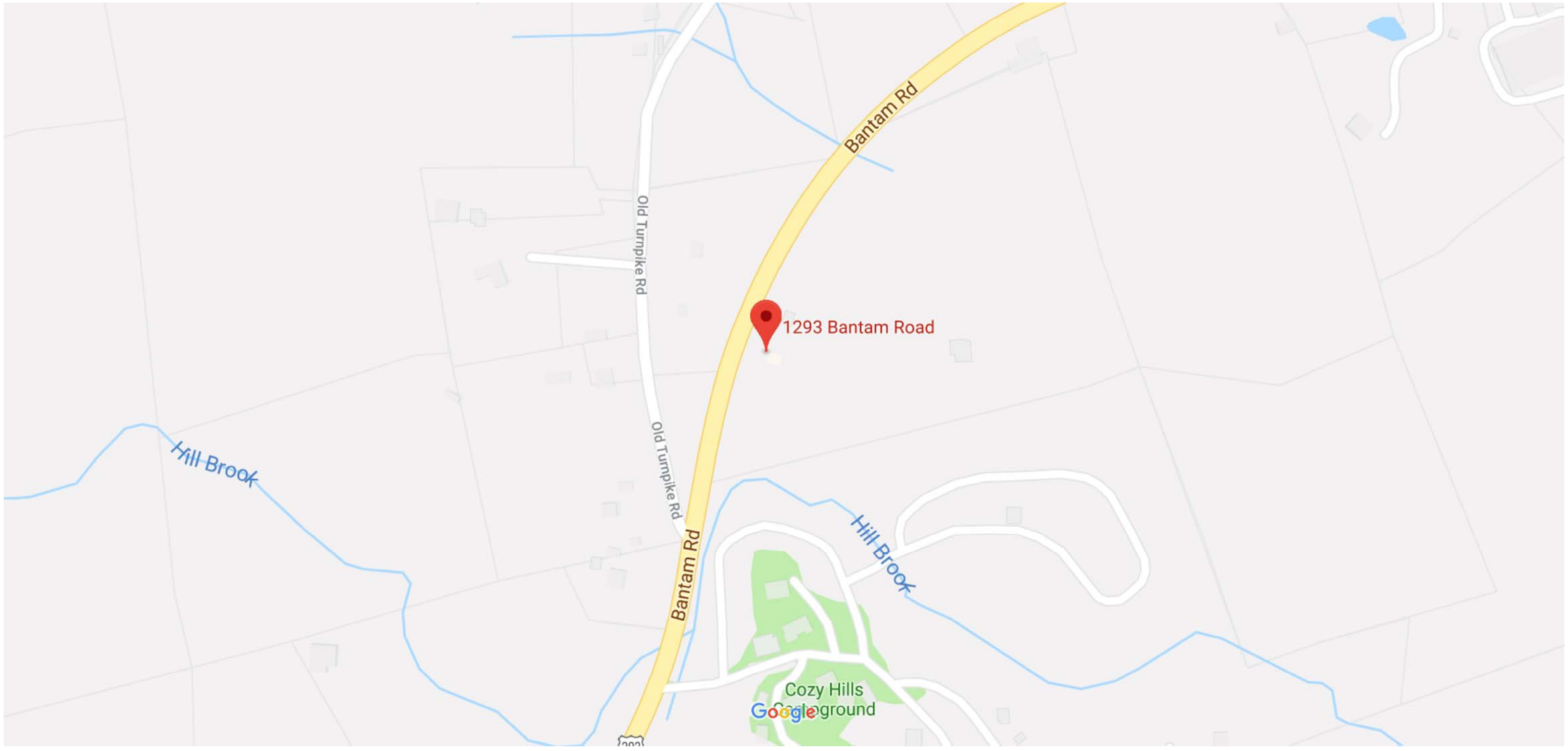
Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
CTWR	Cell Tower			3 UNITS	$615,600	1
FN1	Fence			200 L.F.	$600	4

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$620,010	$245,070	$865,080
2016	$620,010	$245,070	$865,080
2015	$620,010	$245,070	$865,080

Google Maps 1293 Bantam Rd



Map data ©2019 200 ft

UNITED STATES POSTAL SERVICE®

Click-N-Ship®

9405 5036 9930 0040 0049 37 0073 5000 0010 6759

usps.com
$7.35
US POSTAGE
Flat Rate Env

06/22/2019 Mailed from 06268 062S0000000310

P

PRIORITY MAIL 1-DAY™

Expected Delivery Date: 06/24/19

MARK J ROBERTS
QC DEVELOPMENT
PO BOX 916
STORRS CT 06268-0916

0024

Carrier -- Leave if No Response

B005

SHIP TO: THE HONORABLE LEO PAUL JR.
TOWN OF LITCHFIELD
PO BOX 488
CC: MR DENNIS TOBIN - LAND USE
LITCHFIELD CT 06759-0488

USPS TRACKING #

9405 5036 9930 0040 0049 37

Electronic Rate Approved #038555749

Cut on dotted line.

