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

March 22, 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) – CT2125
6 Fairfield Drive, Newtown, CT 06470
N 41.42530556
W 73.37411111

Dear Ms. Bachman:

AT&T currently maintains twelve (12) antennas at the 152-foot level of the existing 152-foot Monopole at 6 Fairfield Drive (aka 25 Meridian Ridge Drive), Newtown, CT. The tower is owned by American Tower and the property is owned by HW 1945 LLC. AT&T now intends to remove six (6) Powerwave 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, add (3) Ericsson 4415-B30 and add (3) Ericsson 4478-B14 Remote Radio Units (RRU). The new antennas and RRUs will also be installed at the 152-foot level of the tower.

This facility was approved by the Siting Council on May 13, 1987. 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 Daniel Rosenthal, First Selectman of the Town of Newtown, and the Newtown Planning 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.

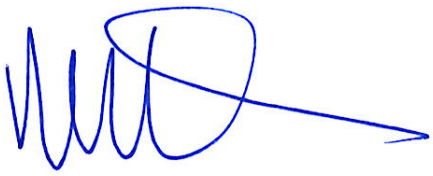
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

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: Daniel Rosenthal - Elected Official
George Benson – Director of Planning
HW 1945 LLC – Property Owner
American Tower – 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*							4.97%
AT&T GSM	2	414	152	0.0140	850	0.5667	0.25%
AT&T UMTS	2	414	152	0.0140	850	0.5667	0.25%
AT&T UMTS	2	656	152	0.0221	1900	1.0000	0.22%
AT&T LTE	2	1117	152	0.0337	700	0.4667	0.81%
AT&T LTE	2	1942	152	0.0655	1900	1.0000	0.66%
Site Total							7.15%

*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

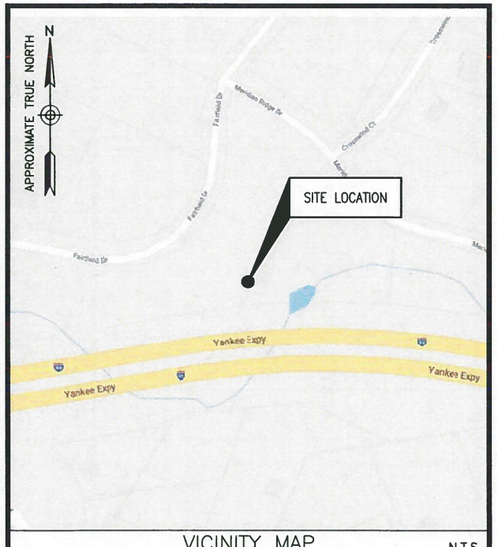
Proposed Loading on Tower

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*							4.97%
AT&T UMTS	1	249	152	0.0042	850	0.5667	0.07%
AT&T LTE	2	2951	152	0.0996	700	0.4667	2.13%
AT&T LTE	1	1000	152	0.0169	850	0.5667	0.30%
AT&T 5G	1	1000	152	0.0169	850	0.5667	0.30%
AT&T LTE	2	3664	152	0.1236	1900	1.0000	1.24%
AT&T LTE	1	1285	152	0.0217	2300	1.0000	0.22%
Site Total							9.23%

*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: NEWTOWN
SITE NUMBER: CT2125
6 FAIRFIELD DRIVE
NEWTOWN, CT 06470
ATC SITE NUMBER: 302518
FA CODE: 10034989
PACE ID: MRCTB035119, MRCTB035249, MRCTB035134
PROJECT: LTE 3C, 4C, 5C



VICINITY MAP N.T.S.

SITE COORDINATES:
LATITUDE: 41°-25'-31.872" N
LONGITUDE: 73°-22'-26.598" W
(PER EXISTING DRAWINGS PROVIDED)

ELEVATION DATA:
GRADE ELEVATION AT TOWER = 433'± 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 AT TOWER TOP
- ADD (3) B14-4478 AT TOWER TOP
- ADD (3) 4415 B30 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 DUS FOR RBS 6630, ADD XMU, ADD 5G RBS 6630

PROJECT DESCRIPTION

SITE NAME:
NEWTOWN

SITE NUMBER:
CT2125

SITE ADDRESS:
6 FAIRFIELD DRIVE
NEWTOWN, CT 06470

TOWER OWNER:
AMERICAN TOWER CORPORATION
116 HUNTINGTON AVE., 11TH FLOOR
BOSTON, MA 02116

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 SHELTER LAYOUTS
C-3	EXISTING & PROPOSED ANTENNA LAYOUTS
C-4	EXISTING & PROPOSED ELEVATIONS
C-5	CONSTRUCTION DETAILS I
C-6	CONSTRUCTION DETAILS II
C-7	CONSTRUCTION DETAILS III
C-8	PLUMBING DIAGRAM
E-1	GROUNDING NOTES & DETAILS

SHEET INDEX

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

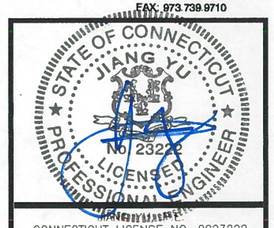
SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

CT2125
NEWTOWN

CONSTRUCTION DRAWINGS

0	03/18/19	ISSUED AS FINAL
C	02/28/19	REVISED PER COMMENTS
B	01/29/19	REVISED PER COMMENTS
A	01/09/19	ISSUED FOR REVIEW

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



CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	BJR
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50055106
JOB NUMBER:	50093831
SITE ADDRESS:	

6 FAIRFIELD DRIVE
NEWTOWN, CT 06470

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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NEWTOWN

CONSTRUCTION DRAWINGS

0	03/18/19	ISSUED AS FINAL
C	02/28/19	REVISED PER COMMENTS
B	01/29/19	REVISED PER COMMENTS
A	01/09/19	ISSUED FOR REVIEW

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STATE OF CONNECTICUT
JIANG YU
No. 0023222
LICENSED
PROFESSIONAL ENGINEER

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

DRAWN BY:	BJR
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50055106
JOB NUMBER:	50093831
SITE ADDRESS:	

6 FAIRFIELD DRIVE
NEWTOWN, CT 06470

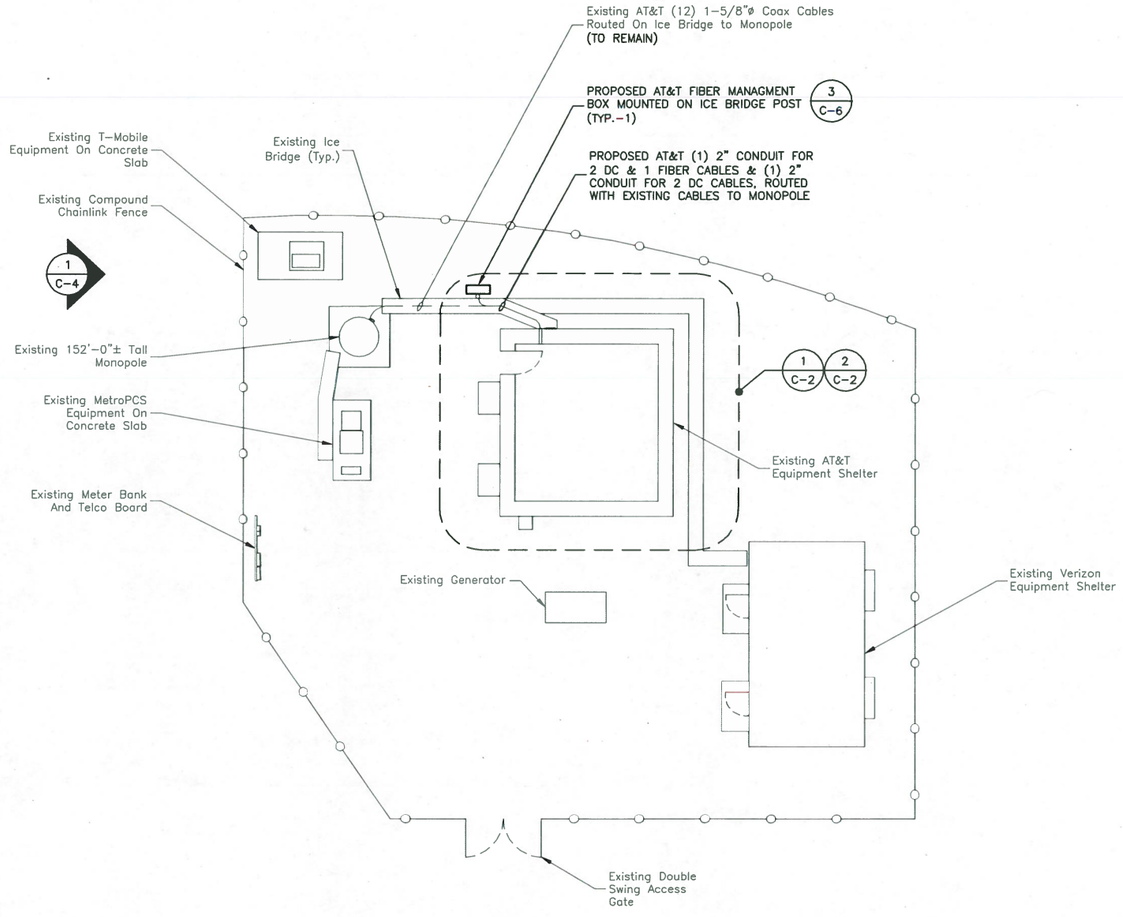
SHEET TITLE

GENERAL NOTES

SHEET NUMBER

G-1

APPROXIMATE TRUE NORTH



COMPOUND PLAN 1

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"

0' 10' 20'

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 AMERICAN TOWER CORPORATION DATED FEBRUARY 6, 2019 AND MOUNT ANALYSIS BY B+T GROUP DATED JANUARY 22, 2019.

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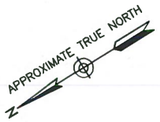
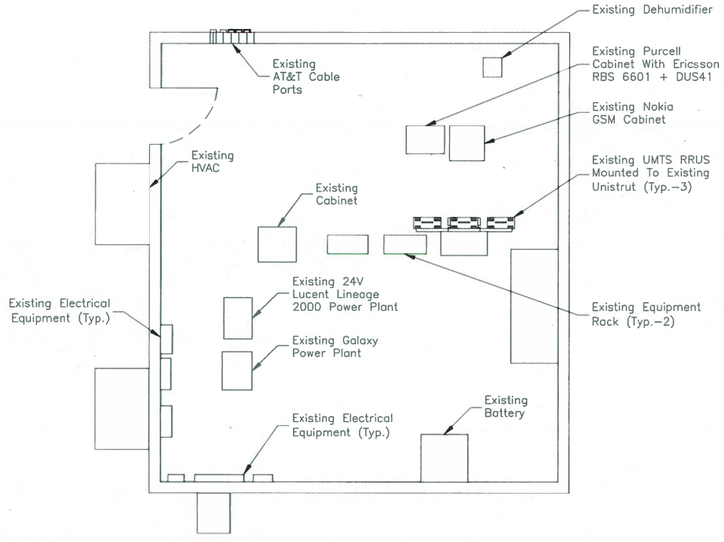
COMPOUND PLAN

SHEET NUMBER

C-1

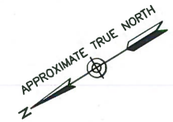


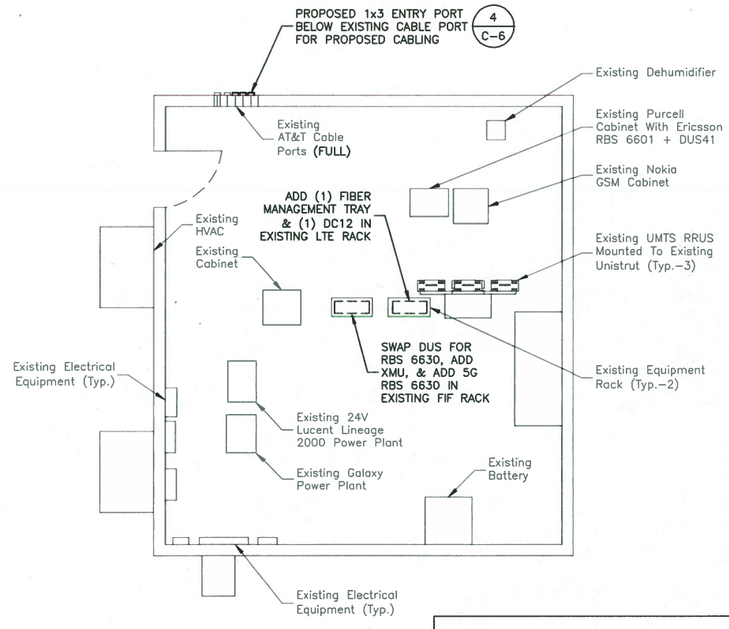


EXISTING SHELTER LAYOUT 1

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

0' 2' 4' 8'





NOTE:

1. INSTALL (24) TELCO FLEX BETWEEN EXISTING & PROPOSED DC12 AND EXISTING POWER PLANT.

PROPOSED SHELTER LAYOUT 1

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

0' 2' 4' 8'

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SITE ADDRESS:	

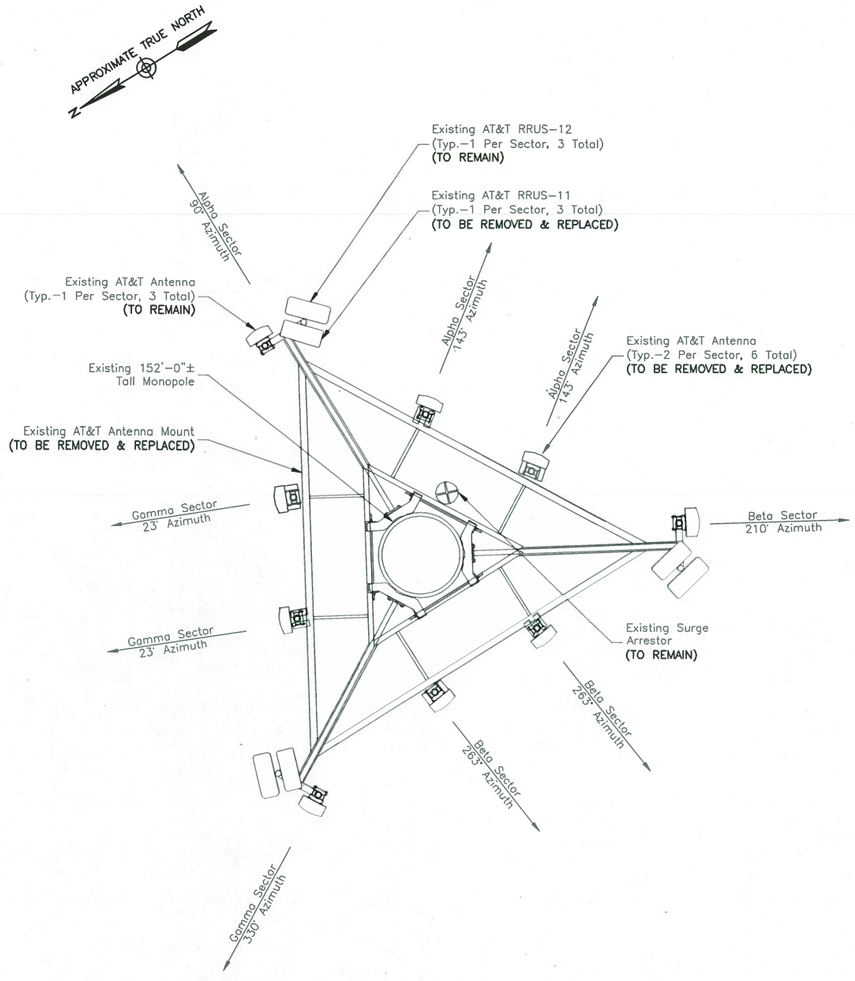
6 FAIRFIELD DRIVE
NEWTOWN, CT 06470

SHEET TITLE

EXISTING & PROPOSED SHELTER LAYOUTS

SHEET NUMBER

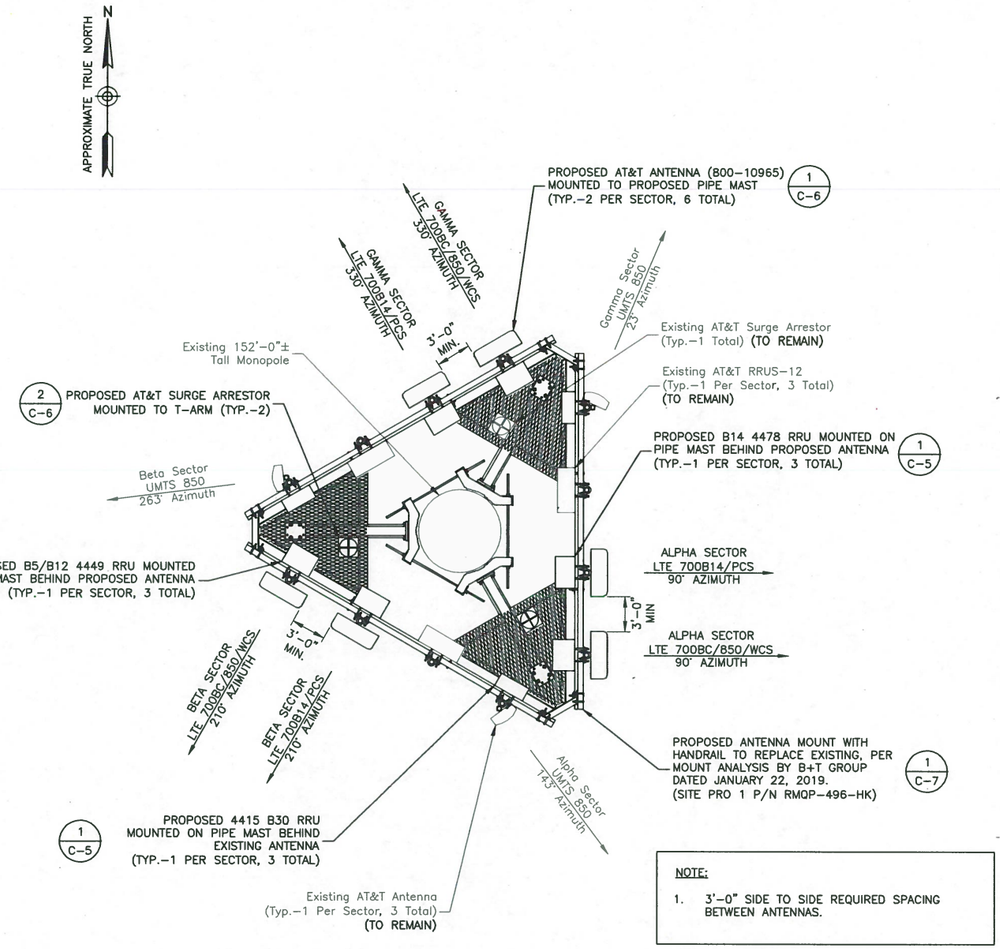
C–2



EXISTING ANTENNA LAYOUT 1

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

0' 2' 4' 6'



NOTE:

1. 3'-0" SIDE TO SIDE REQUIRED SPACING BETWEEN ANTENNAS.

PROPOSED ANTENNA LAYOUT 1

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 AMERICAN TOWER CORPORATION DATED FEBRUARY 6, 2019 AND MOUNT ANALYSIS BY B+T GROUP DATED JANUARY 22, 2019.

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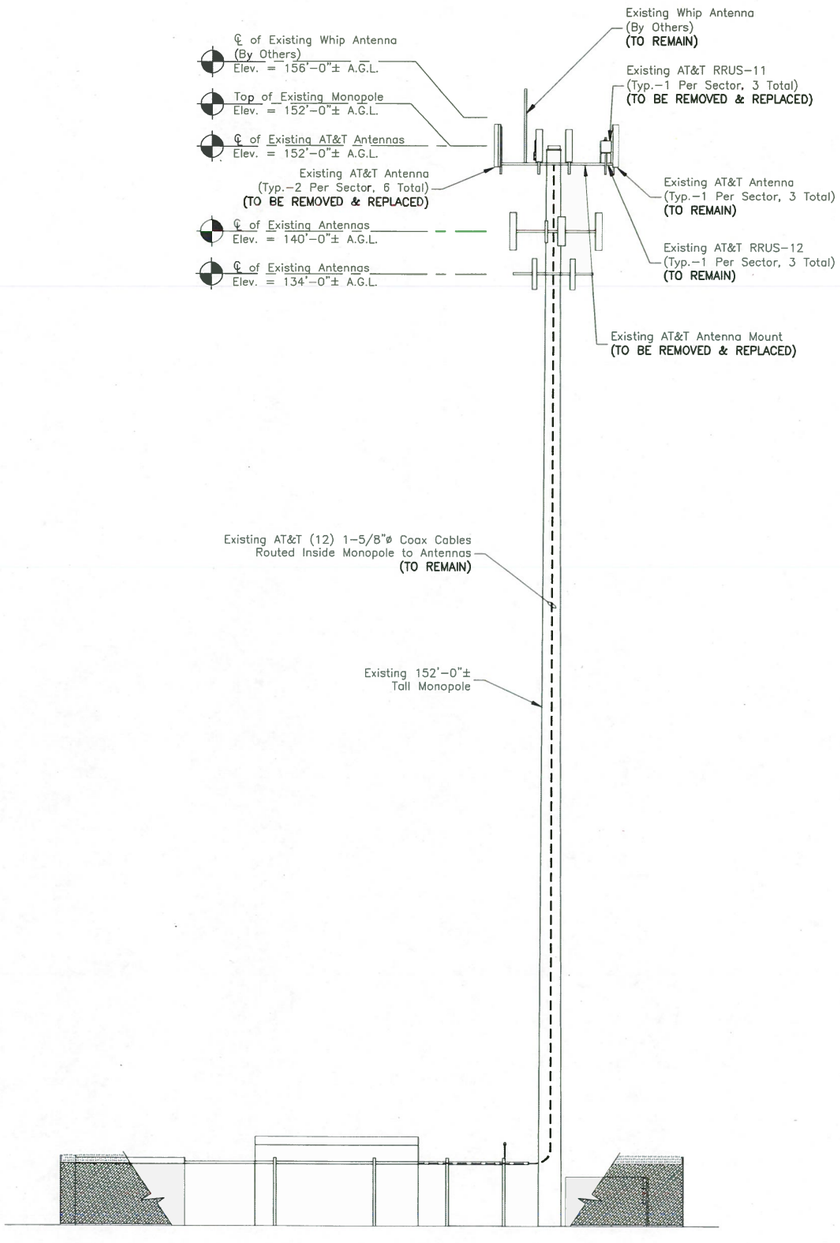
NEWTOWN, CT 06470

SHEET TITLE

EXISTING & PROPOSED ANTENNA LAYOUTS

SHEET NUMBER

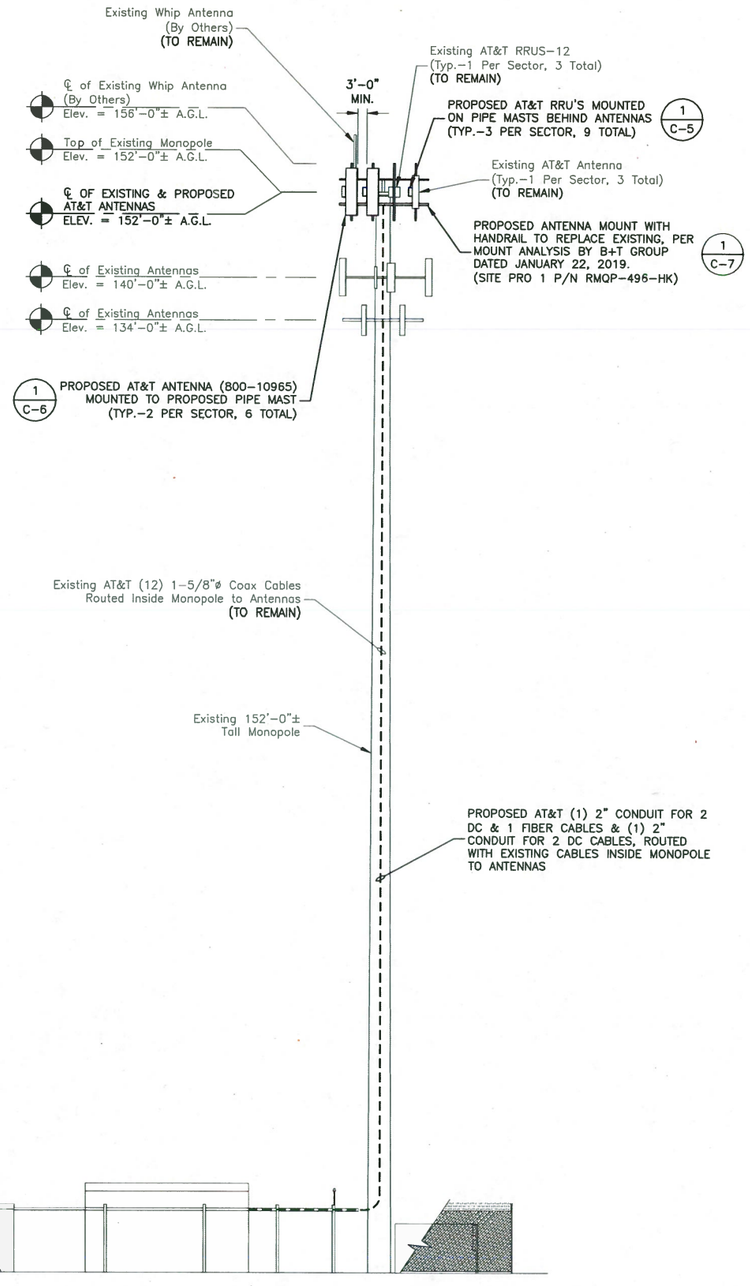
C-3



EXISTING ELEVATION 1

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

0' 8' 16' 24'



PROPOSED 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 AMERICAN TOWER CORPORATION DATED FEBRUARY 6, 2019 AND MOUNT ANALYSIS BY B+T GROUP DATED JANUARY 22, 2019.

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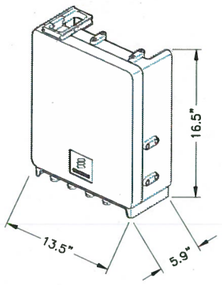
SHEET TITLE

EXISTING & PROPOSED ELEVATIONS

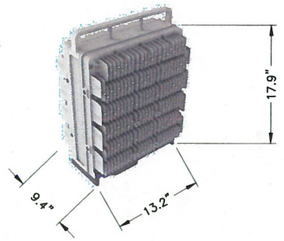
SHEET NUMBER

C-4



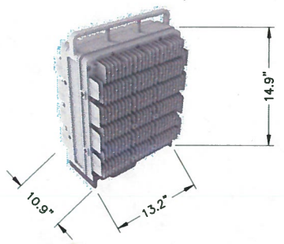
ERICSSON RRUS B30 4415

SPECIFICATIONS:
HEIGHT: 16.5"
WIDTH: 13.5"
DEPTH: 5.9"
WEIGHT: 44.1 LBS



ERICSSON RRUS B5/B12 4449

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



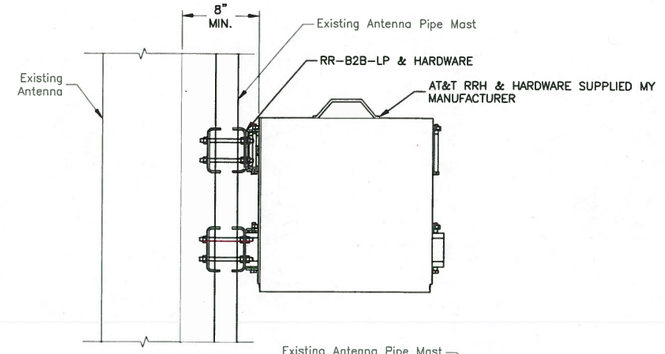
ERICSSON RRUS B2/B66a 8843

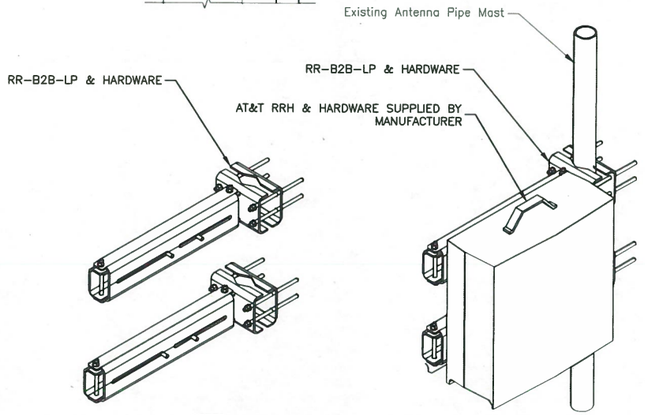
SPECIFICATIONS:
HEIGHT: 14.9"
WIDTH: 13.2"
DEPTH: 10.9"
WEIGHT: 72.0 LBS

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 ℄ HEIGHT	AZIMUTH	TMA/DIPLEXER	RRU	QTY.	FEEDER	RAYCAP
A1	EXISTING	UMTS 850	POWERWAVE 7770	152'	143°	(2) POWERWAVE/LGP 21901 (2) 21401 (DB – 850 BYPASS)	–	4	1-5/8" COAX	(E) (1) RAYCAP DC6-48-60-18-8C (P) (1) RAYCAP DC6-48-60-18-8C (P) (1) RAYCAP DC6-48-60-0-8C-EV
A2	–	–	–	–	–	–	–	–	–	
A3	PROPOSED	LTE 700/1900	KATHREIN 800-10965	152'	90°	–	(P) ERICSSON RRUS B14 4478 (E) ERICSSON RRUS-12	–	FIBER	
A4	PROPOSED	LTE 700/850/WCS 5G 850	KATHREIN 800-10965	152'	90°	–	(P) ERICSSON RRUS B5/B12 4449 (P) ERICSSON RRUS 4415 B30	–	FIBER	
B1	EXISTING	UMTS 850	POWERWAVE 7770	152'	263°	(2) POWERWAVE/LGP 21901 (2) 21401 (DB – 850 BYPASS)	–	4	1-5/8" COAX	
B2	–	–	–	–	–	–	–	–	–	
B3	PROPOSED	LTE 700/1900	KATHREIN 800-10965	152'	210°	–	(P) ERICSSON RRUS B14 4478 (E) ERICSSON RRUS-12	–	FIBER	
B4	PROPOSED	LTE 700/850/WCS 5G 850	KATHREIN 800-10965	152'	210°	–	(P) ERICSSON RRUS B5/B12 4449 (P) ERICSSON RRUS 4415 B30	–	FIBER	
C1	EXISTING	UMTS 850	POWERWAVE 7770	152'	23°	(2) POWERWAVE/LGP 21901 (2) 21401 (DB – 850 BYPASS)	–	4	1-5/8" COAX	
C2	–	–	–	–	–	–	–	–	–	
C3	PROPOSED	LTE 700/1900	KATHREIN 800-10965	152'	330°	–	(P) ERICSSON RRUS B14 4478 (E) ERICSSON RRUS-12	–	FIBER	
C4	PROPOSED	LTE 700/850/WCS 5G 850	KATHREIN 800-10965	152'	330°	–	(P) ERICSSON RRUS B5/B12 4449 (P) ERICSSON RRUS 4415 B30	–	FIBER	

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6 FAIRFIELD DRIVE
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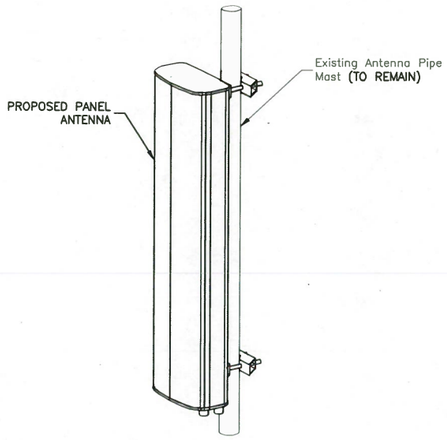
SHEET TITLE
CONSTRUCTION DETAILS I

SHEET NUMBER
C-5

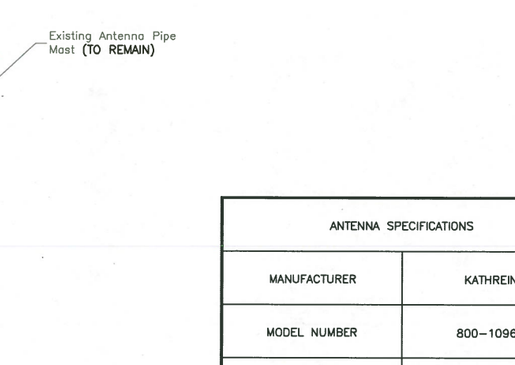


NOTES:

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

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

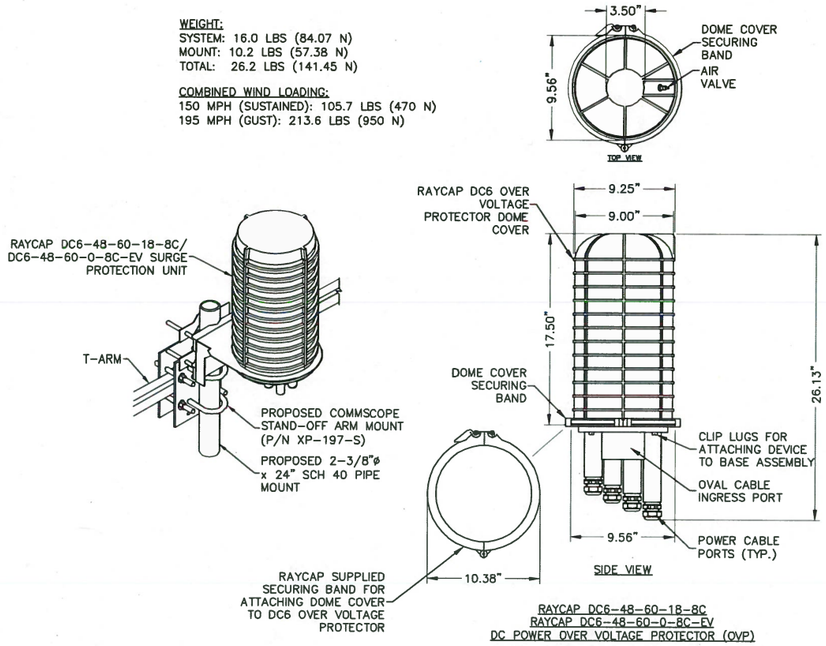
ANTENNA DETAIL 1
SCALE: N.T.S.