Instructions

1. **Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.**
2. **Place your label so it does not wrap around the edge of the package.**
3. **Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.**
4. **To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.**
5. **Mail your package on the "Ship Date" you selected when creating this label.**

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0040 0049 37

Trans. #:	466696991
Print Date:	06/21/2019
Ship Date:	06/22/2019
Expected Delivery Date:	06/24/2019

Priority Mail® Postage:	**$7.35**
Total	**$7.35**

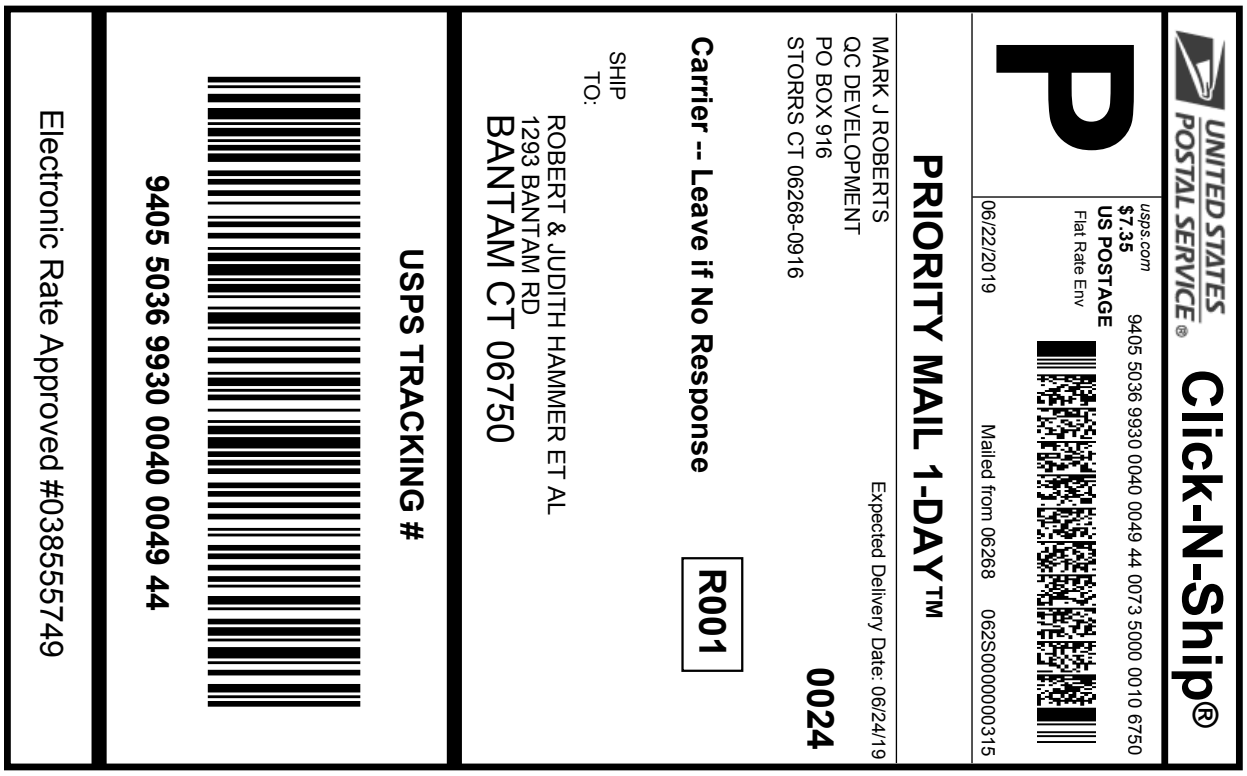
From: MARK J ROBERTS
QC DEVELOPMENT
PO BOX 916
STORRS CT 06268-0916

To: THE HONORABLE LEO PAUL JR.
TOWN OF LITCHFIELD
PO BOX 488
CC: MR DENNIS TOBIN - LAND USE
LITCHFIELD CT 06759-0488

* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

UNITED STATES POSTAL SERVICE®

Thank you for shipping with the United States Postal Service!
Check the status of your shipment on the USPS Tracking® page at usps.com



Cut on dotted line.

Instructions

1. **Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.**
2. **Place your label so it does not wrap around the edge of the package.**
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5. **Mail your package on the "Ship Date" you selected when creating this label.**

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0040 0049 44

Trans. #:	466696991
Print Date:	06/21/2019
Ship Date:	06/22/2019
Expected Delivery Date:	06/24/2019

Priority Mail® Postage:	**$7.35**
Total	**$7.35**

From: MARK J ROBERTS
QC DEVELOPMENT
PO BOX 916
STORRS CT 06268-0916

To: ROBERT & JUDITH HAMMER ET AL
1293 BANTAM RD
BANTAM CT 06750

* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

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Check the status of your shipment on the USPS Tracking® page at usps.com