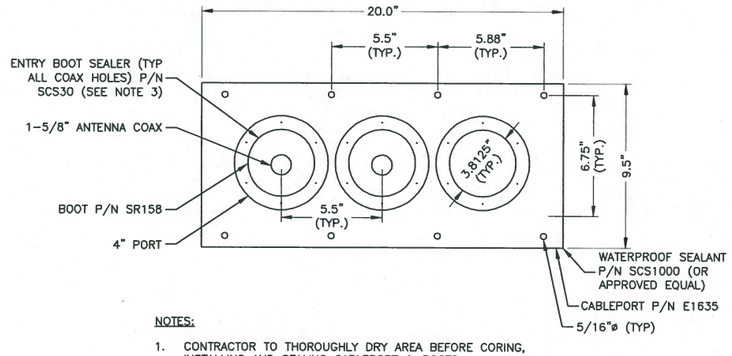
FIBER MANAGEMENT BOX DETAIL 3
SCALE: N.T.S.

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)



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



NOTES:

1. CONTRACTOR TO THOROUGHLY DRY AREA BEFORE CORING, INSTALLING AND SEALING CABLEPORT & BOOTS.
2. ALL PART NUMBERS ARE SITEPRO1.
3. CONTRACTOR TO FILL THE BOOT CAVITY W/ BOOT SEALER TO FORM A CONICAL SHAPE TO ALLOW WATER RUN OFF. 2 TUBES OF SCS30 ARE REQUIRED FOR EACH BOOT.
4. WATERPROOF ALL EDGES AND HOLES.

3 PORT ENTRY PANEL (E1635) 4
SCALE: N.T.S.

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

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

CT2125
NEWTOWN

CONSTRUCTION DRAWINGS

0	03/18/19	ISSUED AS FINAL
C	02/28/19	REVISED PER COMMENTS
B	01/29/19	REVISED PER COMMENTS
A	01/09/19	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. 23022
LICENSED PROFESSIONAL ENGINEER

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

DRAWN BY:	BJR
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50055106
JOB NUMBER:	50093831
SITE ADDRESS:	

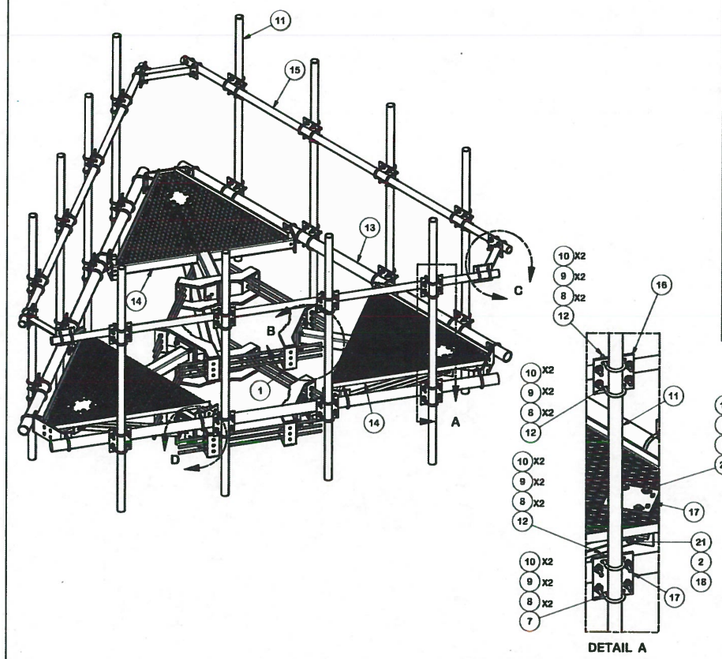
6 FAIRFIELD DRIVE
NEWTOWN, CT 06470

SHEET TITLE

CONSTRUCTION DETAILS II

SHEET NUMBER

C-6



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	6	X-LWRM	RING MOUNT WELDMENT		68.16	408.95
2	66	G58LW	5/8" HDG LOCKWASHER		0.03	1.72
3	60	A58NUT	5/8" HDG A325 HEX NUT		0.13	7.78
4	18	G58R-24	5/8" x 24" THREADED ROD (HDG.)		0.55	9.88
4	18	G58R-48	5/8" x 48" THREADED ROD (HDG.)		0.55	9.88
5	24	A58234	5/8" x 2-3/4" HDG A325 HEX BOLT	2 3/4 in	0.36	8.53
6	24	A58FW	5/8" HDG A325 FLATWASHER		0.03	0.82
7	36	X-UB1306	1/2" X 3-5/8" X 6" X 3" U-BOLT (HDG.)		0.73	26.34
8	264	G12FW	1/2" HDG USS FLATWASHER		0.03	8.99
9	252	G12LW	1/2" HDG LOCKWASHER		0.01	3.50
10	252	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	18.03
11	12	P296	2-3/8" X 96" SCH. 40 GALVANIZED PIPE	96 in	30.76	369.08
12	84	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.73	61.46
13	3	P3150	3-1/2" X 150" SCH 40 GALVANIZED PIPE	150 in	94.80	284.40
14	3	X-SV196	LOW PROFILE PLATFORM CORNER		212.10	636.31
15	3	P2150	2-3/8" OD X 150" SCH 40 GALVANIZED PIPE	150 in	48.06	144.17
16	12	SCX2	CROSSOVER PLATE	7 in	4.80	57.56
17	15	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	90.32
18	6	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	0.78
19	6	X-253993	PLATFORM REINFORCEMENT KIT ANGLE	52 25/32 in	14.33	85.99
20	6	X-253992	T-BRACKET FOR REINFORCEMENT KIT		13.55	81.27
21	6	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.62
22	12	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	4.91
23	3	X-AHCP	ANGLE HANDRAIL CORNER PLATE		12.92	38.76
					TOTAL WT.#	2448.72

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
12' 6" LOW PROFILE PLATFORM WITH TWELVE 2-3/8" ANTENNA MOUTING PIPES, AND HANDRAIL

SITE PRO 1 — A valmont company
Engineering Support Team: 1-888-753-7448
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	
4488	CEK 7/14/2014		RMQP-496-HK	
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	SHEET
81 / 02	CUSTOMER	BMC 7/14/2014	RMQP-496-HK	1 OF 3

ANTENNA MOUNT DETAIL 1

SCALE: N.T.S.

NOTE:

1. INSTALL PROPOSED PLATFORM WITH HANDRAIL IN ACCORDANCE WITH THE MOUNT ANALYSIS BY B+T GROUP DATED JANUARY 22, 2019.

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

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

CT2125
NEWTOWN

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STATE OF CONNECTICUT
JIANG YU
No. 23222
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JIANG YU, P.E.
CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	BJR
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50055106
JOB NUMBER:	50093831
SITE ADDRESS:	

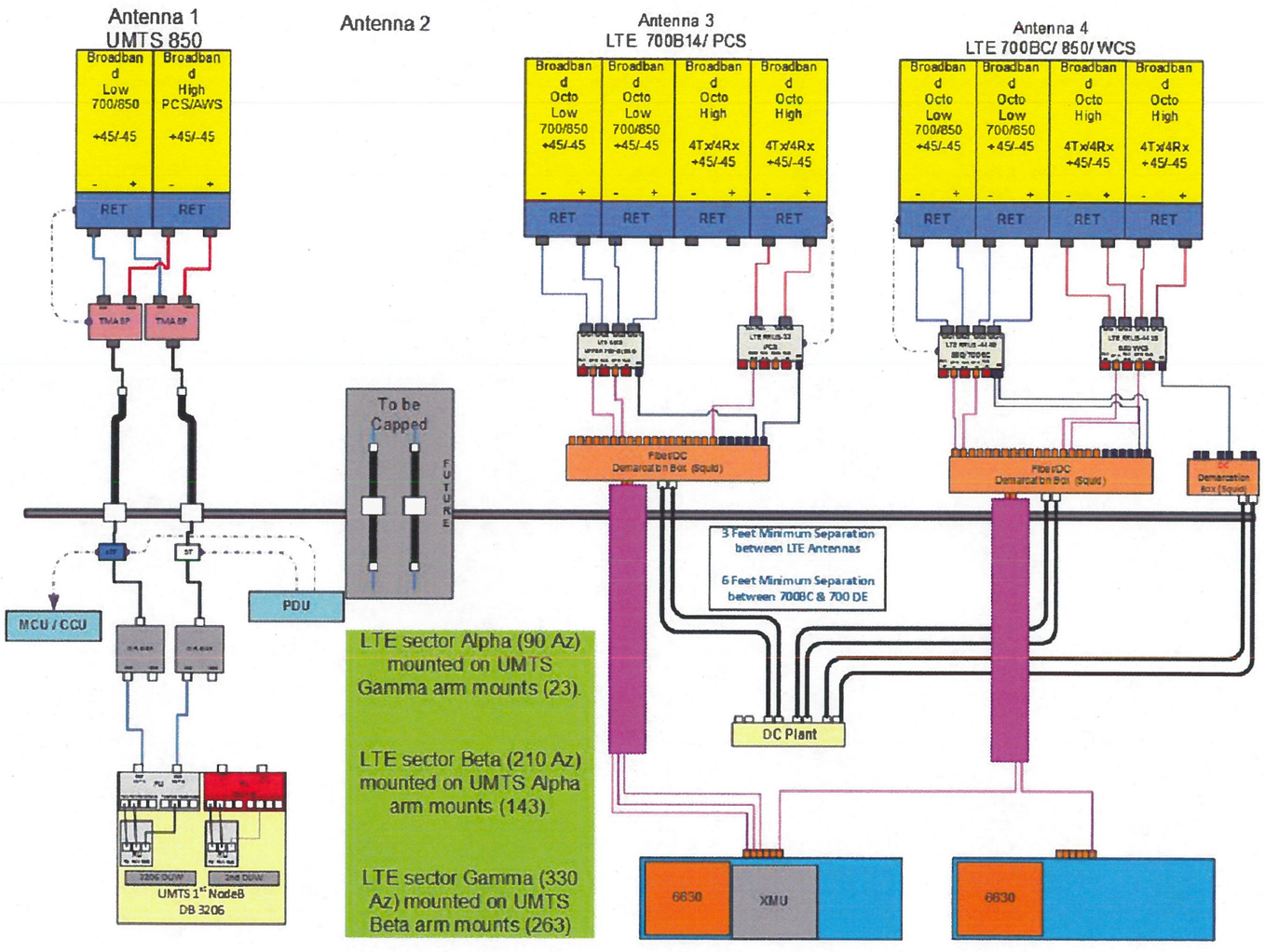
6 FAIRFIELD DRIVE
NEWTOWN, CT 06470

SHEET TITLE

CONSTRUCTION DETAILS III

SHEET NUMBER

C-7



PLUMBING DIAGRAM (1)
SCALE: N.T.S.

NOTE:

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

at&t
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ROCKY HILL, CT 06067

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12 INDUSTRIAL WAY
SALEM, NH 03079

CT2125
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STATE OF CONNECTICUT
JIANG YU
No. 23222
LICENSED PROFESSIONAL ENGINEER
JIANG YU, P.E.
CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	BJR
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50055106
JOB NUMBER:	50093831
SITE ADDRESS:	

6 FAIRFIELD DRIVE
NEWTOWN, CT 06470

SHEET TITLE

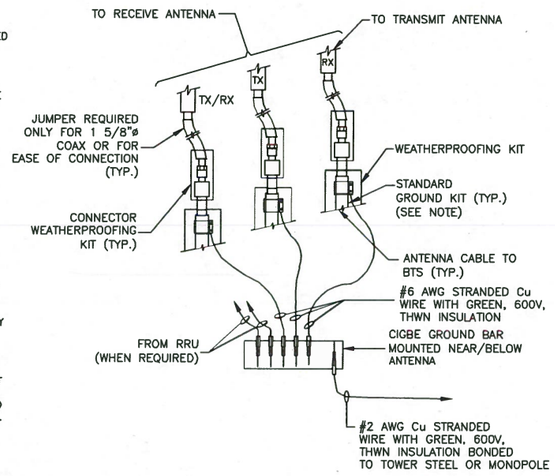
PLUMBING DIAGRAM

SHEET NUMBER

C-8

GROUNDING NOTES:

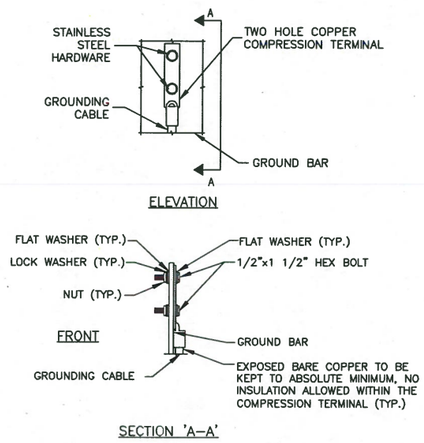
1. THE CONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ). THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA 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

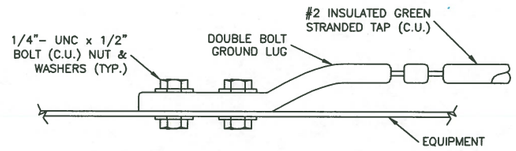


NOTES:

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

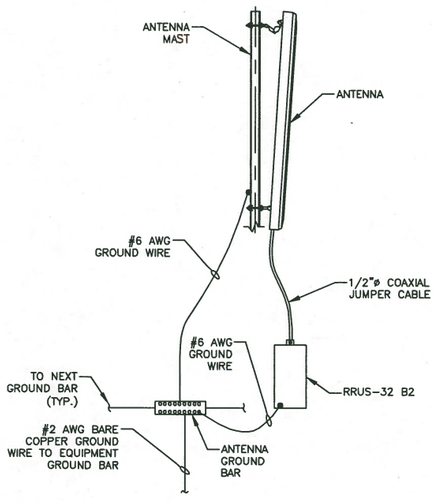
TYPICAL GROUND BAR MECHANICAL CONNECTION DETAIL 2

SCALE: N.T.S.



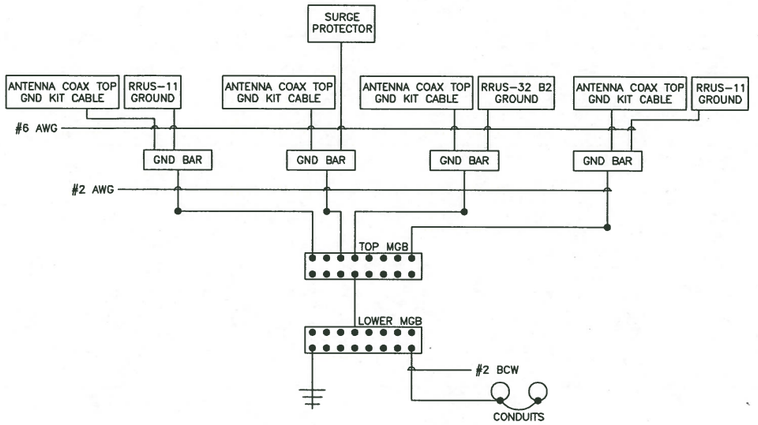
CONNECTION TO EQUIPMENT DETAIL 3

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
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SITE ADDRESS:	

6 FAIRFIELD DRIVE
NEWTOWN, CT 06470

SHEET TITLE

GROUNDING NOTES & DETAILS

SHEET NUMBER

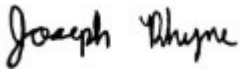
E-1

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**152 ft Monopole**
ATC Site Name	:	**Newtown CT 3, CT**
ATC Site Number	:	**302518**
Engineering Number	:	**OAA745673_C3_01**
Proposed Carrier	:	**AT&T MOBILITY**
Carrier Site Name	:	**ROUND SWAMP**
Carrier Site Number	:	**CT2125**
Site Location	:	**6 Fairfield Dr (Brkfld)** **Newtown, CT 06470-1216** **41.425500,-73.374000**
County	:	**Fairfield**
Date	:	**February 6, 2019**
Max Usage	:	**54%**
Result	:	**Pass**

Prepared By:
Joseph Rhyne
Engineer Intern



Reviewed By:

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 152 ft monopole to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower Drawings	EEI Job #8238 Rev 2, dated January 30, 2001
Foundation Drawing	EEI Job #8238, dated November 16, 2000
Geotechnical Report	Soiltesting Project #G128-5268-98, dated September 8, 1999

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	93 mph (3-Second Gust, Vasd) / 120 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.21, S_1 = 0.07
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
142.0	6	RFS FD9R6004/1C-3L	Flush	(12) 1 5/8" Coax	VERIZON WIRELESS
	3	Rymsa MGD3-800T0			
	6	Andrew DB846H80E-SX			
	3	Powerwave Allgon P65-16-XL-2			
134.0	6	Kathrein Scala 860-10025	Low Profile Platform	(12) 1 5/8" Coax	METRO PCS INC
	3	Kathrein Scala 800 10504			
	3	Kathrein Scala 742 351			
	3	KMW AWS Twin Dual 700 Bypass	Low Profile Platform	(12) 1 5/8" Coax (1) 1.58" (40.1mm) Hybrid	T-MOBILE
	3	Ericsson RRUS 11 B12			
	3	Ericsson AIR 21, 1.3 M, B2A B4P			
	3	Commscope SBNH-1D65C			
30.0	1	Generic 2" x 4" GPS	Flush	(1) 1/2" Coax	VERIZON WIRELESS

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
152.0	3	Powerwave Allgon P65-16-XLH-RR	-	(1) 0.39" (10mm) Fiber Trunk (2) 0.78" (19.7mm) 8 AWG 6 (12) 1 5/8" Coax (1) 2" conduit	AT&T MOBILITY
149.0	6	Powerwave Allgon LGP21901			
	12	Powerwave Allgon 7020.00 Dual Band RET			
	3	CCI DTMABP7819VG12A			
	6	Powerwave Allgon LGP21401			
	1	Raycap DC6-48-60-18-8F			
	3	Ericsson RRUS 11 (Band 12) (55 lb)			
	3	Ericsson RRUS-12 1900 MHz			
	6	Powerwave Allgon 7770.00			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
152.0	6	Powerwave Allgon LGP21901	Platform with Handrails	(2) 0.39" (10mm) Fiber Trunk (6) 0.78" (19.7mm) 8 AWG 6 (12) 1 5/8" Coax (3) 2" conduit	AT&T MOBILITY
	12	Powerwave Allgon 7020.00 Dual Band RET			
	3	CCI DTMABP7819VG12A			
	6	Powerwave Allgon LGP21401			
	1	Raycap DC6-48-60-18-8F			
	3	Ericsson RRUS 4415 B30			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	1	Raycap DC6-48-60-18-8C			
	3	Ericsson RRUS-12 1900 MHz			
	1	Raycap DC6-48-60-18-8C-EV			
	3	Powerwave Allgon 7770.00			
	6	Kathrein Scala 80010965			

[1] Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines outside the pole shaft. Stacking lines is not allowed.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	43%	Pass
Shaft	54%	Pass
Base Plate	49%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	3,859.3	5,210.1	2,408.9	46%
Shear (Kips)	34.7	46.8	21.1	45%

*** The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1**

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
152.0	Powerwave Allgon LGP21901	AT&T MOBILITY	1.377	1.089
	Powerwave Allgon 7020.00 Dual Band RET			
	CCI DTMABP7819VG12A			
	Powerwave Allgon LGP21401			
	Raycap DC6-48-60-18-8F			
	Ericsson RRUS 4415 B30			
	Ericsson RRUS 4449 B5, B12			
	Ericsson RRUS 4478 B14			
	Raycap DC6-48-60-18-8C			
	Ericsson RRUS-12 1900 MHz			
	Raycap DC6-48-60-18-8C-EV			
	Powerwave Allgon 7770.00			
	Kathrein Scala 80010965			

***Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G**

AMERICAN TOWER®
CORPORATION

Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

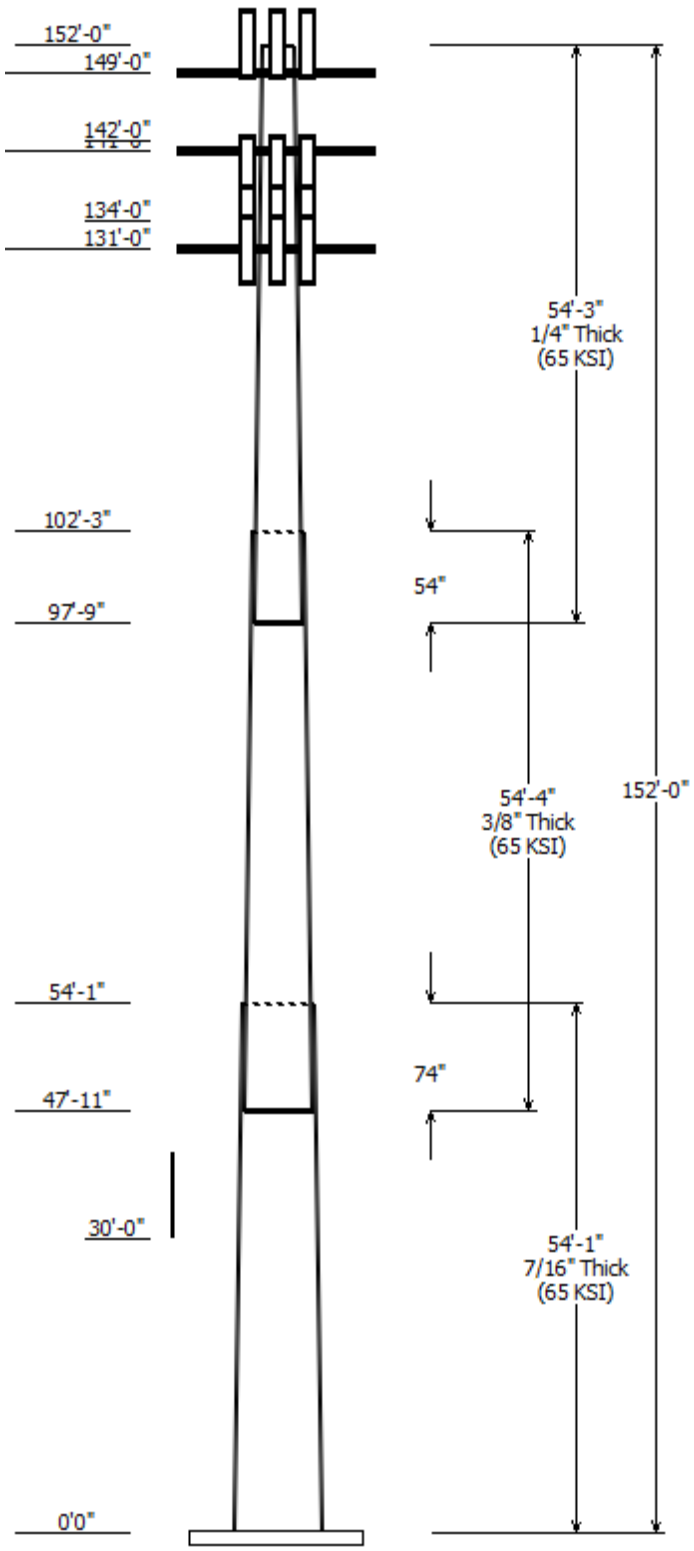
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Job Information

Pole :	302518	Code:	ANSI/TIA-222-G
Location :	Newtown CT 3, CT		
Description :			
Client :	AT&T MOBILITY	Struct Class :	II
Shape :	18 Sides	Exposure :	B
Height :	152.00 (ft)	Topo :	1
Base Elev (ft):	0.00		
Taper:	0.268092 (in/ft)		

Sections Properties

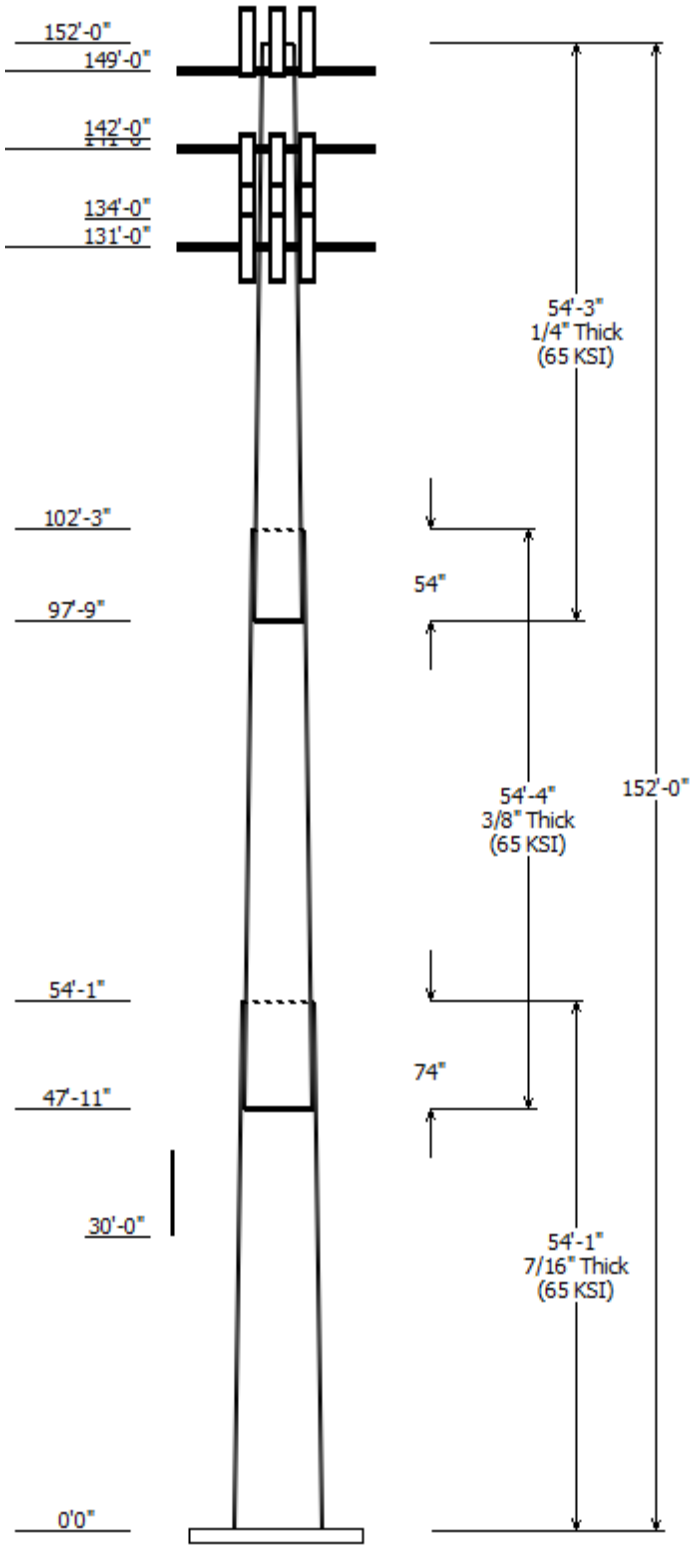
Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	54.083	42.25	56.75	0.438		0.000	18 Sides	65
2	54.333	30.08	44.65	0.375	Slip Joint	74.000	18 Sides	65
3	54.250	17.25	31.79	0.250	Slip Joint	54.000	18 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
152.000	152.000	6	Kathrein Scala 80010965
152.000	152.000	3	Powerwave Allgon 7770.00
152.000	152.000	1	Raycap DC6-48-60-18-8C-EV
152.000	152.000	3	Ericsson RRUS-12 1900 MHz
152.000	152.000	1	Raycap DC6-48-60-18-8C
152.000	152.000	3	Ericsson RRUS 4478 B14
152.000	152.000	3	Ericsson RRUS 4449 B5, B12
152.000	152.000	3	Ericsson RRUS 4415 B30
152.000	152.000	1	Raycap DC6-48-60-18-8F
152.000	152.000	6	Powerwave Allgon LGP21401
152.000	152.000	3	CCI DTMABP7819VG12A
152.000	152.000	12	Powerwave Allgon 7020.00
152.000	152.000	6	Powerwave Allgon LGP21901
149.000	149.000	1	Flat Platform w/ Handrails
142.000	141.000	3	Powerwave Allgon P65-16-XL-
142.000	141.000	6	Andrew DB846H80E-SX
142.000	141.000	3	Rymsa MGD3-800T0
142.000	142.000	6	RFS FD9R6004/1C-3L
141.000	141.000	1	Flat Low Profile Platform
134.000	132.000	3	Commscope SBNH-1D65C
134.000	132.000	3	Ericsson AIR 21, 1.3 M, B2A B4
134.000	132.000	3	Ericsson RRUS 11 B12
134.000	132.000	3	KMW AWS Twin Dual 700
134.000	134.000	3	Kathrein Scala 742 351
134.000	134.000	3	Kathrein Scala 800 10504
134.000	134.000	6	Kathrein Scala 860-10025
131.000	131.000	1	Flat Low Profile Platform
30.000	141.000	1	Generic 2" x 4" GPS

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	30.000	1/2" Coax	No
0.000	132.0	1 1/4" Hybriflex	No
0.000	134.0	1 5/8" Coax	No
0.000	134.0	1 5/8" Coax	No
0.000	134.0	1.58" (40.1mm)	No
0.000	142.0	1 5/8" Coax	No
0.000	152.0	0.39" (10mm)	No
0.000	152.0	0.78" (19.7mm) 8	No
0.000	152.0	1 5/8" Coax	Yes



0.000	152.0	2" conduit	No

Load Cases

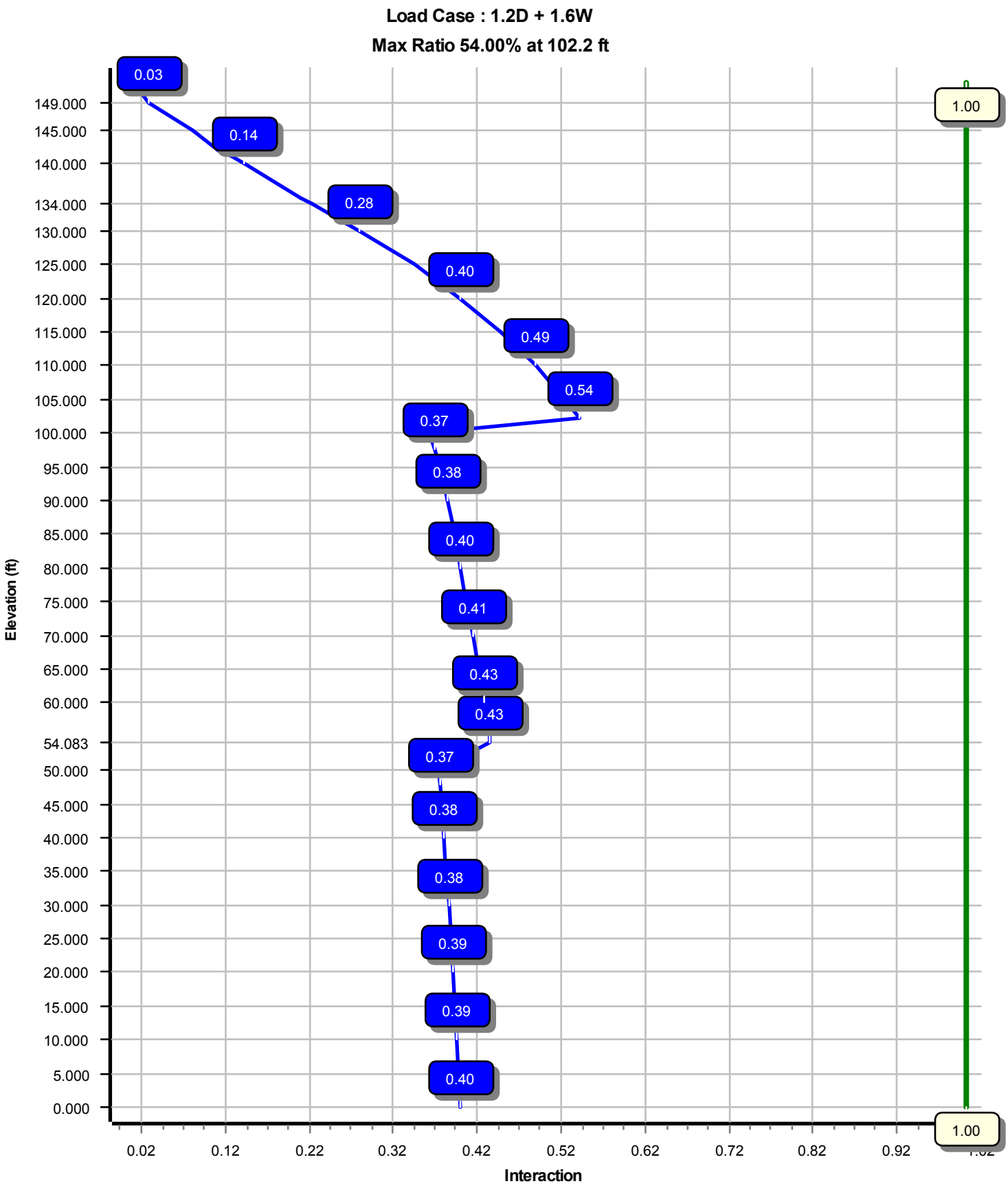
1.2D + 1.6W	93 mph with No Ice
0.9D + 1.6W	93 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	2408.89	21.10	48.54
0.9D + 1.6W	2323.86	20.61	36.40
1.2D + 1.0Di + 1.0Wi	706.60	6.27	80.82
(1.2 + 0.2Sds) * DL + E ELFM	165.77	1.32	48.38
(1.2 + 0.2Sds) * DL + E EMAM	299.59	2.45	48.38
(0.9 - 0.2Sds) * DL + E ELFM	163.56	1.32	33.24
(0.9 - 0.2Sds) * DL + E EMAM	295.15	2.44	33.24
1.0D + 1.0W	607.13	5.36	40.47

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000


Load Case : 1.2D + 1.6W
Max Ratio 54.00% at 102.2 ft
0.03
0.14
0.28
0.40
0.49
0.54
0.37
0.38
0.40
0.41
0.43
0.43
0.37
0.38
0.38
0.39
0.39
0.40
1.00
1.00
149.000
145.000
140.000
134.000
130.000
125.000
120.000
115.000
110.000
105.000
100.000
95.000
90.000
85.000
80.000
75.000
70.000
65.000
60.000
54.083
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
Elevation (ft)
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction

Site Number:	302518	Code: ANSI/TIA-222-G	
Site Name:	Newtown CT 3, CT	Engineering Number:OAA745673_C3_01	2/8/2019 3:11:05 PM
Customer:	AT&T MOBILITY		

Analysis Parameters

Location :	FAIRFIELD County, CT	Height (ft) :	152
Code :	ANSI/TIA-222-G	Base Diameter (in) :	56.75
Shape :	18 Sides	Top Diameter (in) :	17.25
Pole Type :	Taper	Taper (in/ft) :	0.268
Pole Manfacturer :	EEI	Rotation (deg) :	0.00

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	93 mph
Exposure Category:	B	Design Wind Speed With Ice:	50 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	2.29				
T_L (sec):	6	p:	1	C_s:	0.033
S_s:	0.210	S_1:	0.070	C_s Max:	0.033
F_a:	1.600	F_v:	2.400	C_s Min:	0.030
S_{ds}:	0.224	S_{d1}:	0.112		

Load Cases

1.2D + 1.6W	93 mph with No Ice
0.9D + 1.6W	93 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2Sds) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302518 Code: ANSI/TIA-222-G

Site Name: Newtown CT 3, CT Engineering Number:OAA745673_C3_01 2/8/2019 3:11:05 PM

Customer: AT&T MOBILITY

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	54.083	0.4375	65		0.00	12,538	56.75	0.00	78.19	31328.3	21.46	129.71	42.25	54.08	58.06	12825.1	15.62	96.57	0.268092
2-18	54.333	0.3750	65	Slip	74.00	8,141	44.65	47.92	52.70	13054.7	19.59	119.08	30.08	102.25	35.36	3944.5	12.74	80.23	0.268092
3-18	54.250	0.2500	65	Slip	54.00	3,555	31.79	97.75	25.03	3146.6	21.01	127.18	17.25	152.00	13.49	492.5	10.76	69.00	0.268092
				Shaft Weight		24,234													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Distance From Face (ft)	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor
152.00	CCI DTMABP7819VG12A	3	0.000	0.000	19.20	0.970	0.50
152.00	Ericsson RRUS 4415 B30	3	0.000	0.000	46.00	1.840	0.50
152.00	Ericsson RRUS 4449 B5, B12	3	0.000	0.000	71.00	1.970	0.50
152.00	Ericsson RRUS 4478 B14	3	0.000	0.000	59.40	2.020	0.67
152.00	Ericsson RRUS-12 1900 MHz	3	0.000	0.000	60.00	2.700	0.67
152.00	Kathrein Scala 80010965	6	0.000	0.000	97.60	13.810	0.62
152.00	Powerwave Allgon 7020.00 Dual	12	0.000	0.000	2.20	0.340	0.50
152.00	Powerwave Allgon 7770.00	3	0.000	0.000	35.00	5.510	0.65
152.00	Powerwave Allgon LGP21401	6	0.000	0.000	14.10	1.100	0.50
152.00	Powerwave Allgon LGP21901	6	0.000	0.000	5.50	0.200	0.50
152.00	Raycap DC6-48-60-18-8C	1	0.000	0.000	16.00	2.030	1.00
152.00	Raycap DC6-48-60-18-8C-EV	1	0.000	0.000	16.00	4.790	1.00
152.00	Raycap DC6-48-60-18-8F	1	0.000	0.000	20.00	1.260	1.00
149.00	Flat Platform w/ Handrails	1	0.000	0.000	2448.71	42.400	1.00
142.00	Andrew DB846H80E-SX	6	0.000	-1.000	16.00	5.870	0.73
142.00	Powerwave Allgon P65-16-XL-2	3	0.000	-1.000	33.00	8.130	0.65
142.00	RFS FD9R6004/1C-3L	6	0.000	0.000	3.10	0.310	0.50
142.00	Rymsa MGD3-800T0	3	0.000	-1.000	19.80	3.450	0.69
141.00	Flat Low Profile Platform	1	0.000	0.000	1500.00	26.100	1.00
134.00	Commscope SBNH-1D65C	3	0.000	-2.000	49.60	11.460	0.70
134.00	Ericsson AIR 21, 1.3 M, B2A B4	3	0.000	-2.000	83.00	6.050	0.71
134.00	Ericsson RRUS 11 B12	3	0.000	-2.000	50.70	2.790	0.67
134.00	Kathrein Scala 742 351	3	0.000	0.000	29.80	5.390	0.60
134.00	Kathrein Scala 800 10504	3	0.000	0.000	17.60	3.340	0.66
134.00	Kathrein Scala 860-10025	6	0.000	0.000	1.10	0.140	0.50
134.00	KMW AWS Twin Dual 700 Bypass	3	0.000	-2.000	17.40	0.990	0.50
131.00	Flat Low Profile Platform	1	0.000	0.000	1500.00	26.100	1.00
30.00	Generic 2" x 4" GPS	1	0.000	111.000	5.00	0.040	1.00
Totals	Num Loadings:28	97			8131.01		

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	152.00	2	0.39" (10mm) Fiber	0.39	0.06	N	0.00	N	AT&T MOBILITY
0.00	152.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0.00	N	AT&T MOBILITY
0.00	152.00	12	1 5/8" Coax	1.98	0.82	N	3.96	Y	AT&T MOBILITY
0.00	152.00	3	2" conduit	2.38	3.65	N	0.00	N	AT&T MOBILITY
0.00	142.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	VERIZON WIRELESS
0.00	134.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	METRO PCS INC
0.00	134.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	T-MOBILE
0.00	134.00	1	1.58" (40.1mm) Hybrid	1.58	1.61	N	0.00	N	T-MOBILE

0.00	132.00	1	1 1/4" Hybriflex Cable	1.54	1.00	N	0.00	N	T-MOBILE
0.00	30.00	1	1/2" Coax	0.63	0.15	N	0.00	N	VERIZON WIRELESS

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.4375	56.750	78.194	31,328.3	21.46	129.71	76.2	1087.	0.0	0.0
5.00		0.4375	55.410	76.333	29,143.9	20.92	126.65	76.8	1036.	0.0	1,314.6
10.00		0.4375	54.069	74.471	27,063.5	20.38	123.59	77.4	985.9	0.0	1,282.9
15.00		0.4375	52.729	72.610	25,084.5	19.84	120.52	78.1	937.0	0.0	1,251.2
20.00		0.4375	51.388	70.749	23,204.5	19.30	117.46	78.7	889.4	0.0	1,219.5
25.00		0.4375	50.048	68.887	21,420.8	18.76	114.39	79.3	843.0	0.0	1,187.9
30.00		0.4375	48.707	67.026	19,730.9	18.22	111.33	80.0	797.9	0.0	1,156.2
35.00		0.4375	47.367	65.165	18,132.3	17.68	108.27	80.6	754.0	0.0	1,124.5
40.00		0.4375	46.026	63.303	16,622.5	17.14	105.20	81.2	711.3	0.0	1,092.9
45.00		0.4375	44.686	61.442	15,199.0	16.60	102.14	81.9	669.9	0.0	1,061.2
47.92	Bot - Section 2	0.4375	43.904	60.356	14,407.3	16.28	100.35	82.2	646.3	0.0	604.4
50.00		0.4375	43.345	59.581	13,859.1	16.06	99.08	82.5	629.8	0.0	796.4
54.08	Top - Section 1	0.3750	43.001	50.733	11,646.4	18.81	114.67	79.3	533.5	0.0	1,531.3
55.00		0.3750	42.755	50.441	11,446.1	18.69	114.01	79.4	527.3	0.0	157.8
60.00		0.3750	41.414	48.845	10,394.0	18.06	110.44	80.2	494.3	0.0	844.6
65.00		0.3750	40.074	47.250	9,408.4	17.43	106.86	80.9	462.4	0.0	817.5
70.00		0.3750	38.734	45.655	8,487.2	16.80	103.29	81.6	431.6	0.0	790.3
75.00		0.3750	37.393	44.059	7,628.1	16.17	99.71	82.4	401.8	0.0	763.2
80.00		0.3750	36.053	42.464	6,829.1	15.54	96.14	82.6	373.1	0.0	736.0
85.00		0.3750	34.712	40.868	6,087.9	14.91	92.57	82.6	345.4	0.0	708.9
90.00		0.3750	33.372	39.273	5,402.4	14.28	88.99	82.6	318.9	0.0	681.8
95.00		0.3750	32.031	37.677	4,770.4	13.65	85.42	82.6	293.3	0.0	654.6
97.75	Bot - Section 3	0.3750	31.294	36.800	4,444.8	13.30	83.45	82.6	279.8	0.0	348.5
100.0		0.3750	30.691	36.082	4,189.7	13.02	81.84	82.6	268.9	0.0	468.8
102.2	Top - Section 2	0.2500	30.588	24.072	2,799.2	20.16	122.35	77.7	180.2	0.0	459.6
105.0		0.2500	29.850	23.487	2,600.0	19.64	119.40	78.3	171.6	0.0	222.5
110.0		0.2500	28.510	22.423	2,262.5	18.70	114.04	79.4	156.3	0.0	390.6
115.0		0.2500	27.169	21.360	1,955.6	17.75	108.68	80.5	141.8	0.0	372.5
120.0		0.2500	25.829	20.296	1,677.8	16.81	103.32	81.6	127.9	0.0	354.4
125.0		0.2500	24.488	19.233	1,427.6	15.86	97.95	82.6	114.8	0.0	336.3
130.0		0.2500	23.148	18.169	1,203.6	14.92	92.59	82.6	102.4	0.0	318.2
131.0		0.2500	22.880	17.956	1,161.8	14.73	91.52	82.6	100.0	0.0	61.5
134.0		0.2500	22.076	17.318	1,042.3	14.16	88.30	82.6	93.0	0.0	180.0
135.0		0.2500	21.808	17.105	1,004.3	13.97	87.23	82.6	90.7	0.0	58.6
140.0		0.2500	20.467	16.042	828.4	13.02	81.87	82.6	79.7	0.0	282.0
141.0		0.2500	20.199	15.829	795.9	12.84	80.80	82.6	77.6	0.0	54.2
142.0		0.2500	19.931	15.616	764.2	12.65	79.72	82.6	75.5	0.0	53.5
145.0		0.2500	19.127	14.978	674.3	12.08	76.51	82.6	69.4	0.0	156.2
149.0		0.2500	18.054	14.127	565.8	11.32	72.22	82.6	61.7	0.0	198.1
150.0		0.2500	17.786	13.914	540.6	11.13	71.14	82.6	59.9	0.0	47.7
152.0		0.2500	17.250	13.489	492.5	10.76	69.00	82.6	56.2	0.0	93.2
											24,233.9

Site Number: 302518 Code: ANSI/TIA-222-G

Site Name: Newtown CT 3, CT Engineering Number:OAA745673_C3_01 2/8/2019 3:11:05 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W 93 mph with No Ice 24 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		199.8	0.0					0.0	0.0	199.8	0.0	0.0	0.0
5.00		394.9	1,577.5					0.0	340.4	394.9	1,917.8	0.0	0.0
10.00		385.3	1,539.5					0.0	340.4	385.3	1,879.8	0.0	0.0
15.00		375.8	1,501.5					0.0	340.4	375.8	1,841.8	0.0	0.0
20.00		366.2	1,463.5					0.0	340.4	366.2	1,803.8	0.0	0.0
25.00		356.7	1,425.5					0.0	340.4	356.7	1,765.8	0.0	0.0
30.00	Appurtenance(s)	351.2	1,387.5	1.6	0.0	179.2	6.0	0.0	340.4	352.8	1,733.8	0.0	0.0
35.00		352.8	1,349.4					0.0	339.5	352.8	1,688.9	0.0	0.0
40.00		356.2	1,311.4					0.0	339.5	356.2	1,650.9	0.0	0.0
45.00		283.1	1,273.4					0.0	339.5	283.1	1,612.9	0.0	0.0
47.92	Bot - Section 2	180.3	725.3					0.0	198.0	180.3	923.3	0.0	0.0
50.00		224.3	955.6					0.0	141.5	224.3	1,097.1	0.0	0.0
54.08	Top - Section 1	181.7	1,837.5					0.0	277.2	181.7	2,114.8	0.0	0.0
55.00		214.0	189.4					0.0	62.2	214.0	251.6	0.0	0.0
60.00		360.0	1,013.5					0.0	339.5	360.0	1,353.0	0.0	0.0
65.00		356.4	981.0					0.0	339.5	356.4	1,320.5	0.0	0.0
70.00		353.1	948.4					0.0	339.5	353.1	1,287.9	0.0	0.0
75.00		350.9	915.8					0.0	339.5	350.9	1,255.3	0.0	0.0
80.00		348.6	883.3					0.0	339.5	348.6	1,222.7	0.0	0.0
85.00		345.7	850.7					0.0	339.5	345.7	1,190.2	0.0	0.0
90.00		342.2	818.1					0.0	339.5	342.2	1,157.6	0.0	0.0
95.00		262.9	785.5					0.0	339.5	262.9	1,125.0	0.0	0.0
97.75	Bot - Section 3	169.3	418.2					0.0	186.7	169.3	604.9	0.0	0.0
100.00		152.7	562.6					0.0	152.8	152.7	715.3	0.0	0.0
102.25	Top - Section 2	167.9	551.6					0.0	152.8	167.9	704.3	0.0	0.0
105.00		256.8	267.0					0.0	186.7	256.8	453.7	0.0	0.0
110.00		327.2	468.7					0.0	339.5	327.2	808.1	0.0	0.0
115.00		321.6	447.0					0.0	339.5	321.6	786.4	0.0	0.0
120.00		315.6	425.2					0.0	339.5	315.6	764.7	0.0	0.0
125.00		309.2	403.5					0.0	339.5	309.2	743.0	0.0	0.0
130.00		183.2	381.8					0.0	339.5	183.2	721.3	0.0	0.0
131.00	Appurtenance(s)	119.9	73.8	1,031.4	0.0	0.0	1,800.0	0.0	67.9	1,151.4	1,941.7	0.0	0.0
134.00	Appurtenance(s)	119.4	216.1	1,928.1	0.0	-2,791.1	901.1	0.0	201.3	2,047.4	1,318.4	0.0	0.0
135.00		175.6	70.3					0.0	41.1	175.6	111.4	0.0	0.0
140.00		174.7	338.4					0.0	205.7	174.7	544.1	0.0	0.0
141.00	Appurtenance(s)	57.4	65.1	1,053.4	0.0	0.0	1,800.0	0.0	41.1	1,110.7	1,906.2	0.0	0.0
142.00	Appurtenance(s)	113.5	64.2	2,003.3	0.0	-1,965.7	327.6	0.0	41.1	2,116.8	432.9	0.0	0.0
145.00		239.1	187.4					0.0	88.0	239.1	275.4	0.0	0.0
149.00	Appurtenance(s)	191.5	237.7	1,738.4	0.0	0.0	2,938.5	64.2	117.4	1,994.1	3,293.5	0.0	0.0
150.00		110.5	57.3					16.1	29.3	126.6	86.6	0.0	0.0
152.00	Appurtenance(s)	73.2	111.9	2,869.7	0.0	0.0	1,984.1	32.2	58.7	2,975.2	2,154.7	0.0	0.0
								Totals:		21,259.0	48,561.5	0.00	0.00

Site Number: 302518 Code: ANSI/TIA-222-G

Site Name: Newtown CT 3, CT Engineering Number:OAA745673_C3_01 2/8/2019 3:11:09 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W 93 mph with No Ice 24 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Calculated Forces

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 (deg)	Ratio
0.00	-48.54	-21.10	0.00	-2,408.89	0.00	2,408.89	5,359.60	2,679.80	12,402.6	6,210.55	0.00	0.00	0.397
5.00	-46.58	-20.80	0.00	-2,303.37	0.00	2,303.37	5,275.68	2,637.84	11,915.5	5,966.65	0.06	-0.11	0.395
10.00	-44.67	-20.49	0.00	-2,199.39	0.00	2,199.39	5,189.62	2,594.81	11,433.1	5,725.08	0.23	-0.22	0.393
15.00	-42.79	-20.19	0.00	-2,096.93	0.00	2,096.93	5,101.44	2,550.72	10,955.7	5,485.99	0.52	-0.33	0.391
20.00	-40.94	-19.90	0.00	-1,995.97	0.00	1,995.97	5,011.12	2,505.56	10,483.5	5,249.58	0.92	-0.45	0.388
25.00	-39.14	-19.61	0.00	-1,896.48	0.00	1,896.48	4,918.68	2,459.34	10,017.1	5,016.02	1.46	-0.57	0.386
30.00	-37.37	-19.32	0.00	-1,798.25	0.00	1,798.25	4,824.11	2,412.05	9,556.78	4,785.49	2.11	-0.69	0.384
35.00	-35.64	-19.02	0.00	-1,701.66	0.00	1,701.66	4,727.41	2,363.70	9,102.80	4,558.17	2.90	-0.81	0.381
40.00	-33.95	-18.72	0.00	-1,606.54	0.00	1,606.54	4,628.58	2,314.29	8,655.58	4,334.22	3.82	-0.94	0.378
45.00	-32.31	-18.47	0.00	-1,512.94	0.00	1,512.94	4,527.62	2,263.81	8,215.47	4,113.84	4.88	-1.08	0.375
47.92	-31.37	-18.31	0.00	-1,459.08	0.00	1,459.08	4,467.74	2,233.87	7,962.16	3,987.00	5.57	-1.16	0.373
50.00	-30.25	-18.11	0.00	-1,420.94	0.00	1,420.94	4,424.53	2,212.27	7,782.82	3,897.19	6.09	-1.22	0.372
54.08	-28.12	-17.91	0.00	-1,346.99	0.00	1,346.99	3,619.86	1,809.93	6,334.27	3,171.85	7.18	-1.33	0.433
55.00	-27.84	-17.74	0.00	-1,330.57	0.00	1,330.57	3,605.16	1,802.58	6,271.86	3,140.59	7.44	-1.36	0.431
60.00	-26.45	-17.42	0.00	-1,241.87	0.00	1,241.87	3,523.72	1,761.86	5,934.59	2,971.70	8.95	-1.52	0.426
65.00	-25.09	-17.10	0.00	-1,154.76	0.00	1,154.76	3,440.15	1,720.07	5,602.88	2,805.61	10.63	-1.68	0.419
70.00	-23.76	-16.78	0.00	-1,069.26	0.00	1,069.26	3,354.45	1,677.22	5,277.11	2,642.48	12.48	-1.85	0.412
75.00	-22.47	-16.45	0.00	-985.36	0.00	985.36	3,266.62	1,633.31	4,957.62	2,482.50	14.52	-2.03	0.404
80.00	-21.21	-16.13	0.00	-903.09	0.00	903.09	3,154.85	1,577.42	4,612.87	2,309.86	16.73	-2.20	0.398
85.00	-19.99	-15.80	0.00	-822.46	0.00	822.46	3,036.31	1,518.16	4,271.03	2,138.69	19.13	-2.38	0.391
90.00	-18.79	-15.47	0.00	-743.47	0.00	743.47	2,917.78	1,458.89	3,942.34	1,974.10	21.72	-2.56	0.383
95.00	-17.64	-15.20	0.00	-666.15	0.00	666.15	2,799.25	1,399.62	3,626.81	1,816.10	24.51	-2.75	0.373
97.75	-17.02	-15.03	0.00	-624.36	0.00	624.36	2,734.06	1,367.03	3,458.88	1,732.01	26.12	-2.86	0.367
100.00	-16.29	-14.86	0.00	-590.55	0.00	590.55	2,680.72	1,340.36	3,324.44	1,664.69	27.49	-2.94	0.361
102.25	-15.57	-14.68	0.00	-557.11	0.00	557.11	1,683.04	841.52	2,097.24	1,050.18	28.90	-3.03	0.540
105.00	-15.09	-14.45	0.00	-516.73	0.00	516.73	1,655.06	827.53	2,011.86	1,007.42	30.67	-3.14	0.522
110.00	-14.24	-14.15	0.00	-444.47	0.00	444.47	1,602.55	801.28	1,859.07	930.92	34.10	-3.40	0.487
115.00	-13.41	-13.83	0.00	-373.74	0.00	373.74	1,547.92	773.96	1,709.77	856.15	37.80	-3.66	0.446
120.00	-12.61	-13.52	0.00	-304.57	0.00	304.57	1,491.15	745.57	1,564.29	783.31	41.76	-3.90	0.398
125.00	-11.84	-13.21	0.00	-236.96	0.00	236.96	1,428.88	714.44	1,419.66	710.88	45.97	-4.13	0.342
130.00	-11.11	-12.99	0.00	-170.93	0.00	170.93	1,349.86	674.93	1,266.22	634.05	50.41	-4.34	0.278
131.00	-9.25	-11.71	0.00	-157.94	0.00	157.94	1,334.06	667.03	1,236.59	619.21	51.33	-4.38	0.262
134.00	-8.08	-9.58	0.00	-122.81	0.00	122.81	1,286.64	643.32	1,149.79	575.75	54.11	-4.48	0.220
135.00	-7.97	-9.40	0.00	-113.23	0.00	113.23	1,270.84	635.42	1,121.56	561.61	55.05	-4.51	0.208
140.00	-7.43	-9.19	0.00	-66.22	0.00	66.22	1,191.82	595.91	985.67	493.57	59.84	-4.64	0.141
141.00	-5.62	-7.94	0.00	-57.02	0.00	57.02	1,176.01	588.01	959.54	480.48	60.81	-4.66	0.124
142.00	-5.35	-5.79	0.00	-49.09	0.00	49.09	1,160.21	580.10	933.77	467.58	61.79	-4.68	0.110
145.00	-5.09	-5.54	0.00	-31.71	0.00	31.71	1,112.80	556.40	858.55	429.91	64.74	-4.72	0.078
149.00	-1.98	-3.28	0.00	-9.56	0.00	9.56	1,049.58	524.79	763.17	382.15	68.71	-4.76	0.027
150.00	-1.90	-3.14	0.00	-6.29	0.00	6.29	1,033.78	516.89	740.20	370.65	69.71	-4.76	0.019
152.00	0.00	-2.98	0.00	0.00	0.00	0.00	1,002.17	501.08	695.32	348.18	71.70	-4.77	0.000

Load Case: 0.9D + 1.6W — 93 mph with No Ice (Reduced DL) — 24 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
Wind Load Factor :1.60

Wind Importance Factor 1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		199.8	0.0					0.0	0.0	199.8	0.0	0.0	0.0
5.00		394.9	1,183.1					0.0	255.3	394.9	1,438.4	0.0	0.0
10.00		385.3	1,154.6					0.0	255.3	385.3	1,409.9	0.0	0.0
15.00		375.8	1,126.1					0.0	255.3	375.8	1,381.4	0.0	0.0
20.00		366.2	1,097.6					0.0	255.3	366.2	1,352.9	0.0	0.0
25.00		356.7	1,069.1					0.0	255.3	356.7	1,324.4	0.0	0.0
30.00	Appurtenance(s)	351.2	1,040.6	1.6	0.0	179.2	4.5	0.0	255.3	352.8	1,300.4	0.0	0.0
35.00		352.8	1,012.1					0.0	254.6	352.8	1,266.7	0.0	0.0
40.00		356.2	983.6					0.0	254.6	356.2	1,238.2	0.0	0.0
45.00		283.1	955.1					0.0	254.6	283.1	1,209.7	0.0	0.0
47.92	Bot - Section 2	180.3	544.0					0.0	148.5	180.3	692.5	0.0	0.0
50.00		224.3	716.7					0.0	106.1	224.3	822.8	0.0	0.0
54.08	Top - Section 1	181.7	1,378.1					0.0	207.9	181.7	1,586.1	0.0	0.0
55.00		214.0	142.0					0.0	46.7	214.0	188.7	0.0	0.0
60.00		360.0	760.2					0.0	254.6	360.0	1,014.8	0.0	0.0
65.00		356.4	735.7					0.0	254.6	356.4	990.3	0.0	0.0
70.00		351.8	711.3					0.0	254.6	351.8	965.9	0.0	0.0
75.00		346.4	686.9					0.0	254.6	346.4	941.5	0.0	0.0
80.00		340.2	662.4					0.0	254.6	340.2	917.1	0.0	0.0
85.00		333.3	638.0					0.0	254.6	333.3	892.6	0.0	0.0
90.00		325.7	613.6					0.0	254.6	325.7	868.2	0.0	0.0
95.00		247.6	589.2					0.0	254.6	247.6	843.8	0.0	0.0
97.75	Bot - Section 3	157.7	313.6					0.0	140.0	157.7	453.7	0.0	0.0
100.00		141.2	421.9					0.0	114.6	141.2	536.5	0.0	0.0
102.25	Top - Section 2	154.6	413.7					0.0	114.6	154.6	528.2	0.0	0.0
105.00		234.3	200.3					0.0	140.0	234.3	340.3	0.0	0.0
110.00		294.7	351.5					0.0	254.6	294.7	606.1	0.0	0.0
115.00		284.4	335.2					0.0	254.6	284.4	589.8	0.0	0.0
120.00		273.7	318.9					0.0	254.6	273.7	573.5	0.0	0.0
125.00		262.6	302.6					0.0	254.6	262.6	557.3	0.0	0.0
130.00		153.4	286.4					0.0	254.6	153.4	541.0	0.0	0.0
131.00	Appurtenance(s)	98.5	55.3	1,031.4	0.0	0.0	1,350.0	0.0	50.9	1,130.0	1,456.2	0.0	0.0
134.00	Appurtenance(s)	97.6	162.0	1,928.1	0.0	-2,791.1	675.8	0.0	151.0	2,025.6	988.8	0.0	0.0
135.00		140.5	52.7					0.0	30.9	140.5	83.6	0.0	0.0
140.00		139.0	253.8					0.0	154.3	139.0	408.1	0.0	0.0
141.00	Appurtenance(s)	44.8	48.8	1,053.4	0.0	0.0	1,350.0	0.0	30.9	1,098.2	1,429.7	0.0	0.0
142.00	Appurtenance(s)	87.6	48.2	2,003.3	0.0	-1,965.7	245.7	0.0	30.9	2,090.9	324.7	0.0	0.0
145.00		219.5	140.5					0.0	66.0	219.5	206.6	0.0	0.0
149.00	Appurtenance(s)	191.5	178.3	1,738.4	0.0	0.0	2,203.8	64.2	88.0	1,994.1	2,470.1	0.0	0.0
150.00		110.5	42.9					16.1	22.0	126.6	64.9	0.0	0.0
152.00	Appurtenance(s)	73.2	83.9	2,869.7	0.0	0.0	1,488.1	32.2	44.0	2,975.2	1,616.0	0.0	0.0
								Totals:		20,781.8	36,421.1	0.00	0.00

Load Case: 0.9D + 1.6W 93 mph with No Ice (Reduced DL) 24 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :0.90
Wind Load Factor :1.60

Calculated Forces

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 (deg)	Ratio
0.00	-36.40	-20.61	0.00	-2,323.86	0.00	2,323.86	5,359.60	2,679.80	12,402.6	6,210.55	0.00	0.00	0.381
5.00	-34.93	-20.28	0.00	-2,220.78	0.00	2,220.78	5,275.68	2,637.84	11,915.5	5,966.65	0.06	-0.10	0.379
10.00	-33.48	-19.96	0.00	-2,119.38	0.00	2,119.38	5,189.62	2,594.81	11,433.1	5,725.08	0.22	-0.21	0.377
15.00	-32.06	-19.64	0.00	-2,019.60	0.00	2,019.60	5,101.44	2,550.72	10,955.7	5,485.99	0.50	-0.32	0.374
20.00	-30.67	-19.32	0.00	-1,921.42	0.00	1,921.42	5,011.12	2,505.56	10,483.5	5,249.58	0.89	-0.43	0.372
25.00	-29.32	-19.01	0.00	-1,824.82	0.00	1,824.82	4,918.68	2,459.34	10,017.1	5,016.02	1.40	-0.54	0.370
30.00	-27.98	-18.70	0.00	-1,729.58	0.00	1,729.58	4,824.11	2,412.05	9,556.78	4,785.49	2.04	-0.66	0.367
35.00	-26.68	-18.39	0.00	-1,636.06	0.00	1,636.06	4,727.41	2,363.70	9,102.80	4,558.17	2.80	-0.78	0.365
40.00	-25.41	-18.07	0.00	-1,544.09	0.00	1,544.09	4,628.58	2,314.29	8,655.58	4,334.22	3.68	-0.91	0.362
45.00	-24.17	-17.81	0.00	-1,453.72	0.00	1,453.72	4,527.62	2,263.81	8,215.47	4,113.84	4.70	-1.04	0.359
47.92	-23.46	-17.65	0.00	-1,401.76	0.00	1,401.76	4,467.74	2,233.87	7,962.16	3,987.00	5.36	-1.11	0.357
50.00	-22.62	-17.44	0.00	-1,364.99	0.00	1,364.99	4,424.53	2,212.27	7,782.82	3,897.19	5.86	-1.17	0.355
54.08	-21.01	-17.25	0.00	-1,293.77	0.00	1,293.77	3,619.86	1,809.93	6,334.27	3,171.85	6.91	-1.28	0.414
55.00	-20.80	-17.07	0.00	-1,277.96	0.00	1,277.96	3,605.16	1,802.58	6,271.86	3,140.59	7.16	-1.31	0.413
60.00	-19.75	-16.74	0.00	-1,192.63	0.00	1,192.63	3,523.72	1,761.86	5,934.59	2,971.70	8.61	-1.46	0.407
65.00	-18.72	-16.40	0.00	-1,108.96	0.00	1,108.96	3,440.15	1,720.07	5,602.88	2,805.61	10.23	-1.62	0.401
70.00	-17.72	-16.07	0.00	-1,026.93	0.00	1,026.93	3,354.45	1,677.22	5,277.11	2,642.48	12.01	-1.78	0.394
75.00	-16.75	-15.75	0.00	-946.56	0.00	946.56	3,266.62	1,633.31	4,957.62	2,482.50	13.97	-1.95	0.387
80.00	-15.80	-15.42	0.00	-867.83	0.00	867.83	3,154.85	1,577.42	4,612.87	2,309.86	16.10	-2.12	0.381
85.00	-14.87	-15.10	0.00	-790.72	0.00	790.72	3,036.31	1,518.16	4,271.03	2,138.69	18.41	-2.29	0.375
90.00	-13.97	-14.78	0.00	-715.23	0.00	715.23	2,917.78	1,458.89	3,942.34	1,974.10	20.90	-2.46	0.367
95.00	-13.11	-14.53	0.00	-641.32	0.00	641.32	2,799.25	1,399.62	3,626.81	1,816.10	23.58	-2.64	0.358
97.75	-12.64	-14.37	0.00	-601.37	0.00	601.37	2,734.06	1,367.03	3,458.88	1,732.01	25.13	-2.75	0.352
100.00	-12.09	-14.22	0.00	-569.04	0.00	569.04	2,680.72	1,340.36	3,324.44	1,664.69	26.44	-2.83	0.346
102.25	-11.54	-14.06	0.00	-537.04	0.00	537.04	1,683.04	841.52	2,097.24	1,050.18	27.80	-2.91	0.519
105.00	-11.17	-13.84	0.00	-498.38	0.00	498.38	1,655.06	827.53	2,011.86	1,007.42	29.51	-3.02	0.502
110.00	-10.52	-13.56	0.00	-429.17	0.00	429.17	1,602.55	801.28	1,859.07	930.92	32.80	-3.27	0.468
115.00	-9.90	-13.28	0.00	-361.36	0.00	361.36	1,547.92	773.96	1,709.77	856.15	36.36	-3.52	0.429
120.00	-9.29	-13.01	0.00	-294.94	0.00	294.94	1,491.15	745.57	1,564.29	783.31	40.18	-3.76	0.383
125.00	-8.70	-12.75	0.00	-229.88	0.00	229.88	1,428.88	714.44	1,419.66	710.88	44.23	-3.98	0.330
130.00	-8.15	-12.57	0.00	-166.15	0.00	166.15	1,349.86	674.93	1,266.22	634.05	48.51	-4.18	0.268
131.00	-6.77	-11.34	0.00	-153.58	0.00	153.58	1,334.06	667.03	1,236.59	619.21	49.39	-4.22	0.253
134.00	-5.92	-9.26	0.00	-119.55	0.00	119.55	1,286.64	643.32	1,149.79	575.75	52.07	-4.32	0.212
135.00	-5.84	-9.12	0.00	-110.29	0.00	110.29	1,270.84	635.42	1,121.56	561.61	52.97	-4.35	0.201
140.00	-5.43	-8.96	0.00	-64.70	0.00	64.70	1,191.82	595.91	985.67	493.57	57.59	-4.47	0.136
141.00	-4.09	-7.75	0.00	-55.74	0.00	55.74	1,176.01	588.01	959.54	480.48	58.53	-4.49	0.120
142.00	-3.92	-5.64	0.00	-47.99	0.00	47.99	1,160.21	580.10	933.77	467.58	59.47	-4.51	0.106
145.00	-3.73	-5.41	0.00	-31.06	0.00	31.06	1,112.80	556.40	858.55	429.91	62.32	-4.55	0.076
149.00	-1.43	-3.23	0.00	-9.42	0.00	9.42	1,049.58	524.79	763.17	382.15	66.15	-4.59	0.026
150.00	-1.37	-3.10	0.00	-6.19	0.00	6.19	1,033.78	516.89	740.20	370.65	67.11	-4.59	0.018
152.00	0.00	-2.98	0.00	0.00	0.00	0.00	1,002.17	501.08	695.32	348.18	69.03	-4.60	0.000

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 24 Iterations

Gust Response Factor :1.10 | Ice Dead Load Factor :1.00 | Wind Importance Factor :1.00
Dead Load Factor :1.20 | Ice Importance Factor :1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev		Wind FX	Dead Load	Wind FX	Torsion MY	Moment MZ	Dead Load	Wind FX	Dead Load	Wind FX	Dead Load	Torsion MY	Moment MZ
(ft)	Description	(lb)	(lb)	(lb)	(lb-ft)	(lb-ft)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb-ft)	(lb)
0.00		69.4	0.0					0.0	0.0	69.4	0.0	0.0	0.0
5.00		137.4	1,988.1					0.0	475.3	137.4	2,463.4	0.0	0.0
10.00		134.7	1,988.0					0.0	489.7	134.7	2,477.8	0.0	0.0
15.00		131.8	1,962.7					0.0	497.1	131.8	2,459.8	0.0	0.0
20.00		128.8	1,929.0					0.0	502.2	128.8	2,431.2	0.0	0.0
25.00		125.8	1,891.1					0.0	506.1	125.8	2,397.2	0.0	0.0
30.00	Appurtenance(s)	124.2	1,850.4	1.0	0.0	115.8	13.2	0.0	509.4	125.2	2,372.9	0.0	0.0
35.00		125.0	1,807.9					0.0	511.2	125.0	2,319.1	0.0	0.0
40.00		126.6	1,763.9					0.0	513.6	126.6	2,277.5	0.0	0.0
45.00		100.8	1,718.9					0.0	515.7	100.8	2,234.6	0.0	0.0
47.92	Bot - Section 2	64.3	983.1					0.0	301.7	64.3	1,284.8	0.0	0.0
50.00		80.1	1,141.6					0.0	215.9	80.1	1,357.5	0.0	0.0
54.08	Top - Section 1	64.9	2,195.4					0.0	424.0	64.9	2,619.5	0.0	0.0
55.00		76.7	269.6					0.0	95.3	76.7	365.0	0.0	0.0
60.00		129.1	1,440.6					0.0	521.0	129.1	1,961.6	0.0	0.0
65.00		128.2	1,398.3					0.0	522.5	128.2	1,920.8	0.0	0.0
70.00		127.0	1,355.5					0.0	523.9	127.0	1,879.4	0.0	0.0
75.00		125.5	1,312.4					0.0	525.1	125.5	1,837.5	0.0	0.0
80.00		123.6	1,268.8					0.0	526.4	123.6	1,795.2	0.0	0.0
85.00		121.6	1,225.0					0.0	527.5	121.6	1,752.5	0.0	0.0
90.00		119.3	1,180.8					0.0	528.6	119.3	1,709.4	0.0	0.0
95.00		90.9	1,136.4					0.0	529.6	90.9	1,666.0	0.0	0.0
97.75	Bot - Section 3	58.1	607.7					0.0	291.7	58.1	899.4	0.0	0.0
100.00		52.1	717.6					0.0	238.9	52.1	956.5	0.0	0.0
102.25	Top - Section 2	57.2	704.1					0.0	239.1	57.2	943.2	0.0	0.0
105.00		86.9	449.7					0.0	292.5	86.9	742.1	0.0	0.0
110.00		109.8	787.8					0.0	532.5	109.8	1,320.3	0.0	0.0
115.00		106.6	753.4					0.0	533.4	106.6	1,286.8	0.0	0.0
120.00		103.2	718.8					0.0	534.2	103.2	1,253.0	0.0	0.0
125.00		99.6	684.0					0.0	535.0	99.6	1,219.0	0.0	0.0
130.00		58.5	649.1					0.0	535.8	58.5	1,184.9	0.0	0.0
131.00	Appurtenance(s)	37.8	126.8	321.0	0.0	0.0	3,940.2	0.0	107.2	358.8	4,174.3	0.0	0.0
134.00	Appurtenance(s)	37.5	370.1	477.1	0.0	-669.9	3,557.0	0.0	319.5	514.6	4,246.7	0.0	0.0
135.00		54.4	121.1					0.0	80.6	54.4	201.8	0.0	0.0
140.00		53.9	578.8					0.0	403.5	53.9	982.3	0.0	0.0
141.00	Appurtenance(s)	17.5	112.7	328.9	0.0	0.0	3,945.0	0.0	80.8	346.4	4,138.4	0.0	0.0
142.00	Appurtenance(s)	34.3	111.3	435.2	0.0	-420.1	2,172.9	0.0	80.8	469.6	2,365.0	0.0	0.0
145.00		58.6	323.5					0.0	207.2	58.6	530.7	0.0	0.0
149.00	Appurtenance(s)	41.0	410.3	469.4	0.0	0.0	4,677.2	22.0	276.6	532.4	5,364.2	0.0	0.0
150.00		23.9	99.9					5.5	69.2	29.4	169.1	0.0	0.0
152.00	Appurtenance(s)	15.8	194.9	684.4	0.0	0.0	6,927.8	11.1	138.5	711.3	7,261.3	0.0	0.0
								Totals:		6,317.90	80,821.6	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 24 Iterations

Gust Response Factor :1.10 Ice Dead Load Factor :1.00 Wind Importance Factor :1.00
Dead Load Factor :1.20 Ice Importance Factor :1.00
Wind Load Factor :1.00

Calculated Forces

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 (deg)	Ratio
0.00	-80.82	-6.27	0.00	-706.60	0.00	706.60	5,359.60	2,679.80	12,402.6	6,210.55	0.00	0.00	0.129
5.00	-78.35	-6.18	0.00	-675.25	0.00	675.25	5,275.68	2,637.84	11,915.5	5,966.65	0.02	-0.03	0.128
10.00	-75.87	-6.08	0.00	-644.37	0.00	644.37	5,189.62	2,594.81	11,433.1	5,725.08	0.07	-0.06	0.127
15.00	-73.41	-5.99	0.00	-613.95	0.00	613.95	5,101.44	2,550.72	10,955.7	5,485.99	0.15	-0.10	0.126
20.00	-70.97	-5.90	0.00	-584.00	0.00	584.00	5,011.12	2,505.56	10,483.5	5,249.58	0.27	-0.13	0.125
25.00	-68.57	-5.81	0.00	-554.51	0.00	554.51	4,918.68	2,459.34	10,017.1	5,016.02	0.43	-0.17	0.124
30.00	-66.20	-5.72	0.00	-525.35	0.00	525.35	4,824.11	2,412.05	9,556.78	4,785.49	0.62	-0.20	0.124
35.00	-63.88	-5.63	0.00	-496.75	0.00	496.75	4,727.41	2,363.70	9,102.80	4,558.17	0.85	-0.24	0.122
40.00	-61.59	-5.53	0.00	-468.62	0.00	468.62	4,628.58	2,314.29	8,655.58	4,334.22	1.12	-0.28	0.121
45.00	-59.36	-5.45	0.00	-440.97	0.00	440.97	4,527.62	2,263.81	8,215.47	4,113.84	1.43	-0.32	0.120
47.92	-58.07	-5.40	0.00	-425.07	0.00	425.07	4,467.74	2,233.87	7,962.16	3,987.00	1.63	-0.34	0.120
50.00	-56.71	-5.34	0.00	-413.82	0.00	413.82	4,424.53	2,212.27	7,782.82	3,897.19	1.78	-0.36	0.119
54.08	-54.09	-5.27	0.00	-392.03	0.00	392.03	3,619.86	1,809.93	6,334.27	3,171.85	2.10	-0.39	0.139
55.00	-53.72	-5.22	0.00	-387.19	0.00	387.19	3,605.16	1,802.58	6,271.86	3,140.59	2.18	-0.40	0.138
60.00	-51.76	-5.12	0.00	-361.09	0.00	361.09	3,523.72	1,761.86	5,934.59	2,971.70	2.62	-0.44	0.136
65.00	-49.84	-5.02	0.00	-335.49	0.00	335.49	3,440.15	1,720.07	5,602.88	2,805.61	3.11	-0.49	0.134
70.00	-47.95	-4.92	0.00	-310.40	0.00	310.40	3,354.45	1,677.22	5,277.11	2,642.48	3.65	-0.54	0.132
75.00	-46.11	-4.81	0.00	-285.82	0.00	285.82	3,266.62	1,633.31	4,957.62	2,482.50	4.24	-0.59	0.129
80.00	-44.31	-4.71	0.00	-261.76	0.00	261.76	3,154.85	1,577.42	4,612.87	2,309.86	4.89	-0.64	0.127
85.00	-42.56	-4.61	0.00	-238.21	0.00	238.21	3,036.31	1,518.16	4,271.03	2,138.69	5.59	-0.69	0.125
90.00	-40.85	-4.50	0.00	-215.17	0.00	215.17	2,917.78	1,458.89	3,942.34	1,974.10	6.34	-0.75	0.123
95.00	-39.18	-4.42	0.00	-192.65	0.00	192.65	2,799.25	1,399.62	3,626.81	1,816.10	7.15	-0.80	0.120
97.75	-38.28	-4.37	0.00	-180.50	0.00	180.50	2,734.06	1,367.03	3,458.88	1,732.01	7.62	-0.83	0.118
100.00	-37.32	-4.32	0.00	-170.68	0.00	170.68	2,680.72	1,340.36	3,324.44	1,664.69	8.02	-0.86	0.116
102.25	-36.38	-4.26	0.00	-160.96	0.00	160.96	1,683.04	841.52	2,097.24	1,050.18	8.43	-0.88	0.175
105.00	-35.63	-4.20	0.00	-149.24	0.00	149.24	1,655.06	827.53	2,011.86	1,007.42	8.95	-0.91	0.170
110.00	-34.31	-4.11	0.00	-128.24	0.00	128.24	1,602.55	801.28	1,859.07	930.92	9.95	-0.99	0.159
115.00	-33.02	-4.02	0.00	-107.68	0.00	107.68	1,547.92	773.96	1,709.77	856.15	11.02	-1.06	0.147
120.00	-31.76	-3.94	0.00	-87.56	0.00	87.56	1,491.15	745.57	1,564.29	783.31	12.17	-1.13	0.133
125.00	-30.54	-3.84	0.00	-67.88	0.00	67.88	1,428.88	714.44	1,419.66	710.88	13.40	-1.20	0.117
130.00	-29.36	-3.78	0.00	-48.66	0.00	48.66	1,349.86	674.93	1,266.22	634.05	14.69	-1.26	0.099
131.00	-25.19	-3.34	0.00	-44.89	0.00	44.89	1,334.06	667.03	1,236.59	619.21	14.95	-1.27	0.091
134.00	-20.96	-2.73	0.00	-34.88	0.00	34.88	1,286.64	643.32	1,149.79	575.75	15.76	-1.30	0.077
135.00	-20.75	-2.68	0.00	-32.15	0.00	32.15	1,270.84	635.42	1,121.56	561.61	16.03	-1.31	0.074
140.00	-19.77	-2.61	0.00	-18.73	0.00	18.73	1,191.82	595.91	985.67	493.57	17.42	-1.34	0.055
141.00	-15.64	-2.17	0.00	-16.12	0.00	16.12	1,176.01	588.01	959.54	480.48	17.70	-1.35	0.047
142.00	-13.29	-1.65	0.00	-13.95	0.00	13.95	1,160.21	580.10	933.77	467.58	17.98	-1.35	0.041
145.00	-12.76	-1.58	0.00	-9.01	0.00	9.01	1,112.80	556.40	858.55	429.91	18.84	-1.37	0.032
149.00	-7.41	-0.92	0.00	-2.69	0.00	2.69	1,049.58	524.79	763.17	382.15	19.99	-1.38	0.014
150.00	-7.24	-0.89	0.00	-1.77	0.00	1.77	1,033.78	516.89	740.20	370.65	20.28	-1.38	0.012
152.00	0.00	-0.71	0.00	0.00	0.00	0.00	1,002.17	501.08	695.32	348.18	20.86	-1.38	0.000

Load Case: 1.0D + 1.0W Serviceability 60 mph 23 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		52.0	0.0					0.0	0.0	52.0	0.0	0.0	0.0
5.00		102.7	1,314.6					0.0	283.7	102.7	1,598.2	0.0	0.0
10.00		100.2	1,282.9					0.0	283.7	100.2	1,566.5	0.0	0.0
15.00		97.8	1,251.2					0.0	283.7	97.8	1,534.9	0.0	0.0
20.00		95.3	1,219.5					0.0	283.7	95.3	1,503.2	0.0	0.0
25.00		92.8	1,187.9					0.0	283.7	92.8	1,471.5	0.0	0.0
30.00	Appurtenance(s)	91.4	1,156.2	0.4	0.0	46.6	5.0	0.0	283.7	91.8	1,444.9	0.0	0.0
35.00		91.8	1,124.5					0.0	282.9	91.8	1,407.4	0.0	0.0
40.00		92.7	1,092.9					0.0	282.9	92.7	1,375.8	0.0	0.0
45.00		73.6	1,061.2					0.0	282.9	73.6	1,344.1	0.0	0.0
47.92	Bot - Section 2	46.9	604.4					0.0	165.0	46.9	769.4	0.0	0.0
50.00		58.4	796.4					0.0	117.9	58.4	914.2	0.0	0.0
54.08	Top - Section 1	47.3	1,531.3					0.0	231.0	47.3	1,762.3	0.0	0.0
55.00		55.7	157.8					0.0	51.9	55.7	209.7	0.0	0.0
60.00		93.6	844.6					0.0	282.9	93.6	1,127.5	0.0	0.0
65.00		92.7	817.5					0.0	282.9	92.7	1,100.4	0.0	0.0
70.00		91.5	790.3					0.0	282.9	91.5	1,073.2	0.0	0.0
75.00		90.1	763.2					0.0	282.9	90.1	1,046.1	0.0	0.0
80.00		88.5	736.0					0.0	282.9	88.5	1,018.9	0.0	0.0
85.00		86.7	708.9					0.0	282.9	86.7	991.8	0.0	0.0
90.00		84.7	681.8					0.0	282.9	84.7	964.7	0.0	0.0
95.00		64.4	654.6					0.0	282.9	64.4	937.5	0.0	0.0
97.75	Bot - Section 3	41.0	348.5					0.0	155.6	41.0	504.1	0.0	0.0
100.00		36.7	468.8					0.0	127.3	36.7	596.1	0.0	0.0
102.25	Top - Section 2	40.2	459.6					0.0	127.3	40.2	586.9	0.0	0.0
105.00		61.0	222.5					0.0	155.6	61.0	378.1	0.0	0.0
110.00		76.7	390.6					0.0	282.9	76.7	673.5	0.0	0.0
115.00		74.0	372.5					0.0	282.9	74.0	655.4	0.0	0.0
120.00		71.2	354.4					0.0	282.9	71.2	637.3	0.0	0.0
125.00		68.3	336.3					0.0	282.9	68.3	619.2	0.0	0.0
130.00		39.9	318.2					0.0	282.9	39.9	601.1	0.0	0.0
131.00	Appurtenance(s)	25.6	61.5	268.3	0.0	0.0	1,500.0	0.0	56.6	294.0	1,618.0	0.0	0.0
134.00	Appurtenance(s)	25.4	180.0	501.6	0.0	-726.1	750.9	0.0	167.7	527.0	1,098.7	0.0	0.0
135.00		36.5	58.6					0.0	34.3	36.5	92.9	0.0	0.0
140.00		36.2	282.0					0.0	171.5	36.2	453.4	0.0	0.0
141.00	Appurtenance(s)	11.7	54.2	274.0	0.0	0.0	1,500.0	0.0	34.3	285.7	1,588.5	0.0	0.0
142.00	Appurtenance(s)	22.8	53.5	521.1	0.0	-511.4	273.0	0.0	34.3	543.9	360.8	0.0	0.0
145.00		57.1	156.2					0.0	73.4	57.1	229.5	0.0	0.0
149.00	Appurtenance(s)	49.8	198.1	452.2	0.0	0.0	2,448.7	16.8	97.8	518.9	2,744.6	0.0	0.0
150.00		28.8	47.7					4.2	24.5	33.0	72.2	0.0	0.0
152.00	Appurtenance(s)	19.0	93.2	746.5	0.0	0.0	1,653.4	8.5	48.9	774.1	1,795.5	0.0	0.0
								Totals:		5,406.57	40,467.9	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 23 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Calculated Forces

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 (deg)	Ratio
0.00	-40.47	-5.36	0.00	-607.13	0.00	607.13	5,359.60	2,679.80	12,402.6	6,210.55	0.00	0.00	0.105
5.00	-38.87	-5.28	0.00	-580.32	0.00	580.32	5,275.68	2,637.84	11,915.5	5,966.65	0.01	-0.03	0.105
10.00	-37.30	-5.20	0.00	-553.92	0.00	553.92	5,189.62	2,594.81	11,433.1	5,725.08	0.06	-0.05	0.104
15.00	-35.76	-5.11	0.00	-527.94	0.00	527.94	5,101.44	2,550.72	10,955.7	5,485.99	0.13	-0.08	0.103
20.00	-34.25	-5.03	0.00	-502.37	0.00	502.37	5,011.12	2,505.56	10,483.5	5,249.58	0.23	-0.11	0.103
25.00	-32.78	-4.96	0.00	-477.20	0.00	477.20	4,918.68	2,459.34	10,017.1	5,016.02	0.37	-0.14	0.102
30.00	-31.33	-4.88	0.00	-452.38	0.00	452.38	4,824.11	2,412.05	9,556.78	4,785.49	0.53	-0.17	0.101
35.00	-29.92	-4.80	0.00	-428.00	0.00	428.00	4,727.41	2,363.70	9,102.80	4,558.17	0.73	-0.20	0.100
40.00	-28.54	-4.72	0.00	-404.01	0.00	404.01	4,628.58	2,314.29	8,655.58	4,334.22	0.96	-0.24	0.099
45.00	-27.20	-4.65	0.00	-380.44	0.00	380.44	4,527.62	2,263.81	8,215.47	4,113.84	1.23	-0.27	0.098
47.92	-26.43	-4.61	0.00	-366.88	0.00	366.88	4,467.74	2,233.87	7,962.16	3,987.00	1.40	-0.29	0.098
50.00	-25.51	-4.55	0.00	-357.28	0.00	357.28	4,424.53	2,212.27	7,782.82	3,897.19	1.53	-0.31	0.097
54.08	-23.75	-4.50	0.00	-338.69	0.00	338.69	3,619.86	1,809.93	6,334.27	3,171.85	1.81	-0.34	0.113
55.00	-23.54	-4.46	0.00	-334.56	0.00	334.56	3,605.16	1,802.58	6,271.86	3,140.59	1.87	-0.34	0.113
60.00	-22.41	-4.37	0.00	-312.28	0.00	312.28	3,523.72	1,761.86	5,934.59	2,971.70	2.25	-0.38	0.111
65.00	-21.31	-4.29	0.00	-290.43	0.00	290.43	3,440.15	1,720.07	5,602.88	2,805.61	2.68	-0.42	0.110
70.00	-20.23	-4.20	0.00	-268.99	0.00	268.99	3,354.45	1,677.22	5,277.11	2,642.48	3.14	-0.47	0.108
75.00	-19.18	-4.12	0.00	-247.99	0.00	247.99	3,266.62	1,633.31	4,957.62	2,482.50	3.65	-0.51	0.106
80.00	-18.16	-4.03	0.00	-227.40	0.00	227.40	3,154.85	1,577.42	4,612.87	2,309.86	4.21	-0.55	0.104
85.00	-17.17	-3.95	0.00	-207.23	0.00	207.23	3,036.31	1,518.16	4,271.03	2,138.69	4.82	-0.60	0.103
90.00	-16.20	-3.87	0.00	-187.48	0.00	187.48	2,917.78	1,458.89	3,942.34	1,974.10	5.47	-0.65	0.101
95.00	-15.26	-3.80	0.00	-168.14	0.00	168.14	2,799.25	1,399.62	3,626.81	1,816.10	6.17	-0.69	0.098
97.75	-14.75	-3.76	0.00	-157.68	0.00	157.68	2,734.06	1,367.03	3,458.88	1,732.01	6.58	-0.72	0.096
100.00	-14.16	-3.72	0.00	-149.22	0.00	149.22	2,680.72	1,340.36	3,324.44	1,664.69	6.92	-0.74	0.095
102.25	-13.57	-3.68	0.00	-140.84	0.00	140.84	1,683.04	841.52	2,097.24	1,050.18	7.27	-0.76	0.142
105.00	-13.19	-3.63	0.00	-130.72	0.00	130.72	1,655.06	827.53	2,011.86	1,007.42	7.72	-0.79	0.138
110.00	-12.51	-3.55	0.00	-112.59	0.00	112.59	1,602.55	801.28	1,859.07	930.92	8.58	-0.86	0.129
115.00	-11.86	-3.48	0.00	-94.82	0.00	94.82	1,547.92	773.96	1,709.77	856.15	9.52	-0.92	0.118
120.00	-11.22	-3.41	0.00	-77.40	0.00	77.40	1,491.15	745.57	1,564.29	783.31	10.52	-0.98	0.106
125.00	-10.59	-3.34	0.00	-60.34	0.00	60.34	1,428.88	714.44	1,419.66	710.88	11.58	-1.04	0.092
130.00	-9.99	-3.30	0.00	-43.62	0.00	43.62	1,349.86	674.93	1,266.22	634.05	12.70	-1.09	0.076
131.00	-8.38	-2.98	0.00	-40.32	0.00	40.32	1,334.06	667.03	1,236.59	619.21	12.93	-1.10	0.071
134.00	-7.29	-2.43	0.00	-31.39	0.00	31.39	1,286.64	643.32	1,149.79	575.75	13.63	-1.13	0.060
135.00	-7.20	-2.39	0.00	-28.96	0.00	28.96	1,270.84	635.42	1,121.56	561.61	13.87	-1.14	0.057
140.00	-6.74	-2.35	0.00	-16.99	0.00	16.99	1,191.82	595.91	985.67	493.57	15.08	-1.17	0.040
141.00	-5.16	-2.03	0.00	-14.64	0.00	14.64	1,176.01	588.01	959.54	480.48	15.33	-1.18	0.035
142.00	-4.81	-1.48	0.00	-12.61	0.00	12.61	1,160.21	580.10	933.77	467.58	15.58	-1.18	0.031
145.00	-4.58	-1.42	0.00	-8.16	0.00	8.16	1,112.80	556.40	858.55	429.91	16.32	-1.19	0.023
149.00	-1.85	-0.85	0.00	-2.47	0.00	2.47	1,049.58	524.79	763.17	382.15	17.33	-1.20	0.008
150.00	-1.78	-0.81	0.00	-1.62	0.00	1.62	1,033.78	516.89	740.20	370.65	17.58	-1.20	0.006
152.00	0.00	-0.77	0.00	0.00	0.00	0.00	1,002.17	501.08	695.32	348.18	18.09	-1.20	0.000

Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period (S_s):	0.21	
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.07	
Long-Period Transition Period (T_L):	6	
Importance Factor (I_E):	1.00	
Site Coefficient F_a:	1.60	
Site Coeffiecient F_v:	2.40	
Response Modification Coefficient (R):	1.50	
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.22	
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.11	
Seismic Response Coefficient (C_s):	0.03	
Upper Limit C_s	0.03	
Lower Limit C_s	0.03	
Period based on Rayleigh Method (sec):	2.29	
Redundancy Factor (p):	1.00	
Seismic Force Distribution Exponent (k):	1.90	
Total Unfactored Dead Load:	40.47	k
Seismic Base Shear (E):	1.32	k

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
40	151.00	142	1,921	0.009	12	177
39	149.50	72	957	0.005	6	90
38	147.00	296	3,800	0.019	25	368
37	143.50	230	2,816	0.014	18	286
36	141.50	88	1,049	0.005	7	109
35	140.50	89	1,043	0.005	7	110
34	137.50	453	5,131	0.025	33	564
33	134.50	93	1,008	0.005	7	116
32	132.50	348	3,669	0.018	24	433
31	130.50	118	1,210	0.006	8	147
30	127.50	601	5,894	0.029	38	748
29	122.50	619	5,628	0.028	36	771
28	117.50	637	5,353	0.026	35	793
27	112.50	655	5,069	0.025	33	816
26	107.50	673	4,779	0.023	31	838
25	103.63	378	2,503	0.012	16	471
24	101.13	587	3,709	0.018	24	731
23	98.88	596	3,610	0.018	23	742
22	96.38	504	2,908	0.014	19	627
21	92.50	938	5,004	0.025	32	1,167
20	87.50	965	4,634	0.023	30	1,201
19	82.50	992	4,261	0.021	28	1,235
18	77.50	1,019	3,889	0.019	25	1,268

17	72.50	1,046	3,518	0.017	23	1,302
16	67.50	1,073	3,152	0.015	20	1,336
15	62.50	1,100	2,793	0.014	18	1,370
14	57.50	1,128	2,443	0.012	16	1,404
13	54.54	210	411	0.002	3	261
12	52.04	1,762	3,161	0.016	20	2,194
11	48.96	914	1,461	0.007	9	1,138
10	46.46	769	1,113	0.005	7	958
9	42.50	1,344	1,642	0.008	11	1,673
8	37.50	1,376	1,326	0.007	9	1,713
7	32.50	1,407	1,034	0.005	7	1,752
6	27.50	1,440	771	0.004	5	1,792
5	22.50	1,472	538	0.003	3	1,832
4	17.50	1,503	342	0.002	2	1,871
3	12.50	1,535	184	0.001	1	1,911
2	7.50	1,567	71	0.000	0	1,950
1	2.50	1,598	9	0.000	0	1,989
Powerwave Allgon LGP	152.00	33	452	0.002	3	41
Powerwave Allgon 702	152.00	26	361	0.002	2	33
CCI DTMABP7819VG12A	152.00	58	788	0.004	5	72
Powerwave Allgon LGP	152.00	85	1,158	0.006	8	105
Raycap DC6-48-60-18-	152.00	20	274	0.001	2	25
Ericsson RRUS 4415 B	152.00	138	1,888	0.009	12	172
Ericsson RRUS 4449 B	152.00	213	2,915	0.014	19	265
Ericsson RRUS 4478 B	152.00	178	2,439	0.012	16	222
Raycap DC6-48-60-18-	152.00	16	219	0.001	1	20
Ericsson RRUS-12 190	152.00	180	2,463	0.012	16	224
Raycap DC6-48-60-18-	152.00	16	219	0.001	1	20
Powerwave Allgon 777	152.00	105	1,437	0.007	9	131
Kathrein Scala 80010	152.00	586	8,013	0.039	52	729
Flat Platform w/ Han	149.00	2,449	32,266	0.159	209	3,048
RFS FD9R6004/1C-3L	142.00	19	224	0.001	1	23
Rymsa MGD3-800T0	142.00	59	714	0.004	5	74
Andrew DB846H80E-SX	142.00	96	1,155	0.006	7	120
Powerwave Allgon P65	142.00	99	1,191	0.006	8	123
Flat Low Profile Pla	141.00	1,500	17,802	0.088	115	1,867
Kathrein Scala 860-1	134.00	7	71	0.000	0	8
KMW AWS Twin Dual 70	134.00	52	562	0.003	4	65
Ericsson RRUS 11 B12	134.00	152	1,639	0.008	11	189
Kathrein Scala 800 1	134.00	53	569	0.003	4	66
Kathrein Scala 742 3	134.00	89	963	0.005	6	111
Ericsson AIR 21, 1.3	134.00	249	2,683	0.013	17	310
Commscope SBNH-1D65C	134.00	149	1,603	0.008	10	185
Flat Low Profile Pla	131.00	1,500	15,484	0.076	100	1,867
Generic 2" x 4" GPS	30.00	5	3	0.000	0	6
		40,468	203,370	1.000	1,319	50,375

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
40	151.00	142	1,921	0.009	12	122
39	149.50	72	957	0.005	6	62
38	147.00	296	3,800	0.019	25	253
37	143.50	230	2,816	0.014	18	196
36	141.50	88	1,049	0.005	7	75
35	140.50	89	1,043	0.005	7	76
34	137.50	453	5,131	0.025	33	388
33	134.50	93	1,008	0.005	7	79
32	132.50	348	3,669	0.018	24	297

31	130.50	118	1,210	0.006	8	101
30	127.50	601	5,894	0.029	38	514
29	122.50	619	5,628	0.028	36	530
28	117.50	637	5,353	0.026	35	545
27	112.50	655	5,069	0.025	33	560
26	107.50	673	4,779	0.023	31	576
25	103.63	378	2,503	0.012	16	323
24	101.13	587	3,709	0.018	24	502
23	98.88	596	3,610	0.018	23	510
22	96.38	504	2,908	0.014	19	431
21	92.50	938	5,004	0.025	32	802
20	87.50	965	4,634	0.023	30	825
19	82.50	992	4,261	0.021	28	848
18	77.50	1,019	3,889	0.019	25	871
17	72.50	1,046	3,518	0.017	23	895
16	67.50	1,073	3,152	0.015	20	918
15	62.50	1,100	2,793	0.014	18	941
14	57.50	1,128	2,443	0.012	16	964
13	54.54	210	411	0.002	3	179
12	52.04	1,762	3,161	0.016	20	1,507
11	48.96	914	1,461	0.007	9	782
10	46.46	769	1,113	0.005	7	658
9	42.50	1,344	1,642	0.008	11	1,149
8	37.50	1,376	1,326	0.007	9	1,177
7	32.50	1,407	1,034	0.005	7	1,204
6	27.50	1,440	771	0.004	5	1,231
5	22.50	1,472	538	0.003	3	1,258
4	17.50	1,503	342	0.002	2	1,286
3	12.50	1,535	184	0.001	1	1,313
2	7.50	1,567	71	0.000	0	1,340
1	2.50	1,598	9	0.000	0	1,367
Powerwave Allgon LGP	152.00	33	452	0.002	3	28
Powerwave Allgon 702	152.00	26	361	0.002	2	23
CCI DTMABP7819VG12A	152.00	58	788	0.004	5	49
Powerwave Allgon LGP	152.00	85	1,158	0.006	8	72
Raycap DC6-48-60-18-	152.00	20	274	0.001	2	17
Ericsson RRUS 4415 B	152.00	138	1,888	0.009	12	118
Ericsson RRUS 4449 B	152.00	213	2,915	0.014	19	182
Ericsson RRUS 4478 B	152.00	178	2,439	0.012	16	152
Raycap DC6-48-60-18-	152.00	16	219	0.001	1	14
Ericsson RRUS-12 190	152.00	180	2,463	0.012	16	154
Raycap DC6-48-60-18-	152.00	16	219	0.001	1	14
Powerwave Allgon 777	152.00	105	1,437	0.007	9	90
Kathrein Scala 80010	152.00	586	8,013	0.039	52	501
Flat Platform w/ Han	149.00	2,449	32,266	0.159	209	2,094
RFS FD9R6004/1C-3L	142.00	19	224	0.001	1	16
Rymsa MGD3-800T0	142.00	59	714	0.004	5	51
Andrew DB846H80E-SX	142.00	96	1,155	0.006	7	82
Powerwave Allgon P65	142.00	99	1,191	0.006	8	85
Flat Low Profile Pla	141.00	1,500	17,802	0.088	115	1,283
Kathrein Scala 860-1	134.00	7	71	0.000	0	6
KMW AWS Twin Dual 70	134.00	52	562	0.003	4	45
Ericsson RRUS 11 B12	134.00	152	1,639	0.008	11	130
Kathrein Scala 800 1	134.00	53	569	0.003	4	45
Kathrein Scala 742 3	134.00	89	963	0.005	6	76
Ericsson AIR 21, 1.3	134.00	249	2,683	0.013	17	213
Commscope SBNH-1D65C	134.00	149	1,603	0.008	10	127
Flat Low Profile Pla	131.00	1,500	15,484	0.076	100	1,283
Generic 2" x 4" GPS	30.00	5	3	0.000	0	4
		40,468	203,370	1.000	1,319	34,608

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Calculated Forces

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 (deg)	Ratio
0.00	-48.38	-1.32	0.00	-165.77	0.00	165.77	5,359.60	2,679.80	12,402.6	6,210.55	0.00	0.00	0.036
5.00	-46.43	-1.33	0.00	-159.17	0.00	159.17	5,275.68	2,637.84	11,915.5	5,966.65	0.00	-0.01	0.035
10.00	-44.52	-1.33	0.00	-152.54	0.00	152.54	5,189.62	2,594.81	11,433.1	5,725.08	0.02	-0.01	0.035
15.00	-42.65	-1.33	0.00	-145.88	0.00	145.88	5,101.44	2,550.72	10,955.7	5,485.99	0.04	-0.02	0.035
20.00	-40.82	-1.34	0.00	-139.21	0.00	139.21	5,011.12	2,505.56	10,483.5	5,249.58	0.06	-0.03	0.035
25.00	-39.03	-1.34	0.00	-132.54	0.00	132.54	4,918.68	2,459.34	10,017.1	5,016.02	0.10	-0.04	0.034
30.00	-37.27	-1.33	0.00	-125.86	0.00	125.86	4,824.11	2,412.05	9,556.78	4,785.49	0.15	-0.05	0.034
35.00	-35.56	-1.33	0.00	-119.20	0.00	119.20	4,727.41	2,363.70	9,102.80	4,558.17	0.20	-0.06	0.034
40.00	-33.88	-1.32	0.00	-112.56	0.00	112.56	4,628.58	2,314.29	8,655.58	4,334.22	0.27	-0.07	0.033
45.00	-32.93	-1.32	0.00	-105.95	0.00	105.95	4,527.62	2,263.81	8,215.47	4,113.84	0.34	-0.08	0.033
47.92	-31.79	-1.31	0.00	-102.11	0.00	102.11	4,467.74	2,233.87	7,962.16	3,987.00	0.39	-0.08	0.033
50.00	-29.59	-1.29	0.00	-99.38	0.00	99.38	4,424.53	2,212.27	7,782.82	3,897.19	0.42	-0.08	0.032
54.08	-29.33	-1.29	0.00	-94.12	0.00	94.12	3,619.86	1,809.93	6,334.27	3,171.85	0.50	-0.09	0.038
55.00	-27.93	-1.27	0.00	-92.94	0.00	92.94	3,605.16	1,802.58	6,271.86	3,140.59	0.52	-0.09	0.037
60.00	-26.56	-1.26	0.00	-86.58	0.00	86.58	3,523.72	1,761.86	5,934.59	2,971.70	0.62	-0.11	0.037
65.00	-25.22	-1.24	0.00	-80.29	0.00	80.29	3,440.15	1,720.07	5,602.88	2,805.61	0.74	-0.12	0.036
70.00	-23.92	-1.22	0.00	-74.09	0.00	74.09	3,354.45	1,677.22	5,277.11	2,642.48	0.87	-0.13	0.035
75.00	-22.65	-1.20	0.00	-68.00	0.00	68.00	3,266.62	1,633.31	4,957.62	2,482.50	1.01	-0.14	0.034
80.00	-21.42	-1.17	0.00	-62.02	0.00	62.02	3,154.85	1,577.42	4,612.87	2,309.86	1.17	-0.15	0.034
85.00	-20.22	-1.14	0.00	-56.17	0.00	56.17	3,036.31	1,518.16	4,271.03	2,138.69	1.33	-0.17	0.033
90.00	-19.05	-1.11	0.00	-50.47	0.00	50.47	2,917.78	1,458.89	3,942.34	1,974.10	1.51	-0.18	0.032
95.00	-18.42	-1.09	0.00	-44.93	0.00	44.93	2,799.25	1,399.62	3,626.81	1,816.10	1.71	-0.19	0.031
97.75	-17.68	-1.07	0.00	-41.93	0.00	41.93	2,734.06	1,367.03	3,458.88	1,732.01	1.82	-0.20	0.031
100.00	-16.95	-1.04	0.00	-39.53	0.00	39.53	2,680.72	1,340.36	3,324.44	1,664.69	1.91	-0.20	0.030
102.25	-16.48	-1.03	0.00	-37.19	0.00	37.19	1,683.04	841.52	2,097.24	1,050.18	2.01	-0.21	0.045
105.00	-15.64	-1.00	0.00	-34.37	0.00	34.37	1,655.06	827.53	2,011.86	1,007.42	2.13	-0.22	0.044
110.00	-14.82	-0.96	0.00	-29.39	0.00	29.39	1,602.55	801.28	1,859.07	930.92	2.37	-0.23	0.041
115.00	-14.03	-0.93	0.00	-24.57	0.00	24.57	1,547.92	773.96	1,709.77	856.15	2.62	-0.25	0.038
120.00	-13.26	-0.89	0.00	-19.92	0.00	19.92	1,491.15	745.57	1,564.29	783.31	2.89	-0.27	0.034
125.00	-12.51	-0.85	0.00	-15.45	0.00	15.45	1,428.88	714.44	1,419.66	710.88	3.18	-0.28	0.030
130.00	-12.36	-0.85	0.00	-11.18	0.00	11.18	1,349.86	674.93	1,266.22	634.05	3.49	-0.30	0.027
131.00	-10.06	-0.71	0.00	-10.33	0.00	10.33	1,334.06	667.03	1,236.59	619.21	3.55	-0.30	0.024
134.00	-9.01	-0.65	0.00	-8.20	0.00	8.20	1,286.64	643.32	1,149.79	575.75	3.74	-0.30	0.021
135.00	-8.45	-0.61	0.00	-7.55	0.00	7.55	1,270.84	635.42	1,121.56	561.61	3.80	-0.31	0.020
140.00	-8.34	-0.61	0.00	-4.48	0.00	4.48	1,191.82	595.91	985.67	493.57	4.13	-0.32	0.016
141.00	-6.36	-0.47	0.00	-3.87	0.00	3.87	1,176.01	588.01	959.54	480.48	4.19	-0.32	0.013
142.00	-5.74	-0.43	0.00	-3.40	0.00	3.40	1,160.21	580.10	933.77	467.58	4.26	-0.32	0.012
145.00	-5.37	-0.40	0.00	-2.11	0.00	2.11	1,112.80	556.40	858.55	429.91	4.46	-0.32	0.010
149.00	-2.23	-0.17	0.00	-0.49	0.00	0.49	1,049.58	524.79	763.17	382.15	4.73	-0.32	0.003
150.00	-2.06	-0.16	0.00	-0.32	0.00	0.32	1,033.78	516.89	740.20	370.65	4.80	-0.32	0.003
152.00	0.00	-0.15	0.00	0.00	0.00	0.00	1,002.17	501.08	695.32	348.18	4.93	-0.32	0.000

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

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 (deg)	Ratio
0.00	-33.24	-1.32	0.00	-163.56	0.00	163.56	5,359.60	2,679.80	12,402.6	6,210.55	0.00	0.00	0.033
5.00	-31.90	-1.32	0.00	-156.96	0.00	156.96	5,275.68	2,637.84	11,915.5	5,966.65	0.00	-0.01	0.032
10.00	-30.59	-1.33	0.00	-150.35	0.00	150.35	5,189.62	2,594.81	11,433.1	5,725.08	0.02	-0.01	0.032
15.00	-29.30	-1.33	0.00	-143.72	0.00	143.72	5,101.44	2,550.72	10,955.7	5,485.99	0.04	-0.02	0.032
20.00	-28.04	-1.33	0.00	-137.08	0.00	137.08	5,011.12	2,505.56	10,483.5	5,249.58	0.06	-0.03	0.032
25.00	-26.81	-1.33	0.00	-130.44	0.00	130.44	4,918.68	2,459.34	10,017.1	5,016.02	0.10	-0.04	0.031
30.00	-25.60	-1.32	0.00	-123.81	0.00	123.81	4,824.11	2,412.05	9,556.78	4,785.49	0.14	-0.05	0.031
35.00	-24.43	-1.32	0.00	-117.20	0.00	117.20	4,727.41	2,363.70	9,102.80	4,558.17	0.20	-0.06	0.031
40.00	-23.28	-1.31	0.00	-110.63	0.00	110.63	4,628.58	2,314.29	8,655.58	4,334.22	0.26	-0.06	0.031
45.00	-22.62	-1.30	0.00	-104.09	0.00	104.09	4,527.62	2,263.81	8,215.47	4,113.84	0.33	-0.07	0.030
47.92	-21.84	-1.29	0.00	-100.29	0.00	100.29	4,467.74	2,233.87	7,962.16	3,987.00	0.38	-0.08	0.030
50.00	-20.33	-1.27	0.00	-97.59	0.00	97.59	4,424.53	2,212.27	7,782.82	3,897.19	0.42	-0.08	0.030
54.08	-20.15	-1.27	0.00	-92.39	0.00	92.39	3,619.86	1,809.93	6,334.27	3,171.85	0.49	-0.09	0.035
55.00	-19.19	-1.26	0.00	-91.23	0.00	91.23	3,605.16	1,802.58	6,271.86	3,140.59	0.51	-0.09	0.034
60.00	-18.25	-1.24	0.00	-84.94	0.00	84.94	3,523.72	1,761.86	5,934.59	2,971.70	0.61	-0.10	0.034
65.00	-17.33	-1.22	0.00	-78.74	0.00	78.74	3,440.15	1,720.07	5,602.88	2,805.61	0.73	-0.12	0.033
70.00	-16.43	-1.20	0.00	-72.63	0.00	72.63	3,354.45	1,677.22	5,277.11	2,642.48	0.86	-0.13	0.032
75.00	-15.56	-1.18	0.00	-66.62	0.00	66.62	3,266.62	1,633.31	4,957.62	2,482.50	1.00	-0.14	0.032
80.00	-14.71	-1.15	0.00	-60.74	0.00	60.74	3,154.85	1,577.42	4,612.87	2,309.86	1.15	-0.15	0.031
85.00	-13.89	-1.12	0.00	-54.99	0.00	54.99	3,036.31	1,518.16	4,271.03	2,138.69	1.31	-0.16	0.030
90.00	-13.09	-1.09	0.00	-49.39	0.00	49.39	2,917.78	1,458.89	3,942.34	1,974.10	1.49	-0.17	0.030
95.00	-12.65	-1.07	0.00	-43.95	0.00	43.95	2,799.25	1,399.62	3,626.81	1,816.10	1.68	-0.19	0.029
97.75	-12.15	-1.05	0.00	-41.00	0.00	41.00	2,734.06	1,367.03	3,458.88	1,732.01	1.79	-0.19	0.028
100.00	-11.64	-1.02	0.00	-38.65	0.00	38.65	2,680.72	1,340.36	3,324.44	1,664.69	1.88	-0.20	0.028
102.25	-11.32	-1.01	0.00	-36.35	0.00	36.35	1,683.04	841.52	2,097.24	1,050.18	1.98	-0.21	0.041
105.00	-10.74	-0.98	0.00	-33.58	0.00	33.58	1,655.06	827.53	2,011.86	1,007.42	2.10	-0.21	0.040
110.00	-10.18	-0.94	0.00	-28.70	0.00	28.70	1,602.55	801.28	1,859.07	930.92	2.33	-0.23	0.037
115.00	-9.64	-0.91	0.00	-23.99	0.00	23.99	1,547.92	773.96	1,709.77	856.15	2.58	-0.25	0.034
120.00	-9.11	-0.87	0.00	-19.44	0.00	19.44	1,491.15	745.57	1,564.29	783.31	2.84	-0.26	0.031
125.00	-8.59	-0.83	0.00	-15.08	0.00	15.08	1,428.88	714.44	1,419.66	710.88	3.13	-0.28	0.027
130.00	-8.49	-0.83	0.00	-10.91	0.00	10.91	1,349.86	674.93	1,266.22	634.05	3.42	-0.29	0.023
131.00	-6.91	-0.70	0.00	-10.08	0.00	10.08	1,334.06	667.03	1,236.59	619.21	3.48	-0.29	0.021
134.00	-6.19	-0.63	0.00	-8.00	0.00	8.00	1,286.64	643.32	1,149.79	575.75	3.67	-0.30	0.019
135.00	-5.80	-0.60	0.00	-7.36	0.00	7.36	1,270.84	635.42	1,121.56	561.61	3.73	-0.30	0.018
140.00	-5.73	-0.59	0.00	-4.37	0.00	4.37	1,191.82	595.91	985.67	493.57	4.05	-0.31	0.014
141.00	-4.37	-0.46	0.00	-3.78	0.00	3.78	1,176.01	588.01	959.54	480.48	4.12	-0.31	0.012
142.00	-3.94	-0.42	0.00	-3.32	0.00	3.32	1,160.21	580.10	933.77	467.58	4.18	-0.31	0.010
145.00	-3.69	-0.39	0.00	-2.06	0.00	2.06	1,112.80	556.40	858.55	429.91	4.38	-0.31	0.008
149.00	-1.53	-0.17	0.00	-0.48	0.00	0.48	1,049.58	524.79	763.17	382.15	4.64	-0.32	0.003
150.00	-1.41	-0.15	0.00	-0.31	0.00	0.31	1,033.78	516.89	740.20	370.65	4.71	-0.32	0.002
152.00	0.00	-0.15	0.00	0.00	0.00	0.00	1,002.17	501.08	695.32	348.18	4.84	-0.32	0.000

Equivalent Modal Forces Analysis

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.21
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.07
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.22
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.11
Period Based on Rayleigh Method (sec):	2.29
Redundancy Factor (p):	1.00

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
40	151.00	142	1.865	1.852	1.094	0.407	39	177
39	149.50	72	1.828	1.670	1.027	0.380	18	90
38	147.00	296	1.768	1.396	0.923	0.337	66	368
37	143.50	230	1.685	1.064	0.791	0.280	43	286
36	141.50	88	1.638	0.901	0.723	0.250	15	109
35	140.50	89	1.615	0.825	0.690	0.235	14	110
34	137.50	453	1.547	0.623	0.600	0.194	59	564
33	134.50	93	1.480	0.453	0.519	0.156	10	116
32	132.50	348	1.436	0.356	0.470	0.132	31	433
31	130.50	118	1.393	0.271	0.425	0.110	9	147
30	127.50	601	1.330	0.164	0.363	0.079	32	748
29	122.50	619	1.228	0.032	0.276	0.036	15	771
28	117.50	637	1.129	-0.052	0.205	0.001	0	793
27	112.50	655	1.035	-0.099	0.150	-0.025	-11	816
26	107.50	673	0.945	-0.119	0.106	-0.043	-19	838
25	103.63	378	0.878	-0.121	0.079	-0.050	-13	471
24	101.13	587	0.837	-0.118	0.065	-0.052	-20	731
23	98.88	596	0.800	-0.112	0.054	-0.052	-21	742
22	96.38	504	0.760	-0.103	0.043	-0.050	-17	627
21	92.50	938	0.700	-0.087	0.030	-0.043	-27	1,167
20	87.50	965	0.626	-0.062	0.018	-0.029	-18	1,201
19	82.50	992	0.557	-0.037	0.010	-0.010	-6	1,235
18	77.50	1,019	0.491	-0.013	0.007	0.010	7	1,268
17	72.50	1,046	0.430	0.008	0.006	0.028	19	1,302
16	67.50	1,073	0.373	0.026	0.008	0.042	30	1,336
15	62.50	1,100	0.320	0.041	0.011	0.052	38	1,370
14	57.50	1,128	0.270	0.052	0.015	0.058	43	1,404
13	54.54	210	0.243	0.056	0.018	0.060	8	261
12	52.04	1,762	0.222	0.060	0.020	0.060	71	2,194
11	48.96	914	0.196	0.063	0.024	0.061	37	1,138
10	46.46	769	0.177	0.065	0.026	0.061	31	958
9	42.50	1,344	0.148	0.068	0.030	0.060	54	1,673
8	37.50	1,376	0.115	0.070	0.035	0.059	54	1,713
7	32.50	1,407	0.086	0.071	0.039	0.058	54	1,752

6	27.50	1,440	0.062	0.072	0.041	0.056	54	1,792
5	22.50	1,472	0.041	0.070	0.042	0.054	53	1,832
4	17.50	1,503	0.025	0.066	0.039	0.051	51	1,871
3	12.50	1,535	0.013	0.058	0.034	0.046	47	1,911
2	7.50	1,567	0.005	0.043	0.024	0.036	38	1,950
1	2.50	1,598	0.001	0.018	0.010	0.017	18	1,989
Powerwave Allgon LGP	152.00	33	1.890	1.980	1.140	0.425	9	41
Powerwave Allgon 702	152.00	26	1.890	1.980	1.140	0.425	7	33
CCI DTMABP7819VG12A	152.00	58	1.890	1.980	1.140	0.425	16	72
Powerwave Allgon LGP	152.00	85	1.890	1.980	1.140	0.425	24	105
Raycap DC6-48-60-18-	152.00	20	1.890	1.980	1.140	0.425	6	25
Ericsson RRUS 4415 B	152.00	138	1.890	1.980	1.140	0.425	39	172
Ericsson RRUS 4449 B	152.00	213	1.890	1.980	1.140	0.425	60	265
Ericsson RRUS 4478 B	152.00	178	1.890	1.980	1.140	0.425	51	222
Raycap DC6-48-60-18-	152.00	16	1.890	1.980	1.140	0.425	5	20
Ericsson RRUS-12 190	152.00	180	1.890	1.980	1.140	0.425	51	224
Raycap DC6-48-60-18-	152.00	16	1.890	1.980	1.140	0.425	5	20
Powerwave Allgon 777	152.00	105	1.890	1.980	1.140	0.425	30	131
Kathrein Scala 80010	152.00	586	1.890	1.980	1.140	0.425	166	729
Flat Platform w/ Han	149.00	2,449	1.816	1.613	1.005	0.371	606	3,048
RFS FD9R6004/1C-3L	142.00	19	1.649	0.940	0.739	0.257	3	23
Rymsa MGD3-800T0	142.00	59	1.649	0.940	0.739	0.257	10	74
Andrew DB846H80E-SX	142.00	96	1.649	0.940	0.739	0.257	16	120
Powerwave Allgon P65	142.00	99	1.649	0.940	0.739	0.257	17	123
Flat Low Profile Pla	141.00	1,500	1.626	0.862	0.706	0.242	242	1,867
Kathrein Scala 860-1	134.00	7	1.469	0.427	0.507	0.150	1	8
KMW AWS Twin Dual 70	134.00	52	1.469	0.427	0.507	0.150	5	65
Ericsson RRUS 11 B12	134.00	152	1.469	0.427	0.507	0.150	15	189
Kathrein Scala 800 1	134.00	53	1.469	0.427	0.507	0.150	5	66
Kathrein Scala 742 3	134.00	89	1.469	0.427	0.507	0.150	9	111
Ericsson AIR 21, 1.3	134.00	249	1.469	0.427	0.507	0.150	25	310
Commscope SBNH-	134.00	149	1.469	0.427	0.507	0.150	15	185
Flat Low Profile Pla	131.00	1,500	1.404	0.291	0.436	0.115	115	1,867
Generic 2" x 4" GPS	30.00	5	0.074	0.072	0.040	0.057	0	6
		40,468	76.666	44.921	32.600	11.505	2,460	50,375

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
40	151.00	142	1.865	1.852	1.094	0.407	39	122
39	149.50	72	1.828	1.670	1.027	0.380	18	62
38	147.00	296	1.768	1.396	0.923	0.337	66	253
37	143.50	230	1.685	1.064	0.791	0.280	43	196
36	141.50	88	1.638	0.901	0.723	0.250	15	75
35	140.50	89	1.615	0.825	0.690	0.235	14	76
34	137.50	453	1.547	0.623	0.600	0.194	59	388
33	134.50	93	1.480	0.453	0.519	0.156	10	79
32	132.50	348	1.436	0.356	0.470	0.132	31	297
31	130.50	118	1.393	0.271	0.425	0.110	9	101
30	127.50	601	1.330	0.164	0.363	0.079	32	514
29	122.50	619	1.228	0.032	0.276	0.036	15	530
28	117.50	637	1.129	-0.052	0.205	0.001	0	545
27	112.50	655	1.035	-0.099	0.150	-0.025	-11	560
26	107.50	673	0.945	-0.119	0.106	-0.043	-19	576
25	103.63	378	0.878	-0.121	0.079	-0.050	-13	323
24	101.13	587	0.837	-0.118	0.065	-0.052	-20	502
23	98.88	596	0.800	-0.112	0.054	-0.052	-21	510
22	96.38	504	0.760	-0.103	0.043	-0.050	-17	431

21	92.50	938	0.700	-0.087	0.030	-0.043	-27	802
20	87.50	965	0.626	-0.062	0.018	-0.029	-18	825
19	82.50	992	0.557	-0.037	0.010	-0.010	-6	848
18	77.50	1,019	0.491	-0.013	0.007	0.010	7	871
17	72.50	1,046	0.430	0.008	0.006	0.028	19	895
16	67.50	1,073	0.373	0.026	0.008	0.042	30	918
15	62.50	1,100	0.320	0.041	0.011	0.052	38	941
14	57.50	1,128	0.270	0.052	0.015	0.058	43	964
13	54.54	210	0.243	0.056	0.018	0.060	8	179
12	52.04	1,762	0.222	0.060	0.020	0.060	71	1,507
11	48.96	914	0.196	0.063	0.024	0.061	37	782
10	46.46	769	0.177	0.065	0.026	0.061	31	658
9	42.50	1,344	0.148	0.068	0.030	0.060	54	1,149
8	37.50	1,376	0.115	0.070	0.035	0.059	54	1,177
7	32.50	1,407	0.086	0.071	0.039	0.058	54	1,204
6	27.50	1,440	0.062	0.072	0.041	0.056	54	1,231
5	22.50	1,472	0.041	0.070	0.042	0.054	53	1,258
4	17.50	1,503	0.025	0.066	0.039	0.051	51	1,286
3	12.50	1,535	0.013	0.058	0.034	0.046	47	1,313
2	7.50	1,567	0.005	0.043	0.024	0.036	38	1,340
1	2.50	1,598	0.001	0.018	0.010	0.017	18	1,367
Powerwave Allgon LGP	152.00	33	1.890	1.980	1.140	0.425	9	28
Powerwave Allgon 702	152.00	26	1.890	1.980	1.140	0.425	7	23
CCI DTMABP7819VG12A	152.00	58	1.890	1.980	1.140	0.425	16	49
Powerwave Allgon LGP	152.00	85	1.890	1.980	1.140	0.425	24	72
Raycap DC6-48-60-18-	152.00	20	1.890	1.980	1.140	0.425	6	17
Ericsson RRUS 4415 B	152.00	138	1.890	1.980	1.140	0.425	39	118
Ericsson RRUS 4449 B	152.00	213	1.890	1.980	1.140	0.425	60	182
Ericsson RRUS 4478 B	152.00	178	1.890	1.980	1.140	0.425	51	152
Raycap DC6-48-60-18-	152.00	16	1.890	1.980	1.140	0.425	5	14
Ericsson RRUS-12 190	152.00	180	1.890	1.980	1.140	0.425	51	154
Raycap DC6-48-60-18-	152.00	16	1.890	1.980	1.140	0.425	5	14
Powerwave Allgon 777	152.00	105	1.890	1.980	1.140	0.425	30	90
Kathrein Scala 80010	152.00	586	1.890	1.980	1.140	0.425	166	501
Flat Platform w/ Han	149.00	2,449	1.816	1.613	1.005	0.371	606	2,094
RFS FD9R6004/1C-3L	142.00	19	1.649	0.940	0.739	0.257	3	16
Rymsa MGD3-800T0	142.00	59	1.649	0.940	0.739	0.257	10	51
Andrew DB846H80E-SX	142.00	96	1.649	0.940	0.739	0.257	16	82
Powerwave Allgon P65	142.00	99	1.649	0.940	0.739	0.257	17	85
Flat Low Profile Pla	141.00	1,500	1.626	0.862	0.706	0.242	242	1,283
Kathrein Scala 860-1	134.00	7	1.469	0.427	0.507	0.150	1	6
KMW AWS Twin Dual 70	134.00	52	1.469	0.427	0.507	0.150	5	45
Ericsson RRUS 11 B12	134.00	152	1.469	0.427	0.507	0.150	15	130
Kathrein Scala 800 1	134.00	53	1.469	0.427	0.507	0.150	5	45
Kathrein Scala 742 3	134.00	89	1.469	0.427	0.507	0.150	9	76
Ericsson AIR 21, 1.3	134.00	249	1.469	0.427	0.507	0.150	25	213
Commscope SBNH-	134.00	149	1.469	0.427	0.507	0.150	15	127
Flat Low Profile Pla	131.00	1,500	1.404	0.291	0.436	0.115	115	1,283
Generic 2" x 4" GPS	30.00	5	0.074	0.072	0.040	0.057	0	4
		40,468	76.666	44.921	32.600	11.505	2,460	34,608

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

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 (deg)	Ratio
0.00	-48.38	-2.45	0.00	-299.59	0.00	299.59	5,359.60	2,679.80	12,402.6	6,210.55	0.00	0.00	0.057
5.00	-46.43	-2.42	0.00	-287.36	0.00	287.36	5,275.68	2,637.84	11,915.5	5,966.65	0.01	-0.01	0.057
10.00	-44.52	-2.38	0.00	-275.26	0.00	275.26	5,189.62	2,594.81	11,433.1	5,725.08	0.03	-0.03	0.057
15.00	-42.65	-2.34	0.00	-263.34	0.00	263.34	5,101.44	2,550.72	10,955.7	5,485.99	0.06	-0.04	0.056
20.00	-40.82	-2.30	0.00	-251.64	0.00	251.64	5,011.12	2,505.56	10,483.5	5,249.58	0.12	-0.06	0.056
25.00	-39.03	-2.25	0.00	-240.15	0.00	240.15	4,918.68	2,459.34	10,017.1	5,016.02	0.18	-0.07	0.056
30.00	-37.27	-2.21	0.00	-228.89	0.00	228.89	4,824.11	2,412.05	9,556.78	4,785.49	0.26	-0.09	0.056
35.00	-35.55	-2.16	0.00	-217.87	0.00	217.87	4,727.41	2,363.70	9,102.80	4,558.17	0.36	-0.10	0.055
40.00	-33.88	-2.11	0.00	-207.07	0.00	207.07	4,628.58	2,314.29	8,655.58	4,334.22	0.48	-0.12	0.055
45.00	-32.92	-2.09	0.00	-196.52	0.00	196.52	4,527.62	2,263.81	8,215.47	4,113.84	0.61	-0.14	0.055
47.92	-31.78	-2.05	0.00	-190.43	0.00	190.43	4,467.74	2,233.87	7,962.16	3,987.00	0.70	-0.15	0.055
50.00	-29.59	-1.98	0.00	-186.16	0.00	186.16	4,424.53	2,212.27	7,782.82	3,897.19	0.77	-0.15	0.054
54.08	-29.33	-1.98	0.00	-178.07	0.00	178.07	3,619.86	1,809.93	6,334.27	3,171.85	0.91	-0.17	0.064
55.00	-27.93	-1.93	0.00	-176.26	0.00	176.26	3,605.16	1,802.58	6,271.86	3,140.59	0.94	-0.17	0.064
60.00	-26.55	-1.90	0.00	-166.59	0.00	166.59	3,523.72	1,761.86	5,934.59	2,971.70	1.13	-0.19	0.064
65.00	-25.22	-1.88	0.00	-157.08	0.00	157.08	3,440.15	1,720.07	5,602.88	2,805.61	1.35	-0.22	0.063
70.00	-23.92	-1.86	0.00	-147.69	0.00	147.69	3,354.45	1,677.22	5,277.11	2,642.48	1.59	-0.24	0.063
75.00	-22.65	-1.86	0.00	-138.38	0.00	138.38	3,266.62	1,633.31	4,957.62	2,482.50	1.85	-0.26	0.063
80.00	-21.41	-1.87	0.00	-129.08	0.00	129.08	3,154.85	1,577.42	4,612.87	2,309.86	2.14	-0.29	0.063
85.00	-20.21	-1.89	0.00	-119.73	0.00	119.73	3,036.31	1,518.16	4,271.03	2,138.69	2.46	-0.31	0.063
90.00	-19.04	-1.92	0.00	-110.27	0.00	110.27	2,917.78	1,458.89	3,942.34	1,974.10	2.80	-0.34	0.062
95.00	-18.41	-1.94	0.00	-100.67	0.00	100.67	2,799.25	1,399.62	3,626.81	1,816.10	3.18	-0.37	0.062
97.75	-17.67	-1.96	0.00	-95.34	0.00	95.34	2,734.06	1,367.03	3,458.88	1,732.01	3.39	-0.39	0.062
100.00	-16.94	-1.98	0.00	-90.92	0.00	90.92	2,680.72	1,340.36	3,324.44	1,664.69	3.58	-0.40	0.061
102.25	-16.47	-1.99	0.00	-86.47	0.00	86.47	1,683.04	841.52	2,097.24	1,050.18	3.77	-0.41	0.092
105.00	-15.63	-2.01	0.00	-80.99	0.00	80.99	1,655.06	827.53	2,011.86	1,007.42	4.01	-0.43	0.090
110.00	-14.81	-2.03	0.00	-70.91	0.00	70.91	1,602.55	801.28	1,859.07	930.92	4.49	-0.47	0.085
115.00	-14.02	-2.03	0.00	-60.76	0.00	60.76	1,547.92	773.96	1,709.77	856.15	5.00	-0.51	0.080
120.00	-13.24	-2.02	0.00	-50.60	0.00	50.60	1,491.15	745.57	1,564.29	783.31	5.56	-0.55	0.073
125.00	-12.49	-1.99	0.00	-40.50	0.00	40.50	1,428.88	714.44	1,419.66	710.88	6.16	-0.59	0.066
130.00	-12.35	-1.98	0.00	-30.55	0.00	30.55	1,349.86	674.93	1,266.22	634.05	6.80	-0.63	0.057
131.00	-10.05	-1.81	0.00	-28.57	0.00	28.57	1,334.06	667.03	1,236.59	619.21	6.93	-0.63	0.054
134.00	-9.00	-1.72	0.00	-23.13	0.00	23.13	1,286.64	643.32	1,149.79	575.75	7.34	-0.65	0.047
135.00	-8.43	-1.66	0.00	-21.41	0.00	21.41	1,270.84	635.42	1,121.56	561.61	7.47	-0.66	0.045
140.00	-8.32	-1.64	0.00	-13.12	0.00	13.12	1,191.82	595.91	985.67	493.57	8.18	-0.68	0.034
141.00	-6.35	-1.36	0.00	-11.48	0.00	11.48	1,176.01	588.01	959.54	480.48	8.32	-0.69	0.029
142.00	-5.73	-1.27	0.00	-10.11	0.00	10.11	1,160.21	580.10	933.77	467.58	8.47	-0.69	0.027
145.00	-5.36	-1.20	0.00	-6.31	0.00	6.31	1,112.80	556.40	858.55	429.91	8.90	-0.70	0.020
149.00	-2.23	-0.54	0.00	-1.52	0.00	1.52	1,049.58	524.79	763.17	382.15	9.49	-0.71	0.006
150.00	-2.05	-0.49	0.00	-0.99	0.00	0.99	1,033.78	516.89	740.20	370.65	9.64	-0.71	0.005
152.00	0.00	-0.47	0.00	0.00	0.00	0.00	1,002.17	501.08	695.32	348.18	9.94	-0.71	0.000

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

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 (deg)	Ratio
0.00	-33.24	-2.44	0.00	-295.15	0.00	295.15	5,359.60	2,679.80	12,402.6	6,210.55	0.00	0.00	0.054
5.00	-31.90	-2.41	0.00	-282.93	0.00	282.93	5,275.68	2,637.84	11,915.5	5,966.65	0.01	-0.01	0.053
10.00	-30.59	-2.37	0.00	-270.86	0.00	270.86	5,189.62	2,594.81	11,433.1	5,725.08	0.03	-0.03	0.053
15.00	-29.30	-2.33	0.00	-258.99	0.00	258.99	5,101.44	2,550.72	10,955.7	5,485.99	0.06	-0.04	0.053
20.00	-28.04	-2.28	0.00	-247.35	0.00	247.35	5,011.12	2,505.56	10,483.5	5,249.58	0.11	-0.05	0.053
25.00	-26.81	-2.23	0.00	-235.94	0.00	235.94	4,918.68	2,459.34	10,017.1	5,016.02	0.18	-0.07	0.052
30.00	-25.60	-2.18	0.00	-224.77	0.00	224.77	4,824.11	2,412.05	9,556.78	4,785.49	0.26	-0.09	0.052
35.00	-24.43	-2.14	0.00	-213.85	0.00	213.85	4,727.41	2,363.70	9,102.80	4,558.17	0.36	-0.10	0.052
40.00	-23.28	-2.09	0.00	-203.18	0.00	203.18	4,628.58	2,314.29	8,655.58	4,334.22	0.47	-0.12	0.052
45.00	-22.62	-2.06	0.00	-192.75	0.00	192.75	4,527.62	2,263.81	8,215.47	4,113.84	0.60	-0.13	0.052
47.92	-21.83	-2.02	0.00	-186.74	0.00	186.74	4,467.74	2,233.87	7,962.16	3,987.00	0.69	-0.14	0.052
50.00	-20.33	-1.95	0.00	-182.53	0.00	182.53	4,424.53	2,212.27	7,782.82	3,897.19	0.75	-0.15	0.051
54.08	-20.15	-1.95	0.00	-174.56	0.00	174.56	3,619.86	1,809.93	6,334.27	3,171.85	0.89	-0.17	0.061
55.00	-19.18	-1.90	0.00	-172.77	0.00	172.77	3,605.16	1,802.58	6,271.86	3,140.59	0.92	-0.17	0.060
60.00	-18.24	-1.87	0.00	-163.25	0.00	163.25	3,523.72	1,761.86	5,934.59	2,971.70	1.11	-0.19	0.060
65.00	-17.32	-1.84	0.00	-153.90	0.00	153.90	3,440.15	1,720.07	5,602.88	2,805.61	1.33	-0.21	0.060
70.00	-16.43	-1.83	0.00	-144.68	0.00	144.68	3,354.45	1,677.22	5,277.11	2,642.48	1.56	-0.24	0.060
75.00	-15.56	-1.82	0.00	-135.55	0.00	135.55	3,266.62	1,633.31	4,957.62	2,482.50	1.82	-0.26	0.059
80.00	-14.71	-1.83	0.00	-126.43	0.00	126.43	3,154.85	1,577.42	4,612.87	2,309.86	2.10	-0.28	0.059
85.00	-13.88	-1.85	0.00	-117.27	0.00	117.27	3,036.31	1,518.16	4,271.03	2,138.69	2.42	-0.31	0.059
90.00	-13.08	-1.88	0.00	-108.01	0.00	108.01	2,917.78	1,458.89	3,942.34	1,974.10	2.75	-0.34	0.059
95.00	-12.65	-1.90	0.00	-98.60	0.00	98.60	2,799.25	1,399.62	3,626.81	1,816.10	3.12	-0.36	0.059
97.75	-12.14	-1.92	0.00	-93.38	0.00	93.38	2,734.06	1,367.03	3,458.88	1,732.01	3.33	-0.38	0.058
100.00	-11.63	-1.94	0.00	-89.06	0.00	89.06	2,680.72	1,340.36	3,324.44	1,664.69	3.51	-0.39	0.058
102.25	-11.31	-1.95	0.00	-84.69	0.00	84.69	1,683.04	841.52	2,097.24	1,050.18	3.70	-0.40	0.087
105.00	-10.73	-1.97	0.00	-79.32	0.00	79.32	1,655.06	827.53	2,011.86	1,007.42	3.94	-0.42	0.085
110.00	-10.17	-1.99	0.00	-69.45	0.00	69.45	1,602.55	801.28	1,859.07	930.92	4.40	-0.46	0.081
115.00	-9.62	-1.99	0.00	-59.51	0.00	59.51	1,547.92	773.96	1,709.77	856.15	4.91	-0.50	0.076
120.00	-9.09	-1.98	0.00	-49.56	0.00	49.56	1,491.15	745.57	1,564.29	783.31	5.46	-0.54	0.069
125.00	-8.58	-1.94	0.00	-39.68	0.00	39.68	1,428.88	714.44	1,419.66	710.88	6.04	-0.58	0.062
130.00	-8.48	-1.94	0.00	-29.96	0.00	29.96	1,349.86	674.93	1,266.22	634.05	6.67	-0.61	0.054
131.00	-6.90	-1.78	0.00	-28.02	0.00	28.02	1,334.06	667.03	1,236.59	619.21	6.80	-0.62	0.050
134.00	-6.18	-1.69	0.00	-22.69	0.00	22.69	1,286.64	643.32	1,149.79	575.75	7.20	-0.64	0.044
135.00	-5.79	-1.62	0.00	-21.00	0.00	21.00	1,270.84	635.42	1,121.56	561.61	7.33	-0.65	0.042
140.00	-5.71	-1.61	0.00	-12.88	0.00	12.88	1,191.82	595.91	985.67	493.57	8.02	-0.67	0.031
141.00	-4.36	-1.34	0.00	-11.27	0.00	11.27	1,176.01	588.01	959.54	480.48	8.16	-0.67	0.027
142.00	-3.93	-1.24	0.00	-9.93	0.00	9.93	1,160.21	580.10	933.77	467.58	8.30	-0.68	0.025
145.00	-3.68	-1.18	0.00	-6.20	0.00	6.20	1,112.80	556.40	858.55	429.91	8.73	-0.69	0.018
149.00	-1.53	-0.53	0.00	-1.50	0.00	1.50	1,049.58	524.79	763.17	382.15	9.31	-0.69	0.005
150.00	-1.41	-0.49	0.00	-0.97	0.00	0.97	1,033.78	516.89	740.20	370.65	9.46	-0.69	0.004
152.00	0.00	-0.47	0.00	0.00	0.00	0.00	1,002.17	501.08	695.32	348.18	9.75	-0.69	0.000

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	21.10	0.00	48.54	0.00	0.00	2408.89	102.25	0.54
0.9D + 1.6W	20.61	0.00	36.40	0.00	0.00	2323.86	102.25	0.52
1.2D + 1.0Di + 1.0Wi	6.27	0.00	80.82	0.00	0.00	706.60	102.25	0.17
(1.2 + 0.2Sds) * DL + E ELFM	1.32	0.00	48.38	0.00	0.00	165.77	102.25	0.05
(1.2 + 0.2Sds) * DL + E EMAM	2.45	0.00	48.38	0.00	0.00	299.59	102.25	0.09
(0.9 - 0.2Sds) * DL + E ELFM	1.32	0.00	33.24	0.00	0.00	163.56	102.25	0.04
(0.9 - 0.2Sds) * DL + E EMAM	2.44	0.00	33.24	0.00	0.00	295.15	102.25	0.09
1.0D + 1.0W	5.36	0.00	40.47	0.00	0.00	607.13	102.25	0.14

Base Summary

Reactions

Original Design			Analysis			
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment Design %
3,859.30	35.30	34.68	2,408.89	80.82	21.10	46.24

Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Mu (kip-in)	Phi Mn (kip-in)	Ratio
60.0	2.000	72.000	Round	0	0.00	11.257	386.58	607.90	0.64

Anchor Bolts

Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Start Angle (deg)	Compression			Tension		
									Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
66.00	16	2.25" A615-	2.25	75.00	100.00	Radial	0.00	0.0	114.55	260.00	0.45	104.44	260.00	0.41

Base Plate & Anchor Rod Analysis

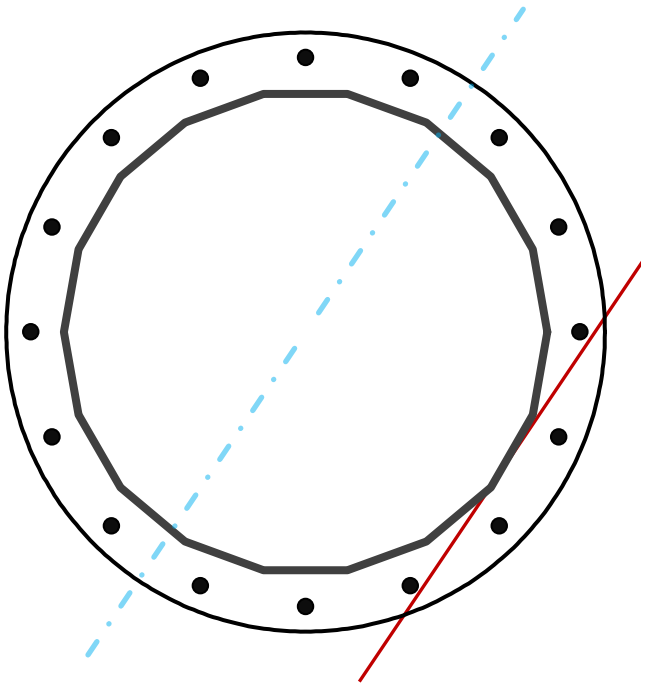
Pole Dimensions		
Number of Sides	18	-
Diameter	56.75	in
Thickness	0.4375	in
Orientation Offset	0	°

Base Reactions		
Moment, Mu	2408.9	k-ft
Axial, Pu	48.5	k
Shear, Vu	21.1	k
Neutral Axis	236	°

Report Capacities		
Component	Capacity	Result
Base Plate	49%	Pass
Anchor Rods	43%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ø	72	in
Thickness	2	in
Grade	A572-60	-
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Clip	N/A	in
Orientation Offset	0	°
Anchor Rod Detail	d	η=0.5
Clear Distance	3	in
Applied Moment, Mu	825.7	k
Bending Stress, ϕMn	1679.4	k

Original Anchor Rods		
Arrangement	Radial	-
Quantity	16	-
Diameter, ø	2 1/4	in
Bolt Circle	66	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	13.0	in
Orientation Offset	0	°
Applied Force, Pu	110.5	k
Anchor Rods, ϕPn	259.8	k



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	21.1	2408.9	1.00
Anchor Rod Forces	21.1	2408.9	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	77.0062	4.2781	0.2740		30529.20
Bolt	3.9761	3.2477	0.8393	4.5	28307.30
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Round	-
Diameter, D	72	in
Thickness, t	2	in
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Base Plate Chord	44.311	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

Anchor Rods		
Anchor Rod Quantity, N	16	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	66	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	110.5	k
Applied Shear, Vu	0.4	k
Compressive Capacity, ϕPn	259.8	k
Tensile Capacity, ϕRnt	0.425	OK
Interaction Capacity	0.428	OK

External Base Plate		
Chord Length AA	37.612	in
Additional AA	4.000	in
Section Modulus, Z	41.612	in^3
Applied Moment, Mu	825.7	k-ft
Bending Capacity, ϕMn	2247.1	k-ft
Capacity, Mu/ϕMn	0.367	OK
Chord Length AB	36.232	in
Additional AB	4.000	in
Section Modulus, Z	40.232	in^3
Applied Moment, Mu	728.2	k-ft
Bending Capacity, ϕMn	2172.5	k-ft
Capacity, Mu/ϕMn	0.335	OK
Bend Line Length	31.100	in
Additional Bend Line	0.000	in
Section Modulus, Z	31.100	in^3
Applied Moment, Mu	825.7	k-ft
Bending Capacity, ϕMn	1679.4	k-ft
Capacity, Mu/ϕMn	0.492	OK

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in^3
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

January 22, 2019

Mary Caulfield
SAI Communications
12 Industrial Way
Salem, NH 03079
(603) 212-5041

B+T Group
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630
btwo@btgrp.com

Subject:	**Appurtenance Mount Analysis Report**	
Carrier Designation:	**Site Number:**	CT2125
	Site Name:	Round Swamp
Engineering Firm Designation:	**B+T Group Project Number:**	130650.003.01
Site Data:	**6 Fairfield Drive, Newtown, CT, 06470, Fairfield County** **Latitude *41.42552*°, Longitude *-73.37405*°** **Monopole** **12.5 ft. Platform Mount**	

Dear Ms. Caulfield,

B+T Group is pleased to submit this **"Appurtenance Mount Analysis 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 75.0%)**

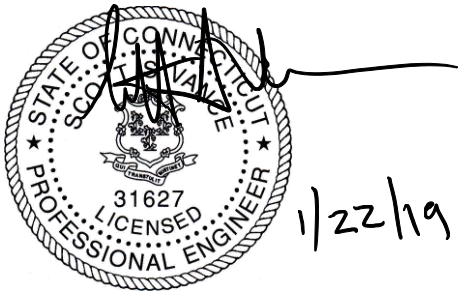
The analysis has been performed in accordance with the ANSI/TIA-222-G Standard. This analysis utilizes an ultimate 3-second gust wind speed of 125 mph (converted to an equivalent 97 mph nominal 3-second gust wind speed per Section 1609.3.1 for use with ANSI/TIA-222 G) as required by the 2015 International Building Code. Exposure Category C and Risk Category II were used in this analysis.

All the equipment proposed in this report shall be installed in accordance with the drawings for the determined available structural capacity to be effective.

We at *B+T Group* appreciate the opportunity of providing our continuing professional services to you and *SAI Communications*. If you have any questions or need further assistance on this or any other projects, please give us a call.

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

Respectfully submitted by: B&T Engineering, Inc.
COA: PEC.0001564 Expires: 02/10/2019



1/22/19

Scott S. Vance, P.E.

TABLE OF CONTENTS

1) INTRODUCTION

The appurtenance mount consists of **Site Pro platform mount, Part# RMQP-496-HK** at 154 ft., attached to monopole at 6 Fairfield Drive, Newtown, CT, 06470, Fairfield County. The proposed antenna loading information was obtained from SAI Communications. 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-G-2-2005 Structural Standard for Antenna Supporting Structures and Antennas – Addendum 2 using a 3-second gust wind speed of 97 mph with no ice and 50 mph with 0.75 inch escalated ice thickness exposure category C, risk category II & Topo category 1 were used in the 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	154	3,5	6	Kathrein	800-10965	1
		3	3	Ericsson	B14 4478	2
		5	3	Ericsson	B5/B12 4449	
			3	Ericsson	4415 B30	
		-	1	Raycap	DC6-48-60-18-8C	3
			1	Raycap	DC6-48-60-0-8C-EV	
Existing	154	2	3	Powerwave	7770	4
			6	Powerwave	LGP 21401	
		3	3	Ericsson	RRUS-12	
		-	1	Raycap	DC6-48-60-18-8F	

Note:
(1) Proposed Antenna to be installed on the existing Mount Pipe.
(2) Proposed Equipment to be installed 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
SOW_12.13.18	Existing Loading Proposed Loading	Date: 12/13/2018	SAI Communications

3) ANALYSIS PROCEDURE

3.1) Analysis Method

RISA-3D (Version 17.0.2), 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.

Manufacturer's drawings were used to create the model.

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. **Site Pro platform mount, Part# RMQP-496-HK** has been used for mount analysis.

   The following assumptions have been included in the analysis of the mount

Component	Section	Length	Note
Proposed Mount Pipe	2" Std. Pipe	8'-0"	In all Positions

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) Connection Bolts : ASTM A325
   b) Steel Pipe : ASTM A53 (GR. 35)
   c) HSS (Round) : ASTM 500 (GR. B-42)
   d) HSS (Rectangular) : ASTM 500 (GR. B-46)
   e) Channel : ASTM A36 (GR. 36)
   f) Steel Solid Rod : ASTM A36 (GR. 36)
   g) Steel Plate : ASTM A36 (GR. 36)
   h) Steel Angle : ASTM A36 (GR. 36)
   i) UNISTRUT : ASTM A570 (GR. 33)

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

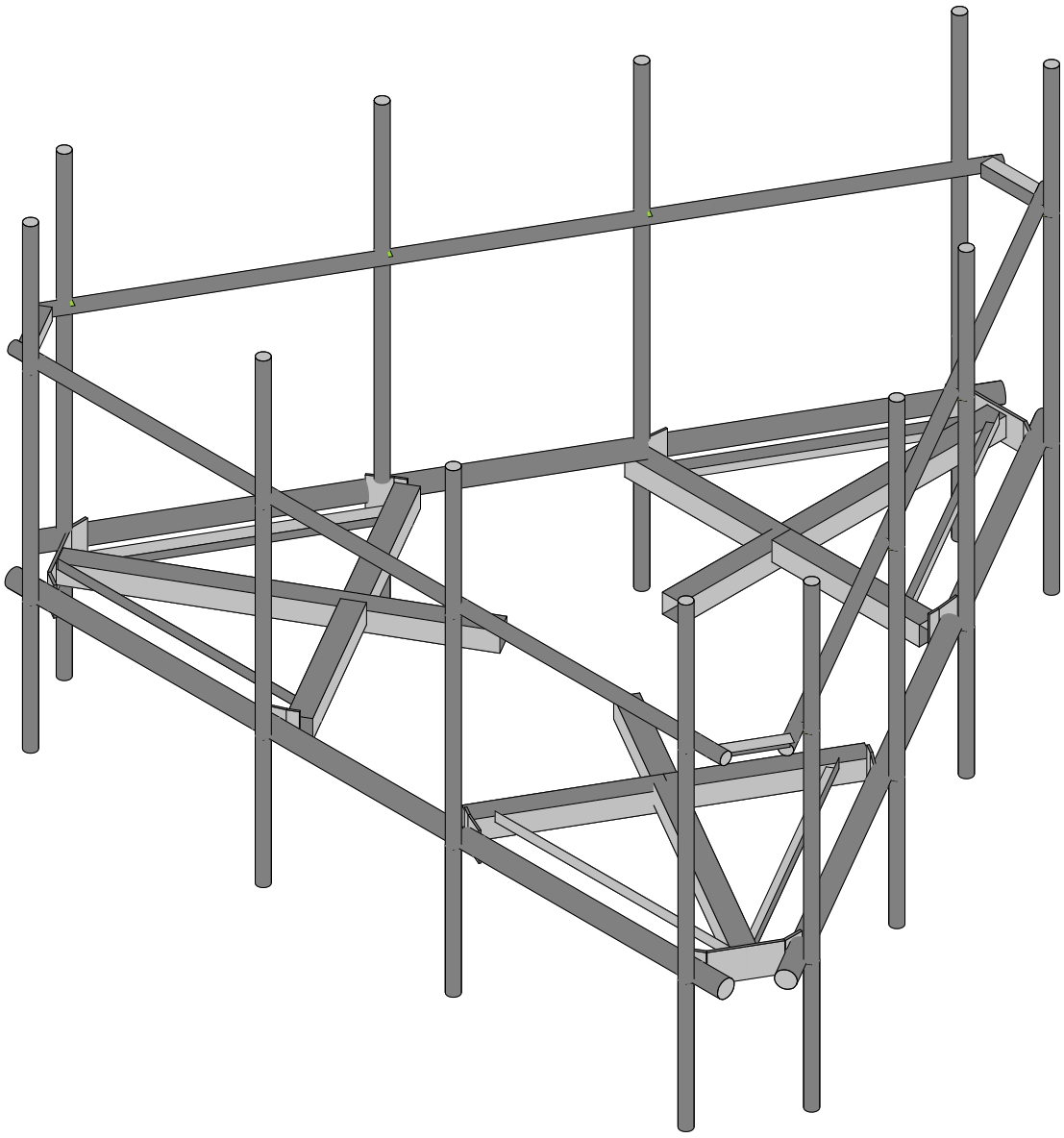
Notes	Component	Elevation (ft.)	% Capacity	Pass / Fail
-	Main Horizontals	154	18.5	Pass
-	Handrails	154	48.1	Pass
-	Supporting Angles	154	41.0	Pass
-	Supporting Tubes	154	55.4	Pass
-	Mount Pipes	154	75.0	Pass
-	Connection Plates	154	62.1	Pass
-	Connection Angles	154	47.3	Pass

5) RECOMMENDATIONS

The mount **Site Pro platform mount, Part# RMQP-496-HK** has sufficient capacity to carry the existing and proposed loads and is in compliance with the ANSI/TIA-222-G standard for the proposed and existing loading. (Refer to the RISA output for the specific members).

APPENDIX A

(RISA-3D Output)



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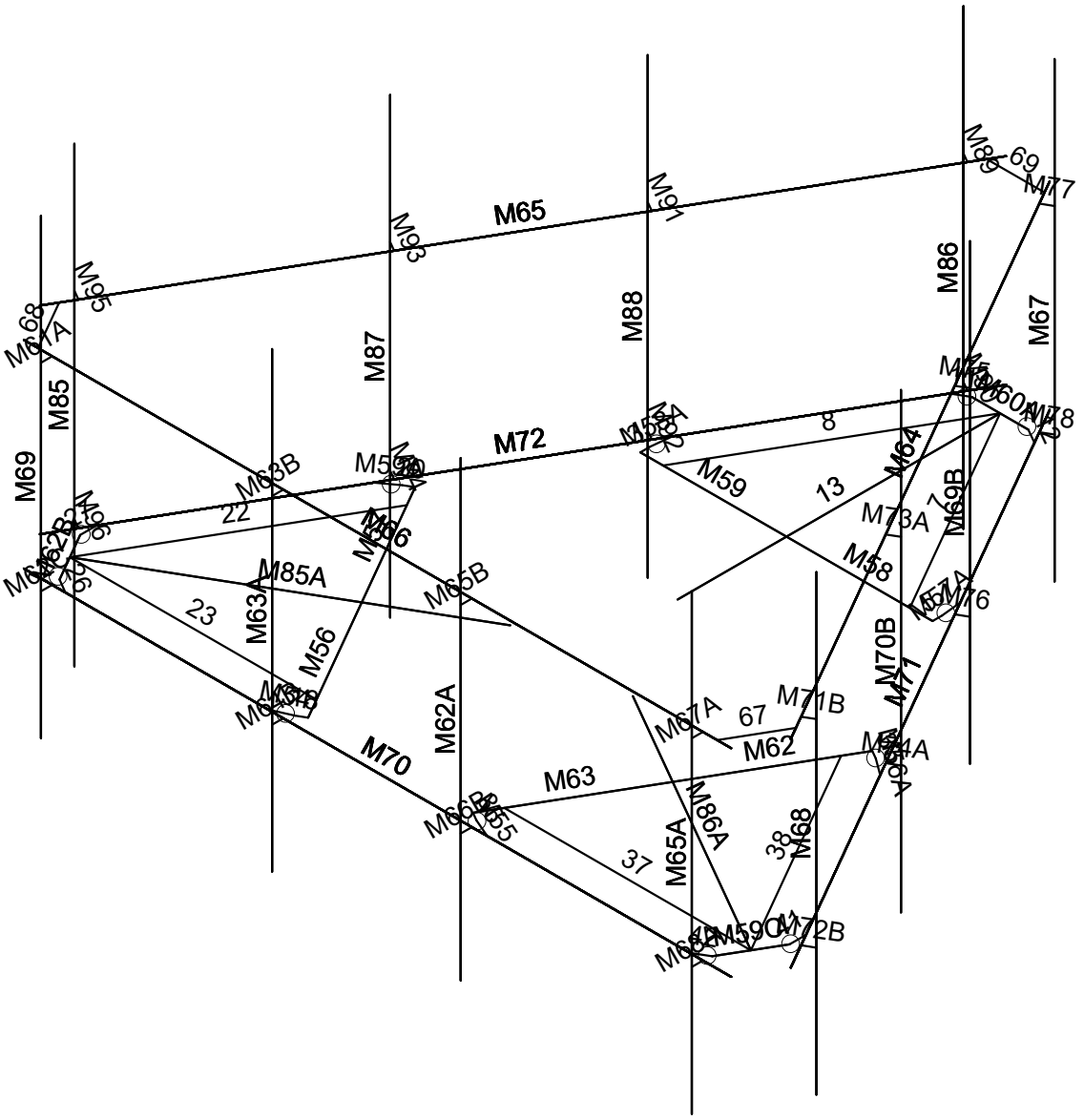

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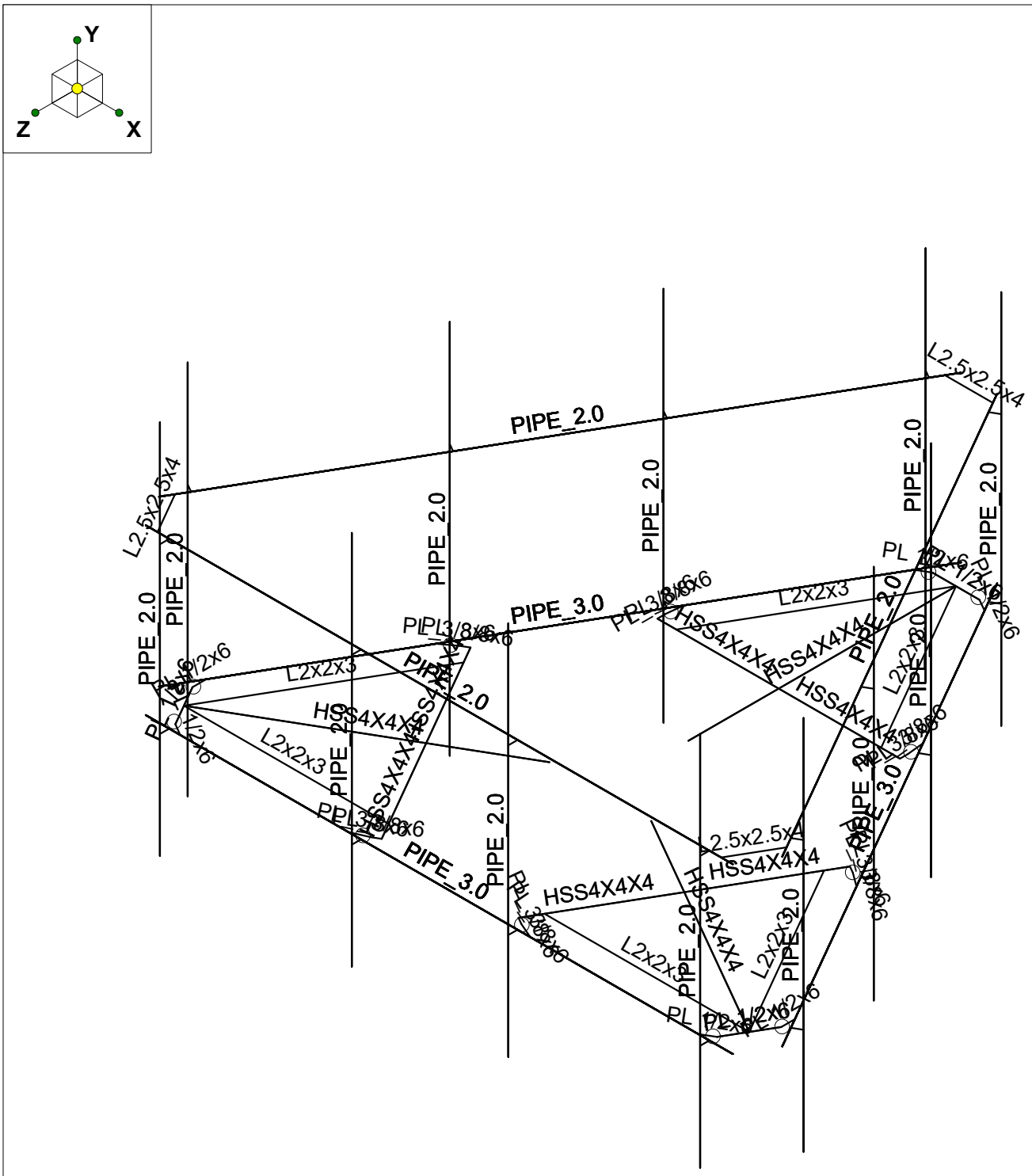

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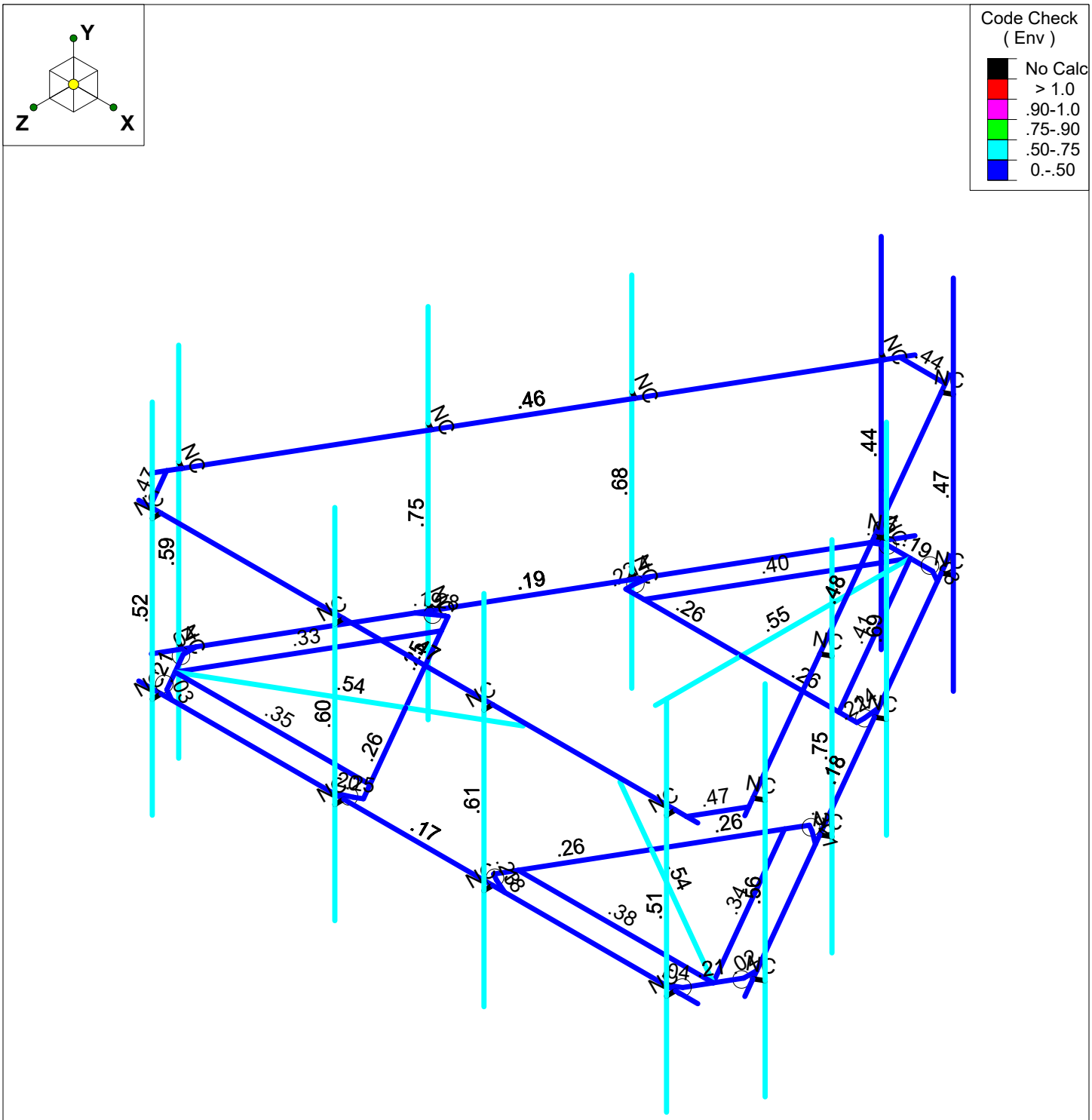

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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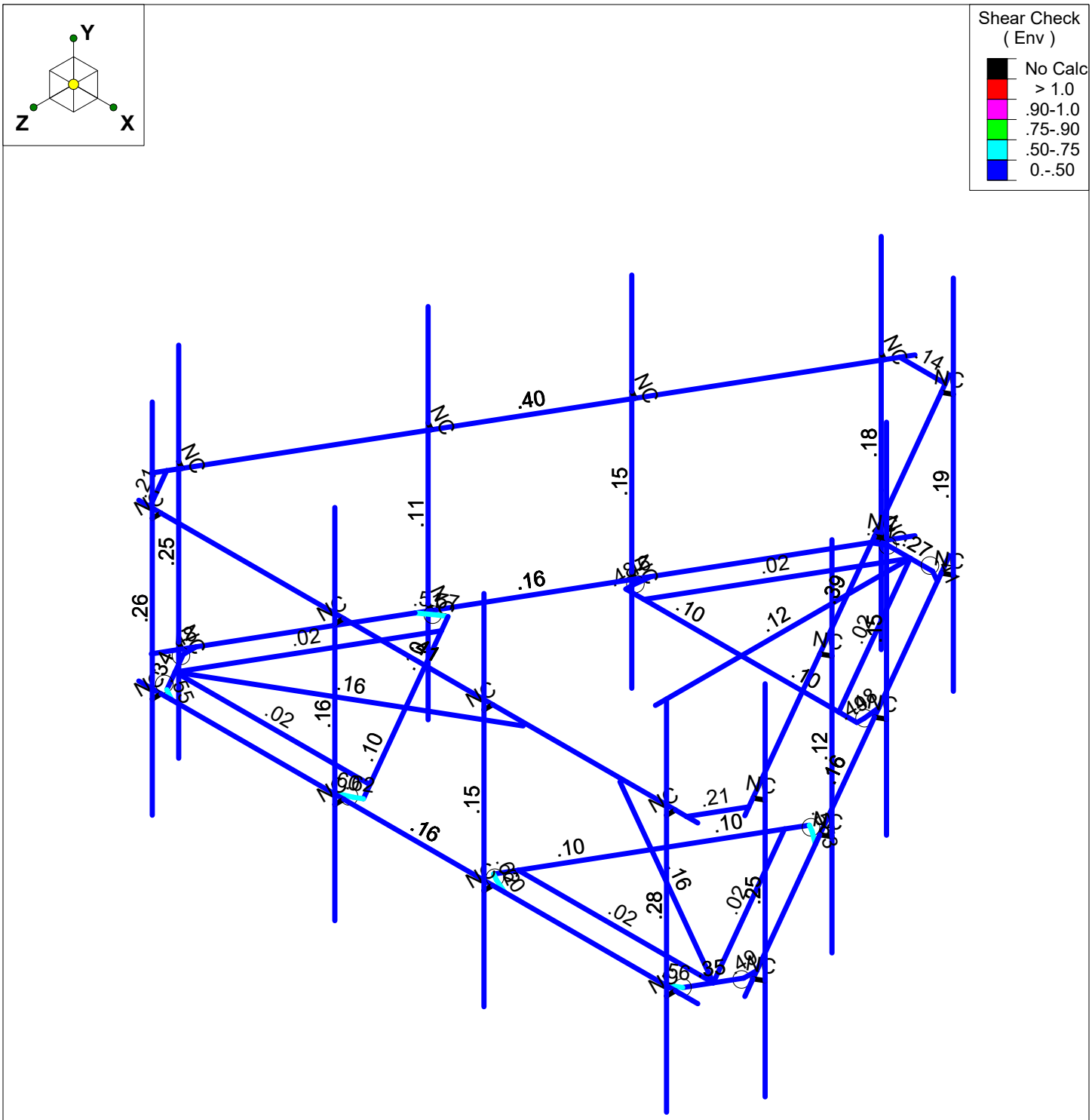

Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

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Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Handrails	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
2	MF-H1	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
3	F1-S1	HSS4X4X4	Beam	Tube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
4	F1-ST1	HSS4X4X4	Beam	Tube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
5	F1-SA1	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
6	F1-C1	PL 1/2x6	Beam	RECT	A36 Gr.36	Typical	3	.063	9	.237
7	F1-CA1	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
8	MF-P1	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
9	F1-KR	LL2.5x2.5x3x6	Beam	Double Angle (3/4 G...	A36 Gr.36	Typical	1.8	3.09	1.07	.023
10	F1-C2	PL_3/8x6	Beam	RECT	A36 Gr.36	Typical	2.28	.027	6.84	.105

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	3	N3	N1			F1-C2	Beam	RECT	A36 Gr.36	Typical
2	5	N4	N2			F1-C2	Beam	RECT	A36 Gr.36	Typical
3	7	N7	N9			F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
4	8	N7	N8		270	F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
5	11	N5	N75			F1-C1	Beam	RECT	A36 Gr.36	Typical
6	12	N6	N64			F1-C1	Beam	RECT	A36 Gr.36	Typical
7	13	N7	N11			F1-ST1	Beam	Tube	A500 Gr.B...	Typical
8	18	N14	N12			F1-C2	Beam	RECT	A36 Gr.36	Typical
9	20	N15	N13			F1-C2	Beam	RECT	A36 Gr.36	Typical
10	22	N18	N20			F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
11	23	N18	N19		270	F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
12	26	N16	N43			F1-C1	Beam	RECT	A36 Gr.36	Typical
13	27	N17	N80			F1-C1	Beam	RECT	A36 Gr.36	Typical
14	33	N25	N23			F1-C2	Beam	RECT	A36 Gr.36	Typical
15	35	N26	N24			F1-C2	Beam	RECT	A36 Gr.36	Typical
16	37	N29	N31			F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
17	38	N29	N30		270	F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
18	41	N27	N59			F1-C1	Beam	RECT	A36 Gr.36	Typical
19	42	N28	N48			F1-C1	Beam	RECT	A36 Gr.36	Typical
20	67	N103	N100		90	F1-CA1	Beam	Single Angle	A36 Gr.36	Typical
21	68	N102	N104		180	F1-CA1	Beam	Single Angle	A36 Gr.36	Typical
22	69	N105	N101		90	F1-CA1	Beam	Single Angle	A36 Gr.36	Typical
23	M70	N106	N109			MF-H1	Beam	Pipe	A53 Gr.B	Typical
24	M71	N107	N110			MF-H1	Beam	Pipe	A53 Gr.B	Typical
25	M72	N108	N111			MF-H1	Beam	Pipe	A53 Gr.B	Typical
26	M64	N94A	N97A			Handrails	Beam	Pipe	A53 Gr.B	Typical
27	M65	N95A	N98A			Handrails	Beam	Pipe	A53 Gr.B	Typical
28	M66	N96A	N99A			Handrails	Beam	Pipe	A53 Gr.B	Typical
29	M65A	N115	N111A			MF-P1	Column	Pipe	A53 Gr.B	Typical
30	M69	N108A	N112			MF-P1	Column	Pipe	A53 Gr.B	Typical
31	M62	N25	N32			F1-S1	Beam	Tube	A500 Gr.B...	Typical
32	M63	N32	N26			F1-S1	Beam	Tube	A500 Gr.B...	Typical
33	M56	N14	N21			F1-S1	Beam	Tube	A500 Gr.B...	Typical
34	M57	N21	N15			F1-S1	Beam	Tube	A500 Gr.B...	Typical
35	M58	N4	N10			F1-S1	Beam	Tube	A500 Gr.B...	Typical
36	M59	N10	N3			F1-S1	Beam	Tube	A500 Gr.B...	Typical
37	M54	N12	N95			F1-C2	Beam	RECT	A36 Gr.36	Typical
38	M55	N24	N98			F1-C2	Beam	RECT	A36 Gr.36	Typical
39	M56A	N23	N96B			F1-C2	Beam	RECT	A36 Gr.36	Typical
40	M57A	N2	N99			F1-C2	Beam	RECT	A36 Gr.36	Typical
41	M58A	N1	N97B			F1-C2	Beam	RECT	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
42	M59A	N13	N100B			F1-C2	Beam	RECT	A36 Gr.36	Typical
43	M62A	N109B	N116A		90	MF-P1	Column	Pipe	A53 Gr.B	Typical
44	M63A	N112A	N114A		90	MF-P1	Column	Pipe	A53 Gr.B	Typical
45	M62B	N16	N17			F1-C1	Beam	RECT	A36 Gr.36	Typical
46	M59C	N27	N28			F1-C1	Beam	RECT	A36 Gr.36	Typical
47	M60A	N5	N6			F1-C1	Beam	RECT	A36 Gr.36	Typical
48	M61A	N144	N99B			RIGID	None	None	RIGID	Typical
49	M62C	N143	N94B			RIGID	None	None	RIGID	Typical
50	M63B	N150A	N106B			RIGID	None	None	RIGID	Typical
51	M64B	N147A	N96C			RIGID	None	None	RIGID	Typical
52	M65B	N103B	N149A			RIGID	None	None	RIGID	Typical
53	M66B	N148A	N98C			RIGID	None	None	RIGID	Typical
54	M67A	N105A	N146			RIGID	None	None	RIGID	Typical
55	M68A	N145	N100A			RIGID	None	None	RIGID	Typical
56	M67	N147B	N145A			MF-P1	Column	Pipe	A53 Gr.B	Typical
57	M68	N144A	N146A			MF-P1	Column	Pipe	A53 Gr.B	Typical
58	M69B	N152A	N155		90	MF-P1	Column	Pipe	A53 Gr.B	Typical
59	M70B	N153A	N154A		90	MF-P1	Column	Pipe	A53 Gr.B	Typical
60	M71B	N97	N141A			RIGID	None	None	RIGID	Typical
61	M72B	N95B	N140A			RIGID	None	None	RIGID	Typical
62	M73A	N104B	N151A			RIGID	None	None	RIGID	Typical
63	M74A	N95C	N148B			RIGID	None	None	RIGID	Typical
64	M75	N150B	N101B			RIGID	None	None	RIGID	Typical
65	M76	N99C	N149B			RIGID	None	None	RIGID	Typical
66	M77	N143A	N103A			RIGID	None	None	RIGID	Typical
67	M78	N101A	N142A			RIGID	None	None	RIGID	Typical
68	M85	N183	N181			MF-P1	Column	Pipe	A53 Gr.B	Typical
69	M86	N180	N182			MF-P1	Column	Pipe	A53 Gr.B	Typical
70	M87	N188	N191		90	MF-P1	Column	Pipe	A53 Gr.B	Typical
71	M88	N189	N190		90	MF-P1	Column	Pipe	A53 Gr.B	Typical
72	M89	N98B	N177			RIGID	None	None	RIGID	Typical
73	M90	N96	N176			RIGID	None	None	RIGID	Typical
74	M91	N105C	N187			RIGID	None	None	RIGID	Typical
75	M92	N97C	N184			RIGID	None	None	RIGID	Typical
76	M93	N186	N102B			RIGID	None	None	RIGID	Typical
77	M94	N100C	N185			RIGID	None	None	RIGID	Typical
78	M95	N179	N104A			RIGID	None	None	RIGID	Typical
79	M96	N102A	N178			RIGID	None	None	RIGID	Typical
80	M85A	N18	N149			F1-ST1	Beam	Tube	A500 Gr.B...	Typical
81	M86A	N29	N151			F1-ST1	Beam	Tube	A500 Gr.B...	Typical

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Dead	DL		-1			60		3	
2	0 Wind - No Ice	WLZ					60	57		
3	90 Wind - No Ice	WLX					60	57		
4	0 Wind - Ice	WLZ					60	57		
5	90 Wind - Ice	WLX					60	57		
6	0 Wind - Service	WLZ					60	57		
7	90 Wind - Service	WLX					60	57		
8	Ice	OL1					60	57	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				

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
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					1			
23	Maint LL 11	LL					1			
24	Maint LL 12	LL					1			
25	Maint LL 13	LL					1			
26	Maint LL 14	LL					1			
27	Maint LL 15	LL					1			
28	BLC 1 Transient Area...	None						21		
29	BLC 8 Transient Area...	None						21		

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	0.9 D + 1.6 - 0 W	Y...	Y		1	.9	2	1.6																		
3	0.9 D + 1.6 - 30 W	Y...	Y		1	.9	2	1....	3	.8																
4	0.9 D + 1.6 - 60 W	Y...	Y		1	.9	3	1....	2	.8																
5	0.9 D + 1.6 - 90 W	Y...	Y		1	.9	3	1.6																		
6	0.9 D + 1.6 - 120 W	Y...	Y		1	.9	3	1....	2	-.8																
7	0.9 D + 1.6 - 150 W	Y...	Y		1	.9	2	-1...	3	.8																
8	0.9 D + 1.6 - 180 W	Y...	Y		1	.9	2	-1.6																		
9	0.9 D + 1.6 - 210 W	Y...	Y		1	.9	2	-1...	3	-.8																
10	0.9 D + 1.6 - 240 W	Y...	Y		1	.9	3	-1...	2	-.8																
11	0.9 D + 1.6 - 270 W	Y...	Y		1	.9	3	-1.6																		
12	0.9 D + 1.6 - 300 W	Y...	Y		1	.9	3	-1...	2	.8																
13	0.9 D + 1.6 - 330 W	Y...	Y		1	.9	2	1....	3	-.8																
14	1.2 D + 1.6 - 0 W	Y...	Y		1	1.2	2	1.6																		
15	1.2 D + 1.6 - 30 W	Y...	Y		1	1.2	2	1....	3	.8																
16	1.2 D + 1.6 - 60 W	Y...	Y		1	1.2	3	1....	2	.8																
17	1.2 D + 1.6 - 90 W	Y...	Y		1	1.2	3	1.6																		
18	1.2 D + 1.6 - 120 W	Y...	Y		1	1.2	3	1....	2	-.8																
19	1.2 D + 1.6 - 150 W	Y...	Y		1	1.2	2	-1...	3	.8																
20	1.2 D + 1.6 - 180 W	Y...	Y		1	1.2	2	-1.6																		
21	1.2 D + 1.6 - 210 W	Y...	Y		1	1.2	2	-1...	3	-.8																
22	1.2 D + 1.6 - 240 W	Y...	Y		1	1.2	3	-1...	2	-.8																
23	1.2 D + 1.6 - 270 W	Y...	Y		1	1.2	3	-1.6																		
24	1.2 D + 1.6 - 300 W	Y...	Y		1	1.2	3	-1...	2	.8																
25	1.2 D + 1.6 - 330 W	Y...	Y		1	1.2	2	1....	3	-.8																
26	0.9 D + 1.6 - 0 W/Ice	Y...	Y		1	.9	4	1.6			8	1														
27	0.9 D + 1.6 - 30 W/Ice	Y...	Y		1	.9	4	1....	5	.8	8	1														
28	0.9 D + 1.6 - 60 W/Ice	Y...	Y		1	.9	5	1....	4	.8	8	1														
29	0.9 D + 1.6 - 90 W/Ice	Y...	Y		1	.9	5	1.6			8	1														
30	0.9 D + 1.6 - 120 W/Ice	Y...	Y		1	.9	5	1....	4	-.8	8	1														
31	0.9 D + 1.6 - 150 W/Ice	Y...	Y		1	.9	4	-1...	5	.8	8	1														
32	0.9 D + 1.6 - 180 W/Ice	Y...	Y		1	.9	4	-1.6			8	1														
33	0.9 D + 1.6 - 210 W/Ice	Y...	Y		1	.9	4	-1...	5	-.8	8	1														
34	0.9 D + 1.6 - 240 W/Ice	Y...	Y		1	.9	5	-1...	4	-.8	8	1														
35	0.9 D + 1.6 - 270 W/Ice	Y...	Y		1	.9	5	-1.6			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...
36	0.9 D + 1.6 - 300 W/Ice	Y...	Y		1	.9	5	-1...	4	.8	8	1														
37	0.9 D + 1.6 - 330 W/Ice	Y...	Y		1	.9	4	1....	5	-.8	8	1														
38	1.2 D + 1.0 - 0 W/Ice	Y...	Y		1	1.2	4	1			8	1														
39	1.2 D + 1.0 - 30 W/Ice	Y...	Y		1	1.2	4	.8...	5	.5	8	1														
40	1.2 D + 1.0 - 60 W/Ice	Y...	Y		1	1.2	5	.8...	4	.5	8	1														
41	1.2 D + 1.0 - 90 W/Ice	Y...	Y		1	1.2	5	1			8	1														
42	1.2 D + 1.0 - 120 W/Ice	Y...	Y		1	1.2	5	.8...	4	-.5	8	1														
43	1.2 D + 1.0 - 150 W/Ice	Y...	Y		1	1.2	4	-....	5	.5	8	1														
44	1.2 D + 1.0 - 180 W/Ice	Y...	Y		1	1.2	4	-1			8	1														
45	1.2 D + 1.0 - 210 W/Ice	Y...	Y		1	1.2	4	-....	5	-.5	8	1														
46	1.2 D + 1.0 - 240 W/Ice	Y...	Y		1	1.2	5	-....	4	-.5	8	1														
47	1.2 D + 1.0 - 270 W/Ice	Y...	Y		1	1.2	5	-1			8	1														
48	1.2 D + 1.0 - 300 W/Ice	Y...	Y		1	1.2	5	-....	4	.5	8	1														
49	1.2 D + 1.0 - 330 W/Ice	Y...	Y		1	1.2	4	.8...	5	-.5	8	1														
50	1.2 D + 1.5 LL a + Service - 0 W	Y...	Y		1	1.2	6	1			9	1.5														
51	1.2 D + 1.5 LL a + Service - 30 W	Y...	Y		1	1.2	6	.8...	7	.5	9	1.5														
52	1.2 D + 1.5 LL a + Service - 60 W	Y...	Y		1	1.2	7	.8...	6	.5	9	1.5														
53	1.2 D + 1.5 LL a + Service - 90 W	Y...	Y		1	1.2	7	1			9	1.5														
54	1.2 D + 1.5 LL a + Service - 120 W	Y...	Y		1	1.2	7	.8...	6	-.5	9	1.5														
55	1.2 D + 1.5 LL a + Service - 150 W	Y...	Y		1	1.2	6	-....	7	.5	9	1.5														
56	1.2 D + 1.5 LL a + Service - 180 W	Y...	Y		1	1.2	6	-1			9	1.5														
57	1.2 D + 1.5 LL a + Service - 210 W	Y...	Y		1	1.2	6	-....	7	-.5	9	1.5														
58	1.2 D + 1.5 LL a + Service - 240 W	Y...	Y		1	1.2	7	-....	6	-.5	9	1.5														
59	1.2 D + 1.5 LL a + Service - 270 W	Y...	Y		1	1.2	7	-1			9	1.5														
60	1.2 D + 1.5 LL a + Service - 300 W	Y...	Y		1	1.2	7	-....	6	.5	9	1.5														
61	1.2 D + 1.5 LL a + Service - 330 W	Y...	Y		1	1.2	6	.8...	7	-.5	9	1.5														
62	1.2 D + 1.5 LL b + Service - 0 W	Y...	Y		1	1.2	6	1			10	1.5														
63	1.2 D + 1.5 LL b + Service - 30 W	Y...	Y		1	1.2	6	.8...	7	.5	10	1.5														
64	1.2 D + 1.5 LL b + Service - 60 W	Y...	Y		1	1.2	7	.8...	6	.5	10	1.5														
65	1.2 D + 1.5 LL b + Service - 90 W	Y...	Y		1	1.2	7	1			10	1.5														
66	1.2 D + 1.5 LL b + Service - 120 W	Y...	Y		1	1.2	7	.8...	6	-.5	10	1.5														
67	1.2 D + 1.5 LL b + Service - 150 W	Y...	Y		1	1.2	6	-....	7	.5	10	1.5														
68	1.2 D + 1.5 LL b + Service - 180 W	Y...	Y		1	1.2	6	-1			10	1.5														
69	1.2 D + 1.5 LL b + Service - 210 W	Y...	Y		1	1.2	6	-....	7	-.5	10	1.5														
70	1.2 D + 1.5 LL b + Service - 240 W	Y...	Y		1	1.2	7	-....	6	-.5	10	1.5														
71	1.2 D + 1.5 LL b + Service - 270 W	Y...	Y		1	1.2	7	-1			10	1.5														
72	1.2 D + 1.5 LL b + Service - 300 W	Y...	Y		1	1.2	7	-....	6	.5	10	1.5														
73	1.2 D + 1.5 LL b + Service - 330 W	Y...	Y		1	1.2	6	.8...	7	-.5	10	1.5														
74	1.2 D + 1.5 LL c + Service - 0 W	Y...	Y		1	1.2	6	1			11	1.5														
75	1.2 D + 1.5 LL c + Service - 30 W	Y...	Y		1	1.2	6	.8...	7	.5	11	1.5														
76	1.2 D + 1.5 LL c + Service - 60 W	Y...	Y		1	1.2	7	.8...	6	.5	11	1.5														
77	1.2 D + 1.5 LL c + Service - 90 W	Y...	Y		1	1.2	7	1			11	1.5														
78	1.2 D + 1.5 LL c + Service - 120 W	Y...	Y		1	1.2	7	.8...	6	-.5	11	1.5														
79	1.2 D + 1.5 LL c + Service - 150 W	Y...	Y		1	1.2	6	-....	7	.5	11	1.5														
80	1.2 D + 1.5 LL c + Service - 180 W	Y...	Y		1	1.2	6	-1			11	1.5														
81	1.2 D + 1.5 LL c + Service - 210 W	Y...	Y		1	1.2	6	-....	7	-.5	11	1.5														
82	1.2 D + 1.5 LL c + Service - 240 W	Y...	Y		1	1.2	7	-....	6	-.5	11	1.5														
83	1.2 D + 1.5 LL c + Service - 270 W	Y...	Y		1	1.2	7	-1			11	1.5														
84	1.2 D + 1.5 LL c + Service - 300 W	Y...	Y		1	1.2	7	-....	6	.5	11	1.5														
85	1.2 D + 1.5 LL c + Service - 330 W	Y...	Y		1	1.2	6	.8...	7	-.5	11	1.5														
86	1.2 D + 1.5 LL d + Service - 0 W	Y...	Y		1	1.2	6	1			12	1.5														
87	1.2 D + 1.5 LL d + Service - 30 W	Y...	Y		1	1.2	6	.8...	7	.5	12	1.5														
88	1.2 D + 1.5 LL d + Service - 60 W	Y...	Y		1	1.2	7	.8...	6	.5	12	1.5														
89	1.2 D + 1.5 LL d + Service - 90 W	Y...	Y		1	1.2	7	1			12	1.5														
90	1.2 D + 1.5 LL d + Service - 120 W	Y...	Y		1	1.2	7	.8...	6	-.5	12	1.5														
91	1.2 D + 1.5 LL d + Service - 150 W	Y...	Y		1	1.2	6	-....	7	.5	12	1.5														
92	1.2 D + 1.5 LL d + Service - 180 W	Y...	Y		1	1.2	6	-1			12	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...
93	1.2 D + 1.5 LL d + Service - 210 W	Y...	Y		1	1.2	6	-....	7	-.5	12	1.5														
94	1.2 D + 1.5 LL d + Service - 240 W	Y...	Y		1	1.2	7	-....	6	-.5	12	1.5														
95	1.2 D + 1.5 LL d + Service - 270 W	Y...	Y		1	1.2	7	-1			12	1.5														
96	1.2 D + 1.5 LL d + Service - 300 W	Y...	Y		1	1.2	7	-....	6	.5	12	1.5														
97	1.2 D + 1.5 LL d + Service - 330 W	Y...	Y		1	1.2	6	.8...	7	-.5	12	1.5														
98	1.2 D + 1.5 LL Maint (1)	Y...	Y		1	1.2					13	1.5														
99	1.2 D + 1.5 LL Maint (2)	Y...	Y		1	1.2					14	1.5														
100	1.2 D + 1.5 LL Maint (3)	Y...	Y		1	1.2					15	1.5														
101	1.2 D + 1.5 LL Maint (4)	Y...	Y		1	1.2					16	1.5														
102	1.2 D + 1.5 LL Maint (5)	Y...	Y		1	1.2					17	1.5														
103	1.2 D + 1.5 LL Maint (6)	Y...	Y		1	1.2					18	1.5														
104	1.2 D + 1.5 LL Maint (7)	Y...	Y		1	1.2					19	1.5														
105	1.2 D + 1.5 LL Maint (8)	Y...	Y		1	1.2					20	1.5														
106	1.2 D + 1.5 LL Maint (9)	Y...	Y		1	1.2					21	1.5														
107	1.2 D + 1.5 LL Maint (10)	Y...	Y		1	1.2					22	1.5														
108	1.2 D + 1.5 LL Maint (11)	Y...	Y		1	1.2					23	1.5														
109	1.2 D + 1.5 LL Maint (12)	Y...	Y		1	1.2					24	1.5														
110	1.2 D + 1.5 LL Maint (13)	Y...	Y		1	1.2					25	1.5														
111	1.2 D + 1.5 LL Maint (14)	Y...	Y		1	1.2					26	1.5														
112	1.2 D + 1.5 LL Maint (15)	Y...	Y		1	1.2					27	1.5														

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M65A	Y	-.018	%25
2	M65A	Y	-.018	%75
3	M65A	Y	-.028	%50
4	M65A	Y	0	0
5	M65A	Y	0	0
6	M62A	Y	-.054	%10
7	M62A	Y	-.054	%90
8	M62A	Y	-.06	%50
9	M62A	Y	-.05	%50
10	M62A	Y	0	0
11	M63A	Y	-.054	%10
12	M63A	Y	-.054	%90
13	M63A	Y	-.071	%50
14	M63A	Y	-.044	%50
15	M63A	Y	0	0
16	M85A	Y	-.033	%80
17	M85A	Y	0	0
18	M85A	Y	0	0
19	M85A	Y	0	0
20	M85A	Y	0	0
21	13	Y	-.026	%80
22	13	Y	0	0
23	13	Y	0	0
24	13	Y	0	0
25	13	Y	0	0
26	M86A	Y	-.026	%80
27	M86A	Y	0	0
28	M86A	Y	0	0
29	M86A	Y	0	0
30	M86A	Y	0	0
31	M85	Y	-.018	%25
32	M85	Y	-.018	%75

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
33	M85	Y	-.028	%50
34	M85	Y	0	0
35	M85	Y	0	0
36	M87	Y	-.054	%10
37	M87	Y	-.054	%90
38	M87	Y	-.06	%50
39	M87	Y	-.05	%50
40	M87	Y	0	0
41	M88	Y	-.054	%10
42	M88	Y	-.054	%90
43	M88	Y	-.071	%50
44	M88	Y	-.044	%50
45	M88	Y	0	0
46	M67	Y	-.018	%25
47	M67	Y	-.018	%75
48	M67	Y	-.028	%50
49	M67	Y	0	0
50	M67	Y	0	0
51	M69B	Y	-.054	%10
52	M69B	Y	-.054	%90
53	M69B	Y	-.06	%50
54	M69B	Y	-.05	%50
55	M69B	Y	0	0
56	M70B	Y	-.054	%10
57	M70B	Y	-.054	%90
58	M70B	Y	-.071	%50
59	M70B	Y	-.044	%50
60	M70B	Y	0	0

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M65A	Z	-.087	%25
2	M65A	Z	-.087	%75
3	M65A	Z	-.07	%50
4	M65A	Z	0	0
5	M65A	Z	0	0
6	M62A	Z	-.219	%10
7	M62A	Z	-.219	%90
8	M62A	Z	-.034	%50
9	M62A	Z	-.041	%50
10	M62A	Z	0	0
11	M63A	Z	-.219	%10
12	M63A	Z	-.219	%90
13	M63A	Z	-.045	%50
14	M63A	Z	-.021	%50
15	M63A	Z	0	0
16	M85A	Z	-.038	%80
17	M85A	Z	0	0
18	M85A	Z	0	0
19	M85A	Z	0	0
20	M85A	Z	0	0
21	13	Z	-.036	%80
22	13	Z	0	0
23	13	Z	0	0
24	13	Z	0	0
25	13	Z	0	0

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
26	M86A	Z	-.036	%80
27	M86A	Z	0	0
28	M86A	Z	0	0
29	M86A	Z	0	0
30	M86A	Z	0	0
31	M85	Z	-.087	%25
32	M85	Z	-.087	%75
33	M85	Z	-.07	%50
34	M85	Z	0	0
35	M85	Z	0	0
36	M87	Z	-.219	%10
37	M87	Z	-.219	%90
38	M87	Z	-.034	%50
39	M87	Z	-.041	%50
40	M87	Z	0	0
41	M88	Z	-.219	%10
42	M88	Z	-.219	%90
43	M88	Z	-.045	%50
44	M88	Z	-.021	%50
45	M88	Z	0	0
46	M67	Z	-.087	%25
47	M67	Z	-.087	%75
48	M67	Z	-.07	%50
49	M67	Z	0	0
50	M67	Z	0	0
51	M69B	Z	-.219	%10
52	M69B	Z	-.219	%90
53	M69B	Z	-.034	%50
54	M69B	Z	-.041	%50
55	M69B	Z	0	0
56	M70B	Z	-.219	%10
57	M70B	Z	-.219	%90
58	M70B	Z	-.045	%50
59	M70B	Z	-.021	%50
60	M70B	Z	0	0

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M65A	X	-.04	%25
2	M65A	X	-.04	%75
3	M65A	X	-.02	%50
4	M65A	X	0	0
5	M65A	X	0	0
6	M62A	X	-.076	%10
7	M62A	X	-.076	%90
8	M62A	X	-.058	%50
9	M62A	X	-.101	%50
10	M62A	X	0	0
11	M63A	X	-.076	%10
12	M63A	X	-.076	%90
13	M63A	X	-.062	%50
14	M63A	X	-.053	%50
15	M63A	X	0	0
16	M85A	X	-.038	%80
17	M85A	X	0	0
18	M85A	X	0	0

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
19	M85A	X	0	0
20	M85A	X	0	0
21	13	X	-.036	%80
22	13	X	0	0
23	13	X	0	0
24	13	X	0	0
25	13	X	0	0
26	M86A	X	-.036	%80
27	M86A	X	0	0
28	M86A	X	0	0
29	M86A	X	0	0
30	M86A	X	0	0
31	M85	X	-.04	%25
32	M85	X	-.04	%75
33	M85	X	-.02	%50
34	M85	X	0	0
35	M85	X	0	0
36	M87	X	-.076	%10
37	M87	X	-.076	%90
38	M87	X	-.058	%50
39	M87	X	-.101	%50
40	M87	X	0	0
41	M88	X	-.076	%10
42	M88	X	-.076	%90
43	M88	X	-.062	%50
44	M88	X	-.053	%50
45	M88	X	0	0
46	M67	X	-.04	%25
47	M67	X	-.04	%75
48	M67	X	-.02	%50
49	M67	X	0	0
50	M67	X	0	0
51	M69B	X	-.076	%10
52	M69B	X	-.076	%90
53	M69B	X	-.058	%50
54	M69B	X	-.101	%50
55	M69B	X	0	0
56	M70B	X	-.076	%10
57	M70B	X	-.076	%90
58	M70B	X	-.062	%50
59	M70B	X	-.053	%50
60	M70B	X	0	0

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M65A	Z	-.032	%25
2	M65A	Z	-.032	%75
3	M65A	Z	-.032	%50
4	M65A	Z	0	0
5	M65A	Z	0	0
6	M62A	Z	-.071	%10
7	M62A	Z	-.071	%90
8	M62A	Z	-.016	%50
9	M62A	Z	-.019	%50
10	M62A	Z	0	0
11	M63A	Z	-.071	%10

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
12	M63A	Z	-.071	%90
13	M63A	Z	-.019	%50
14	M63A	Z	-.012	%50
15	M63A	Z	0	0
16	M85A	Z	-.015	%80
17	M85A	Z	0	0
18	M85A	Z	0	0
19	M85A	Z	0	0
20	M85A	Z	0	0
21	13	Z	-.014	%80
22	13	Z	0	0
23	13	Z	0	0
24	13	Z	0	0
25	13	Z	0	0
26	M86A	Z	-.014	%80
27	M86A	Z	0	0
28	M86A	Z	0	0
29	M86A	Z	0	0
30	M86A	Z	0	0
31	M85	Z	-.032	%25
32	M85	Z	-.032	%75
33	M85	Z	-.032	%50
34	M85	Z	0	0
35	M85	Z	0	0
36	M87	Z	-.071	%10
37	M87	Z	-.071	%90
38	M87	Z	-.016	%50
39	M87	Z	-.019	%50
40	M87	Z	0	0
41	M88	Z	-.071	%10
42	M88	Z	-.071	%90
43	M88	Z	-.019	%50
44	M88	Z	-.012	%50
45	M88	Z	0	0
46	M67	Z	-.032	%25
47	M67	Z	-.032	%75
48	M67	Z	-.032	%50
49	M67	Z	0	0
50	M67	Z	0	0
51	M69B	Z	-.071	%10
52	M69B	Z	-.071	%90
53	M69B	Z	-.016	%50
54	M69B	Z	-.019	%50
55	M69B	Z	0	0
56	M70B	Z	-.071	%10
57	M70B	Z	-.071	%90
58	M70B	Z	-.019	%50
59	M70B	Z	-.012	%50
60	M70B	Z	0	0

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M65A	X	-.019	%25
2	M65A	X	-.019	%75
3	M65A	X	-.015	%50
4	M65A	X	0	0

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
5	M65A	X	0	0
6	M62A	X	-.031	%10
7	M62A	X	-.031	%90
8	M62A	X	-.024	%50
9	M62A	X	-.037	%50
10	M62A	X	0	0
11	M63A	X	-.031	%10
12	M63A	X	-.031	%90
13	M63A	X	-.025	%50
14	M63A	X	-.022	%50
15	M63A	X	0	0
16	M85A	X	-.015	%80
17	M85A	X	0	0
18	M85A	X	0	0
19	M85A	X	0	0
20	M85A	X	0	0
21	13	X	-.014	%80
22	13	X	0	0
23	13	X	0	0
24	13	X	0	0
25	13	X	0	0
26	M86A	X	-.014	%80
27	M86A	X	0	0
28	M86A	X	0	0
29	M86A	X	0	0
30	M86A	X	0	0
31	M85	X	-.019	%25
32	M85	X	-.019	%75
33	M85	X	-.015	%50
34	M85	X	0	0
35	M85	X	0	0
36	M87	X	-.031	%10
37	M87	X	-.031	%90
38	M87	X	-.024	%50
39	M87	X	-.037	%50
40	M87	X	0	0
41	M88	X	-.031	%10
42	M88	X	-.031	%90
43	M88	X	-.025	%50
44	M88	X	-.022	%50
45	M88	X	0	0
46	M67	X	-.019	%25
47	M67	X	-.019	%75
48	M67	X	-.015	%50
49	M67	X	0	0
50	M67	X	0	0
51	M69B	X	-.031	%10
52	M69B	X	-.031	%90
53	M69B	X	-.024	%50
54	M69B	X	-.037	%50
55	M69B	X	0	0
56	M70B	X	-.031	%10
57	M70B	X	-.031	%90
58	M70B	X	-.025	%50
59	M70B	X	-.022	%50
60	M70B	X	0	0

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M65A	Z	-.008	%25
2	M65A	Z	-.008	%75
3	M65A	Z	-.007	%50
4	M65A	Z	0	0
5	M65A	Z	0	0
6	M62A	Z	-.021	%10
7	M62A	Z	-.021	%90
8	M62A	Z	-.003	%50
9	M62A	Z	-.004	%50
10	M62A	Z	0	0
11	M63A	Z	-.021	%10
12	M63A	Z	-.021	%90
13	M63A	Z	-.004	%50
14	M63A	Z	-.002	%50
15	M63A	Z	0	0
16	M85A	Z	-.004	%80
17	M85A	Z	0	0
18	M85A	Z	0	0
19	M85A	Z	0	0
20	M85A	Z	0	0
21	13	Z	-.003	%80
22	13	Z	0	0
23	13	Z	0	0
24	13	Z	0	0
25	13	Z	0	0
26	M86A	Z	-.003	%80
27	M86A	Z	0	0
28	M86A	Z	0	0
29	M86A	Z	0	0
30	M86A	Z	0	0
31	M85	Z	-.008	%25
32	M85	Z	-.008	%75
33	M85	Z	-.007	%50
34	M85	Z	0	0
35	M85	Z	0	0
36	M87	Z	-.021	%10
37	M87	Z	-.021	%90
38	M87	Z	-.003	%50
39	M87	Z	-.004	%50
40	M87	Z	0	0
41	M88	Z	-.021	%10
42	M88	Z	-.021	%90
43	M88	Z	-.004	%50
44	M88	Z	-.002	%50
45	M88	Z	0	0
46	M67	Z	-.008	%25
47	M67	Z	-.008	%75
48	M67	Z	-.007	%50
49	M67	Z	0	0
50	M67	Z	0	0
51	M69B	Z	-.021	%10
52	M69B	Z	-.021	%90
53	M69B	Z	-.003	%50
54	M69B	Z	-.004	%50
55	M69B	Z	0	0
56	M70B	Z	-.021	%10
57	M70B	Z	-.021	%90

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
58	M70B	Z	-.004	%50
59	M70B	Z	-.002	%50
60	M70B	Z	0	0

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M65A	X	-.004	%25
2	M65A	X	-.004	%75
3	M65A	X	-.002	%50
4	M65A	X	0	0
5	M65A	X	0	0
6	M62A	X	-.007	%10
7	M62A	X	-.007	%90
8	M62A	X	-.006	%50
9	M62A	X	-.01	%50
10	M62A	X	0	0
11	M63A	X	-.007	%10
12	M63A	X	-.007	%90
13	M63A	X	-.006	%50
14	M63A	X	-.005	%50
15	M63A	X	0	0
16	M85A	X	-.004	%80
17	M85A	X	0	0
18	M85A	X	0	0
19	M85A	X	0	0
20	M85A	X	0	0
21	13	X	-.003	%80
22	13	X	0	0
23	13	X	0	0
24	13	X	0	0
25	13	X	0	0
26	M86A	X	-.003	%80
27	M86A	X	0	0
28	M86A	X	0	0
29	M86A	X	0	0
30	M86A	X	0	0
31	M85	X	-.004	%25
32	M85	X	-.004	%75
33	M85	X	-.002	%50
34	M85	X	0	0
35	M85	X	0	0
36	M87	X	-.007	%10
37	M87	X	-.007	%90
38	M87	X	-.006	%50
39	M87	X	-.01	%50
40	M87	X	0	0
41	M88	X	-.007	%10
42	M88	X	-.007	%90
43	M88	X	-.006	%50
44	M88	X	-.005	%50
45	M88	X	0	0
46	M67	X	-.004	%25
47	M67	X	-.004	%75
48	M67	X	-.002	%50
49	M67	X	0	0
50	M67	X	0	0

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
51	M69B	X	-.007	%10
52	M69B	X	-.007	%90
53	M69B	X	-.006	%50
54	M69B	X	-.01	%50
55	M69B	X	0	0
56	M70B	X	-.007	%10
57	M70B	X	-.007	%90
58	M70B	X	-.006	%50
59	M70B	X	-.005	%50
60	M70B	X	0	0

Member Point Loads (BLC 8 : Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M65A	Y	-.068	%25
2	M65A	Y	-.068	%75
3	M65A	Y	-.058	%50
4	M65A	Y	0	0
5	M65A	Y	0	0
6	M62A	Y	-.161	%10
7	M62A	Y	-.161	%90
8	M62A	Y	-.051	%50
9	M62A	Y	-.079	%50
10	M62A	Y	0	0
11	M63A	Y	-.161	%10
12	M63A	Y	-.161	%90
13	M63A	Y	-.057	%50
14	M63A	Y	-.043	%50
15	M63A	Y	0	0
16	M85A	Y	-.071	%80
17	M85A	Y	0	0
18	M85A	Y	0	0
19	M85A	Y	0	0
20	M85A	Y	0	0
21	13	Y	-.067	%80
22	13	Y	0	0
23	13	Y	0	0
24	13	Y	0	0
25	13	Y	0	0
26	M86A	Y	-.067	%80
27	M86A	Y	0	0
28	M86A	Y	0	0
29	M86A	Y	0	0
30	M86A	Y	0	0
31	M85	Y	-.068	%25
32	M85	Y	-.068	%75
33	M85	Y	-.058	%50
34	M85	Y	0	0
35	M85	Y	0	0
36	M87	Y	-.161	%10
37	M87	Y	-.161	%90
38	M87	Y	-.051	%50
39	M87	Y	-.079	%50
40	M87	Y	0	0
41	M88	Y	-.161	%10
42	M88	Y	-.161	%90
43	M88	Y	-.057	%50

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
44	M88	Y	-.043	%50
45	M88	Y	0	0
46	M67	Y	-.068	%25
47	M67	Y	-.068	%75
48	M67	Y	-.058	%50
49	M67	Y	0	0
50	M67	Y	0	0
51	M69B	Y	-.161	%10
52	M69B	Y	-.161	%90
53	M69B	Y	-.051	%50
54	M69B	Y	-.079	%50
55	M69B	Y	0	0
56	M70B	Y	-.161	%10
57	M70B	Y	-.161	%90
58	M70B	Y	-.057	%50
59	M70B	Y	-.043	%50
60	M70B	Y	0	0

Member Point Loads (BLC 13 : Maint LL 1)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M70	Y	-.25	%5

Member Point Loads (BLC 14 : Maint LL 2)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M70	Y	-.25	%95

Member Point Loads (BLC 15 : Maint LL 3)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M72	Y	-.25	%5

Member Point Loads (BLC 16 : Maint LL 4)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M72	Y	-.25	%95

Member Point Loads (BLC 17 : Maint LL 5)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M71	Y	-.25	%5

Member Point Loads (BLC 18 : Maint LL 6)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M71	Y	-.25	%95

Member Point Loads (BLC 19 : Maint LL 7)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M66	Y	-.25	%5

Member Point Loads (BLC 20 : Maint LL 8)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M66	Y	-.25	%95

Member Point Loads (BLC 21 : Maint LL 9)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]

Member Point Loads (BLC 21 : Maint LL 9) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M65	Y	-.25	%5

Member Point Loads (BLC 22 : Maint LL 10)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M65	Y	-.25	%95

Member Point Loads (BLC 23 : Maint LL 11)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M64	Y	-.25	%5

Member Point Loads (BLC 24 : Maint LL 12)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M64	Y	-.25	%95

Member Point Loads (BLC 25 : Maint LL 13)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M85A	Y	-.25	%5

Member Point Loads (BLC 26 : Maint LL 14)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	13	Y	-.25	%5

Member Point Loads (BLC 27 : Maint LL 15)

	Member Label	Direction	Magnitude[k,k-ft]	Location[in,%]
1	M86A	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	3	Z	-.019	-.019	0	0
2	5	Z	-.019	-.019	0	0
3	7	Z	-.011	-.011	0	0
4	8	Z	-.011	-.011	0	0
5	11	Z	-.019	-.019	0	0
6	12	Z	-.019	-.019	0	0
7	13	Z	-.018	-.018	0	0
8	18	Z	-.019	-.019	0	0
9	20	Z	-.019	-.019	0	0
10	22	Z	-.011	-.011	0	0
11	23	Z	-.011	-.011	0	0
12	26	Z	-.019	-.019	0	0
13	27	Z	-.019	-.019	0	0
14	33	Z	-.019	-.019	0	0
15	35	Z	-.019	-.019	0	0
16	37	Z	-.011	-.011	0	0
17	38	Z	-.011	-.011	0	0
18	41	Z	-.019	-.019	0	0
19	42	Z	-.019	-.019	0	0
20	67	Z	-.009	-.009	0	0
21	68	Z	-.009	-.009	0	0
22	69	Z	-.009	-.009	0	0
23	M70	Z	-.011	-.011	0	0
24	M71	Z	-.011	-.011	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,%]
25	M72	Z	-.011	-.011	0	0
26	M64	Z	-.007	-.007	0	0
27	M65	Z	-.007	-.007	0	0
28	M66	Z	-.007	-.007	0	0
29	M65A	Z	-.007	-.007	0	0
30	M69	Z	-.007	-.007	0	0
31	M62	Z	-.015	-.015	0	0
32	M63	Z	-.015	-.015	0	0
33	M56	Z	-.015	-.015	0	0
34	M57	Z	-.015	-.015	0	0
35	M58	Z	-.015	-.015	0	0
36	M59	Z	-.015	-.015	0	0
37	M54	Z	-.019	-.019	0	0
38	M55	Z	-.019	-.019	0	0
39	M56A	Z	-.019	-.019	0	0
40	M57A	Z	-.019	-.019	0	0
41	M58A	Z	-.019	-.019	0	0
42	M59A	Z	-.019	-.019	0	0
43	M62A	Z	-.007	-.007	0	0
44	M63A	Z	-.007	-.007	0	0
45	M62B	Z	-.019	-.019	0	0
46	M59C	Z	-.019	-.019	0	0
47	M60A	Z	-.019	-.019	0	0
48	M67	Z	-.007	-.007	0	0
49	M68	Z	-.007	-.007	0	0
50	M69B	Z	-.007	-.007	0	0
51	M70B	Z	-.007	-.007	0	0
52	M85	Z	-.007	-.007	0	0
53	M86	Z	-.007	-.007	0	0
54	M87	Z	-.007	-.007	0	0
55	M88	Z	-.007	-.007	0	0
56	M85A	Z	-.018	-.018	0	0
57	M86A	Z	-.018	-.018	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	3	X	-.019	-.019	0	0
2	5	X	-.019	-.019	0	0
3	7	X	-.011	-.011	0	0
4	8	X	-.011	-.011	0	0
5	11	X	-.019	-.019	0	0
6	12	X	-.019	-.019	0	0
7	13	X	-.018	-.018	0	0
8	18	X	-.019	-.019	0	0
9	20	X	-.019	-.019	0	0
10	22	X	-.011	-.011	0	0
11	23	X	-.011	-.011	0	0
12	26	X	-.019	-.019	0	0
13	27	X	-.019	-.019	0	0
14	33	X	-.019	-.019	0	0
15	35	X	-.019	-.019	0	0
16	37	X	-.011	-.011	0	0
17	38	X	-.011	-.011	0	0
18	41	X	-.019	-.019	0	0
19	42	X	-.019	-.019	0	0
20	67	X	-.009	-.009	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,%]
21	68	X	-.009	-.009	0	0
22	69	X	-.009	-.009	0	0
23	M70	X	-.011	-.011	0	0
24	M71	X	-.011	-.011	0	0
25	M72	X	-.011	-.011	0	0
26	M64	X	-.007	-.007	0	0
27	M65	X	-.007	-.007	0	0
28	M66	X	-.007	-.007	0	0
29	M65A	X	-.007	-.007	0	0
30	M69	X	-.007	-.007	0	0
31	M62	X	-.015	-.015	0	0
32	M63	X	-.015	-.015	0	0
33	M56	X	-.015	-.015	0	0
34	M57	X	-.015	-.015	0	0
35	M58	X	-.015	-.015	0	0
36	M59	X	-.015	-.015	0	0
37	M54	X	-.019	-.019	0	0
38	M55	X	-.019	-.019	0	0
39	M56A	X	-.019	-.019	0	0
40	M57A	X	-.019	-.019	0	0
41	M58A	X	-.019	-.019	0	0
42	M59A	X	-.019	-.019	0	0
43	M62A	X	-.007	-.007	0	0
44	M63A	X	-.007	-.007	0	0
45	M62B	X	-.019	-.019	0	0
46	M59C	X	-.019	-.019	0	0
47	M60A	X	-.019	-.019	0	0
48	M67	X	-.007	-.007	0	0
49	M68	X	-.007	-.007	0	0
50	M69B	X	-.007	-.007	0	0
51	M70B	X	-.007	-.007	0	0
52	M85	X	-.007	-.007	0	0
53	M86	X	-.007	-.007	0	0
54	M87	X	-.007	-.007	0	0
55	M88	X	-.007	-.007	0	0
56	M85A	X	-.018	-.018	0	0
57	M86A	X	-.018	-.018	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	3	Z	-.022	-.022	0	0
2	5	Z	-.022	-.022	0	0
3	7	Z	-.008	-.008	0	0
4	8	Z	-.008	-.008	0	0
5	11	Z	-.016	-.016	0	0
6	12	Z	-.016	-.016	0	0
7	13	Z	-.009	-.009	0	0
8	18	Z	-.022	-.022	0	0
9	20	Z	-.022	-.022	0	0
10	22	Z	-.008	-.008	0	0
11	23	Z	-.008	-.008	0	0
12	26	Z	-.016	-.016	0	0
13	27	Z	-.016	-.016	0	0
14	33	Z	-.022	-.022	0	0
15	35	Z	-.022	-.022	0	0
16	37	Z	-.008	-.008	0	0

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

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
17	38	Z	-.008	-.008	0	0
18	41	Z	-.016	-.016	0	0
19	42	Z	-.016	-.016	0	0
20	67	Z	-.007	-.007	0	0
21	68	Z	-.007	-.007	0	0
22	69	Z	-.007	-.007	0	0
23	M70	Z	-.003	-.003	0	0
24	M71	Z	-.003	-.003	0	0
25	M72	Z	-.003	-.003	0	0
26	M64	Z	-.003	-.003	0	0
27	M65	Z	-.003	-.003	0	0
28	M66	Z	-.003	-.003	0	0
29	M65A	Z	-.003	-.003	0	0
30	M69	Z	-.003	-.003	0	0
31	M62	Z	-.008	-.008	0	0
32	M63	Z	-.008	-.008	0	0
33	M56	Z	-.008	-.008	0	0
34	M57	Z	-.008	-.008	0	0
35	M58	Z	-.008	-.008	0	0
36	M59	Z	-.008	-.008	0	0
37	M54	Z	-.014	-.014	0	0
38	M55	Z	-.014	-.014	0	0
39	M56A	Z	-.014	-.014	0	0
40	M57A	Z	-.014	-.014	0	0
41	M58A	Z	-.014	-.014	0	0
42	M59A	Z	-.014	-.014	0	0
43	M62A	Z	-.003	-.003	0	0
44	M63A	Z	-.003	-.003	0	0
45	M62B	Z	-.01	-.01	0	0
46	M59C	Z	-.01	-.01	0	0
47	M60A	Z	-.01	-.01	0	0
48	M67	Z	-.003	-.003	0	0
49	M68	Z	-.003	-.003	0	0
50	M69B	Z	-.003	-.003	0	0
51	M70B	Z	-.003	-.003	0	0
52	M85	Z	-.003	-.003	0	0
53	M86	Z	-.003	-.003	0	0
54	M87	Z	-.003	-.003	0	0
55	M88	Z	-.003	-.003	0	0
56	M85A	Z	-.009	-.009	0	0
57	M86A	Z	-.009	-.009	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	3	X	-.022	-.022	0	0
2	5	X	-.022	-.022	0	0
3	7	X	-.008	-.008	0	0
4	8	X	-.008	-.008	0	0
5	11	X	-.016	-.016	0	0
6	12	X	-.016	-.016	0	0
7	13	X	-.009	-.009	0	0
8	18	X	-.022	-.022	0	0
9	20	X	-.022	-.022	0	0
10	22	X	-.008	-.008	0	0
11	23	X	-.008	-.008	0	0
12	26	X	-.016	-.016	0	0

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

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
13	27	X	-.016	-.016	0	0
14	33	X	-.022	-.022	0	0
15	35	X	-.022	-.022	0	0
16	37	X	-.008	-.008	0	0
17	38	X	-.008	-.008	0	0
18	41	X	-.016	-.016	0	0
19	42	X	-.016	-.016	0	0
20	67	X	-.007	-.007	0	0
21	68	X	-.007	-.007	0	0
22	69	X	-.007	-.007	0	0
23	M70	X	-.003	-.003	0	0
24	M71	X	-.003	-.003	0	0
25	M72	X	-.003	-.003	0	0
26	M64	X	-.003	-.003	0	0
27	M65	X	-.003	-.003	0	0
28	M66	X	-.003	-.003	0	0
29	M65A	X	-.003	-.003	0	0
30	M69	X	-.003	-.003	0	0
31	M62	X	-.008	-.008	0	0
32	M63	X	-.008	-.008	0	0
33	M56	X	-.008	-.008	0	0
34	M57	X	-.008	-.008	0	0
35	M58	X	-.008	-.008	0	0
36	M59	X	-.008	-.008	0	0
37	M54	X	-.014	-.014	0	0
38	M55	X	-.014	-.014	0	0
39	M56A	X	-.014	-.014	0	0
40	M57A	X	-.014	-.014	0	0
41	M58A	X	-.014	-.014	0	0
42	M59A	X	-.014	-.014	0	0
43	M62A	X	-.003	-.003	0	0
44	M63A	X	-.003	-.003	0	0
45	M62B	X	-.01	-.01	0	0
46	M59C	X	-.01	-.01	0	0
47	M60A	X	-.01	-.01	0	0
48	M67	X	-.003	-.003	0	0
49	M68	X	-.003	-.003	0	0
50	M69B	X	-.003	-.003	0	0
51	M70B	X	-.003	-.003	0	0
52	M85	X	-.003	-.003	0	0
53	M86	X	-.003	-.003	0	0
54	M87	X	-.003	-.003	0	0
55	M88	X	-.003	-.003	0	0
56	M85A	X	-.009	-.009	0	0
57	M86A	X	-.009	-.009	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	3	Z	-.002	-.002	0	0
2	5	Z	-.002	-.002	0	0
3	7	Z	-.001	-.001	0	0
4	8	Z	-.001	-.001	0	0
5	11	Z	-.002	-.002	0	0
6	12	Z	-.002	-.002	0	0
7	13	Z	-.002	-.002	0	0
8	18	Z	-.002	-.002	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,%]
9	20	Z	-.002	-.002	0	0
10	22	Z	-.001	-.001	0	0
11	23	Z	-.001	-.001	0	0
12	26	Z	-.002	-.002	0	0
13	27	Z	-.002	-.002	0	0
14	33	Z	-.002	-.002	0	0
15	35	Z	-.002	-.002	0	0
16	37	Z	-.001	-.001	0	0
17	38	Z	-.001	-.001	0	0
18	41	Z	-.002	-.002	0	0
19	42	Z	-.002	-.002	0	0
20	67	Z	-.0008	-.0008	0	0
21	68	Z	-.0008	-.0008	0	0
22	69	Z	-.0008	-.0008	0	0
23	M70	Z	-.0005	-.0005	0	0
24	M71	Z	-.0005	-.0005	0	0
25	M72	Z	-.0005	-.0005	0	0
26	M64	Z	-.0004	-.0004	0	0
27	M65	Z	-.0004	-.0004	0	0
28	M66	Z	-.0004	-.0004	0	0
29	M65A	Z	-.0004	-.0004	0	0
30	M69	Z	-.0004	-.0004	0	0
31	M62	Z	-.001	-.001	0	0
32	M63	Z	-.001	-.001	0	0
33	M56	Z	-.001	-.001	0	0
34	M57	Z	-.001	-.001	0	0
35	M58	Z	-.001	-.001	0	0
36	M59	Z	-.001	-.001	0	0
37	M54	Z	-.002	-.002	0	0
38	M55	Z	-.002	-.002	0	0
39	M56A	Z	-.002	-.002	0	0
40	M57A	Z	-.002	-.002	0	0
41	M58A	Z	-.002	-.002	0	0
42	M59A	Z	-.002	-.002	0	0
43	M62A	Z	-.0004	-.0004	0	0
44	M63A	Z	-.0004	-.0004	0	0
45	M62B	Z	-.002	-.002	0	0
46	M59C	Z	-.002	-.002	0	0
47	M60A	Z	-.002	-.002	0	0
48	M67	Z	-.0004	-.0004	0	0
49	M68	Z	-.0004	-.0004	0	0
50	M69B	Z	-.0004	-.0004	0	0
51	M70B	Z	-.0004	-.0004	0	0
52	M85	Z	-.0004	-.0004	0	0
53	M86	Z	-.0004	-.0004	0	0
54	M87	Z	-.0004	-.0004	0	0
55	M88	Z	-.0004	-.0004	0	0
56	M85A	Z	-.002	-.002	0	0
57	M86A	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	3	X	-.002	-.002	0	0
2	5	X	-.002	-.002	0	0
3	7	X	-.001	-.001	0	0
4	8	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	11	X	-.002	-.002	0	0
6	12	X	-.002	-.002	0	0
7	13	X	-.002	-.002	0	0
8	18	X	-.002	-.002	0	0
9	20	X	-.002	-.002	0	0
10	22	X	-.001	-.001	0	0
11	23	X	-.001	-.001	0	0
12	26	X	-.002	-.002	0	0
13	27	X	-.002	-.002	0	0
14	33	X	-.002	-.002	0	0
15	35	X	-.002	-.002	0	0
16	37	X	-.001	-.001	0	0
17	38	X	-.001	-.001	0	0
18	41	X	-.002	-.002	0	0
19	42	X	-.002	-.002	0	0
20	67	X	-.0008	-.0008	0	0
21	68	X	-.0008	-.0008	0	0
22	69	X	-.0008	-.0008	0	0
23	M70	X	-.0005	-.0005	0	0
24	M71	X	-.0005	-.0005	0	0
25	M72	X	-.0005	-.0005	0	0
26	M64	X	-.0004	-.0004	0	0
27	M65	X	-.0004	-.0004	0	0
28	M66	X	-.0004	-.0004	0	0
29	M65A	X	-.0004	-.0004	0	0
30	M69	X	-.0004	-.0004	0	0
31	M62	X	-.001	-.001	0	0
32	M63	X	-.001	-.001	0	0
33	M56	X	-.001	-.001	0	0
34	M57	X	-.001	-.001	0	0
35	M58	X	-.001	-.001	0	0
36	M59	X	-.001	-.001	0	0
37	M54	X	-.002	-.002	0	0
38	M55	X	-.002	-.002	0	0
39	M56A	X	-.002	-.002	0	0
40	M57A	X	-.002	-.002	0	0
41	M58A	X	-.002	-.002	0	0
42	M59A	X	-.002	-.002	0	0
43	M62A	X	-.0004	-.0004	0	0
44	M63A	X	-.0004	-.0004	0	0
45	M62B	X	-.002	-.002	0	0
46	M59C	X	-.002	-.002	0	0
47	M60A	X	-.002	-.002	0	0
48	M67	X	-.0004	-.0004	0	0
49	M68	X	-.0004	-.0004	0	0
50	M69B	X	-.0004	-.0004	0	0
51	M70B	X	-.0004	-.0004	0	0
52	M85	X	-.0004	-.0004	0	0
53	M86	X	-.0004	-.0004	0	0
54	M87	X	-.0004	-.0004	0	0
55	M88	X	-.0004	-.0004	0	0
56	M85A	X	-.002	-.002	0	0
57	M86A	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,%]

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,%]
1	3	Y	-.017	-.017	0	0
2	5	Y	-.017	-.017	0	0
3	7	Y	-.01	-.01	0	0
4	8	Y	-.01	-.01	0	0
5	11	Y	-.017	-.017	0	0
6	12	Y	-.017	-.017	0	0
7	13	Y	-.016	-.016	0	0
8	18	Y	-.017	-.017	0	0
9	20	Y	-.017	-.017	0	0
10	22	Y	-.01	-.01	0	0
11	23	Y	-.01	-.01	0	0
12	26	Y	-.017	-.017	0	0
13	27	Y	-.017	-.017	0	0
14	33	Y	-.017	-.017	0	0
15	35	Y	-.017	-.017	0	0
16	37	Y	-.01	-.01	0	0
17	38	Y	-.01	-.01	0	0
18	41	Y	-.017	-.017	0	0
19	42	Y	-.017	-.017	0	0
20	67	Y	-.011	-.011	0	0
21	68	Y	-.011	-.011	0	0
22	69	Y	-.011	-.011	0	0
23	M70	Y	-.011	-.011	0	0
24	M71	Y	-.011	-.011	0	0
25	M72	Y	-.011	-.011	0	0
26	M64	Y	-.009	-.009	0	0
27	M65	Y	-.009	-.009	0	0
28	M66	Y	-.009	-.009	0	0
29	M65A	Y	-.009	-.009	0	0
30	M69	Y	-.009	-.009	0	0
31	M62	Y	-.016	-.016	0	0
32	M63	Y	-.016	-.016	0	0
33	M56	Y	-.016	-.016	0	0
34	M57	Y	-.016	-.016	0	0
35	M58	Y	-.016	-.016	0	0
36	M59	Y	-.016	-.016	0	0
37	M54	Y	-.017	-.017	0	0
38	M55	Y	-.017	-.017	0	0
39	M56A	Y	-.017	-.017	0	0
40	M57A	Y	-.017	-.017	0	0
41	M58A	Y	-.017	-.017	0	0
42	M59A	Y	-.017	-.017	0	0
43	M62A	Y	-.009	-.009	0	0
44	M63A	Y	-.009	-.009	0	0
45	M62B	Y	-.017	-.017	0	0
46	M59C	Y	-.017	-.017	0	0
47	M60A	Y	-.017	-.017	0	0
48	M67	Y	-.009	-.009	0	0
49	M68	Y	-.009	-.009	0	0
50	M69B	Y	-.009	-.009	0	0
51	M70B	Y	-.009	-.009	0	0
52	M85	Y	-.009	-.009	0	0
53	M86	Y	-.009	-.009	0	0
54	M87	Y	-.009	-.009	0	0
55	M88	Y	-.009	-.009	0	0
56	M85A	Y	-.016	-.016	0	0
57	M86A	Y	-.016	-.016	0	0

Member Distributed Loads (BLC 28 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
1	22	Y	-.001	-.005	0	26.155
2	22	Y	-.005	-.009	26.155	52.309
3	23	Y	-.001	-.005	0	26.155
4	23	Y	-.005	-.009	26.155	52.309
5	M56	Y	-.009	-.009	19.246	31
6	M57	Y	-.009	-.009	0	11.754
7	M85A	Y	-.011	-.011	12.878	33.63
8	7	Y	-.001	-.005	0	26.155
9	7	Y	-.005	-.009	26.155	52.309
10	8	Y	-.001	-.005	0	26.155
11	8	Y	-.005	-.009	26.155	52.309
12	13	Y	-.011	-.011	12.878	33.63
13	M58	Y	-.009	-.009	19.246	31
14	M59	Y	-.009	-.009	0	11.754
15	37	Y	-.001	-.005	0	26.155
16	37	Y	-.005	-.009	26.155	52.309
17	38	Y	-.001	-.005	0	26.155
18	38	Y	-.005	-.009	26.155	52.309
19	M62	Y	-.009	-.009	19.252	31
20	M63	Y	-.009	-.009	0	11.754
21	M86A	Y	-.011	-.011	12.842	33.642

Member Distributed Loads (BLC 29 : BLC 8 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[in,%]	End Location[in,%]
1	22	Y	-.001	-.004	0	26.155
2	22	Y	-.004	-.007	26.155	52.309
3	23	Y	-.001	-.004	0	26.155
4	23	Y	-.004	-.007	26.155	52.309
5	M56	Y	-.008	-.008	19.252	31
6	M57	Y	-.008	-.008	0	11.754
7	M85A	Y	-.009	-.009	12.842	33.642
8	7	Y	-.001	-.004	0	26.155
9	7	Y	-.004	-.007	26.155	52.309
10	8	Y	-.0009991	-.004	0	26.155
11	8	Y	-.004	-.007	26.155	52.309
12	13	Y	-.009	-.009	12.842	33.642
13	M58	Y	-.007	-.007	19.246	31
14	M59	Y	-.007	-.007	0	11.748
15	37	Y	-.001	-.004	0	26.155
16	37	Y	-.004	-.007	26.155	52.309
17	38	Y	-.0009987	-.004	0	26.155
18	38	Y	-.004	-.007	26.155	52.309
19	M62	Y	-.007	-.007	19.252	31
20	M63	Y	-.007	-.007	0	11.754
21	M86A	Y	-.009	-.009	12.841	33.642

Member Area Loads (BLC 1 : Dead)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N19	N18	N20		Y	Two Way	-.01
2	N8	N7	N9		Y	Two Way	-.01
3	N31	N30	N29		Y	Two Way	-.01

Member Area Loads (BLC 8 : Ice)

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N19	N18	N20		Y	Two Way	-.008
2	N8	N7	N9		Y	Two Way	-.008
3	N31	N30	N29		Y	Two Way	-.008

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	N96	L	Y	-.25

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	N147A	L	Y	-.25

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	N148A	L	Y	-.25

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	N102A	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	N11	max	1.208	5	3.684	38	5.088	2	8.815	26	1.247	11	1.031	23
2		min	-1.206	11	-.759	8	-5.105	20	-3.806	8	-1.243	5	-1.011	5
3	N149	max	3.378	6	3.625	42	2.622	25	1.908	13	1.541	3	1.854	12
4		min	-3.396	24	-.325	12	-2.613	7	-4.396	31	-1.53	9	-7.371	42
5	N151	max	3.368	16	3.609	46	2.749	15	1.918	3	1.565	7	7.291	46
6		min	-3.354	10	-.332	4	-2.737	9	-4.489	33	-1.564	13	-1.863	4
7	Totals:	max	7.252	5	9.917	41	10.072	14						
8		min	-7.252	11	2.814	11	-10.072	20						

Envelope AISC 13th(360-05): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear C...	Loc[in]	Dir	LC	phi*...	phi*...	phi*...	phi*...	...	Eqn
1	3	PL 3/8x6	.220	0	24	.482	0	y	22	72.57	73.8...	.586	9.234	...	H1-...
2	5	PL 3/8x6	.221	0	15	.493	0	y	18	72.57	73.8...	.586	9.234	...	H1-...
3	7	L2x2x3	.410	0	14	.017	0	y	41	9.02	23.3...	.558	1.222	...	H2-1
4	8	L2x2x3	.403	0	14	.020	0	z	47	9.02	23.3...	.558	1.222	...	H2-1
5	11	PL 1/2x6	.017	0	15	.407	3.473	y	22	94.2...	97.2	1.012	12.15	...	H1-...
6	12	PL 1/2x6	.026	0	18	.414	3.473	y	18	94.2...	97.2	1.012	12.15	...	H1-...
7	13	HSS4X4X4	.554	68.375	26	.121	68.375	y	24	121....	139....	16.1...	16.1...	3	H1-...
8	18	PL 3/8x6	.250	0	21	.616	0	y	14	72.57	73.8...	.586	9.234	...	H1-...
9	20	PL 3/8x6	.283	0	20	.568	0	y	21	72.57	73.8...	.586	9.234	...	H1-...
10	22	L2x2x3	.333	0	18	.018	0	y	45	9.02	23.3...	.558	1.223	...	H2-1
11	23	L2x2x3	.353	52.309	19	.020	0	z	39	9.02	23.3...	.558	1.239	3	H2-1
12	26	PL 1/2x6	.028	0	20	.552	3.473	y	14	94.2...	97.2	1.012	12.15	...	H1-...
13	27	PL 1/2x6	.035	0	21	.480	3.473	y	21	94.2...	97.2	1.012	12.15	...	H1-...
14	33	PL 3/8x6	.305	0	20	.580	0	y	19	72.57	73.8...	.586	9.234	...	H1-...
15	35	PL 3/8x6	.230	0	19	.621	0	y	14	72.57	73.8...	.586	9.234	...	H1-...
16	37	L2x2x3	.379	52.309	21	.018	0	y	49	9.02	23.3...	.558	1.219	...	H2-1
17	38	L2x2x3	.336	0	22	.020	0	z	44	9.02	23.3...	.558	1.223	...	H2-1
18	41	PL 1/2x6	.021	0	25	.490	3.473	y	19	94.2...	97.2	1.012	12.15	...	H1-...

Envelope AISC 13th(360-05): LRFD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[in]	LC	Shear C...	Loc[in]	Dir	LC	phi*...	phi*...	phi*...	phi*...	...	Eqn
19	42	PL 1/2x6	.040	0	14	.557	3.473	y	14	94.2...	97.2	1.012	12.15	...	H1-...
20	67	L2.5x2.5x4	.471	0	14	.213	12.234	z	25	37.27	38.5...	1.114	2.537	...	H2-1
21	68	L2.5x2.5x4	.473	0	14	.213	0	y	21	37.27	38.5...	1.114	2.537	...	H2-1
22	69	L2.5x2.5x4	.444	12.232	14	.139	12.232	z	17	37.2...	38.5...	1.114	2.537	...	H2-1
23	M70	PIPE_3.0	.173	96.875	20	.155	96.875		21	28.2...	65.2...	5.749	5.749	...	H1-...
24	M71	PIPE_3.0	.180	6.25	14	.162	96.875		25	28.2...	65.2...	5.749	5.749	...	H1-...
25	M72	PIPE_3.0	.185	143.75	14	.158	53.125		15	28.2...	65.2...	5.749	5.749	...	H1-...
26	M64	PIPE_2.0	.481	4.688	2	.389	3.125		19	6.295	32.13	1.872	1.872	3	H3-6
27	M65	PIPE_2.0	.459	56.25	14	.395	146.875		21	6.295	32.13	1.872	1.872	3	H1-...
28	M66	PIPE_2.0	.472	54.688	20	.408	146.875		25	6.295	32.13	1.872	1.872	...	H3-6
29	M65A	PIPE_2.0	.512	69	19	.277	69		20	14.9...	32.13	1.872	1.872	3	H3-6
30	M69	PIPE_2.0	.522	27	21	.260	27		20	14.9...	32.13	1.872	1.872	3	H3-6
31	M62	HSS4X4X4	.255	31	47	.100	31	y	46	135....	139....	16.1...	16.1...	...	H1-...
32	M63	HSS4X4X4	.256	0	45	.099	0	y	46	135....	139....	16.1...	16.1...	...	H1-...
33	M56	HSS4X4X4	.260	31	43	.100	31	y	42	135....	139....	16.1...	16.1...	...	H1-...
34	M57	HSS4X4X4	.252	0	41	.099	0	y	42	135....	139....	16.1...	16.1...	...	H1-...
35	M58	HSS4X4X4	.258	31	49	.101	31	y	38	135....	139....	16.1...	16.1...	...	H1-...
36	M59	HSS4X4X4	.261	0	39	.102	0	y	38	135....	139....	16.1...	16.1...	...	H1-...
37	M54	PL_3/8x6	.196	0	15	.598	0	y	14	67.8...	73.8...	.586	9.234	...	H1-...
38	M55	PL_3/8x6	.183	0	25	.603	0	y	14	67.8...	73.8...	.586	9.234	...	H1-...
39	M56A	PL_3/8x6	.206	0	20	.525	0	y	19	67.8...	73.8...	.586	9.234	...	H1-...
40	M57A	PL_3/8x6	.141	0	16	.475	0	y	18	67.8...	73.8...	.586	9.234	...	H1-...
41	M58A	PL_3/8x6	.143	0	24	.464	0	y	22	67.8...	73.8...	.586	9.234	...	H1-...
42	M59A	PL_3/8x6	.192	0	20	.514	0	y	21	67.8...	73.8...	.586	9.234	...	H1-...
43	M62A	PIPE_2.0	.611	69	19	.151	69		20	14.9...	32.13	1.872	1.872	...	H1-...
44	M63A	PIPE_2.0	.599	69	15	.159	69		20	14.9...	32.13	1.872	1.872	...	H1-...
45	M62B	PL 1/2x6	.210	6	14	.338	0	y	14	67.5...	97.2	1.012	12.15	...	H1-...
46	M59C	PL 1/2x6	.208	6	20	.347	12	y	14	67.5...	97.2	1.012	12.15	...	H1-...
47	M60A	PL 1/2x6	.189	6	21	.267	12	y	18	67.5...	97.2	1.012	12.15	...	H1-...
48	M67	PIPE_2.0	.470	27	21	.190	69		24	14.9...	32.13	1.872	1.872	3	H1-...
49	M68	PIPE_2.0	.563	69	14	.247	69		25	14.9...	32.13	1.872	1.872	3	H1-...
50	M69B	PIPE_2.0	.693	69	21	.154	69		20	14.9...	32.13	1.872	1.872	...	H1-...
51	M70B	PIPE_2.0	.746	69	14	.121	69		25	14.9...	32.13	1.872	1.872	...	H1-...
52	M85	PIPE_2.0	.591	27	14	.248	27		15	14.9...	32.13	1.872	1.872	3	H1-...
53	M86	PIPE_2.0	.441	69	19	.176	69		17	14.9...	32.13	1.872	1.872	3	H1-...
54	M87	PIPE_2.0	.750	69	14	.114	69		15	14.9...	32.13	1.872	1.872	...	H1-...
55	M88	PIPE_2.0	.678	69	19	.154	69		14	14.9...	32.13	1.872	1.872	...	H1-...
56	M85A	HSS4X4X4	.541	68.375	31	.158	68.375	y	20	121....	139....	16.1...	16.1...	3	H1-...
57	M86A	HSS4X4X4	.544	68.375	33	.160	68.375	y	20	121....	139....	16.1...	16.1...	3	H1-...

Town of Newtown, CT

Property Listing Report

Map Block Lot **2-9-1.23**

Account **00141100**

Property Information

Property Location	**25 MERIDIAN RIDGE DRIVE**
Owner	**HW 1945 LLC**
Co-Owner	**CHARTER GROUP**
Mailing Address	**162 DANBURY ROAD** **RIDGEFIELD CT 06877**
Land Use	**1300 Vacant Lnd**
Land Class	**R**
Zoning Code	**R-1**
Census Tract	**23**
Sub Lot	

Neighborhood	**110**
Acreage	**1.88**
Utilities	**Well,Septic**
Lot Setting/Desc	
Survey Map	
TC Survey Numbers	

Photo

Sketch

Primary Construction Details

Year Built		Bedrooms		Exterior Walls	
Stories		Full Bathrooms		Interior Walls	
Building Style		Half Bathrooms		Heating Type	
Building Use		Bath Style		Heating Fuel	
Building Condition		Kitchen Style		AC Type	
Floors		Roof Style		Gross Bldg Area	
Total Rooms		Roof Cover		Total Living Area	

Report Created On **3/22/2019**

Town of Newtown, CT

Property Listing Report | Map Block Lot **2-9-1.23** | Account **00141100**

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings		
Extras		
Outbuildings		
Land		
Total		

Outbuilding and Extra Items

Type	Description

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area		0

Sales History

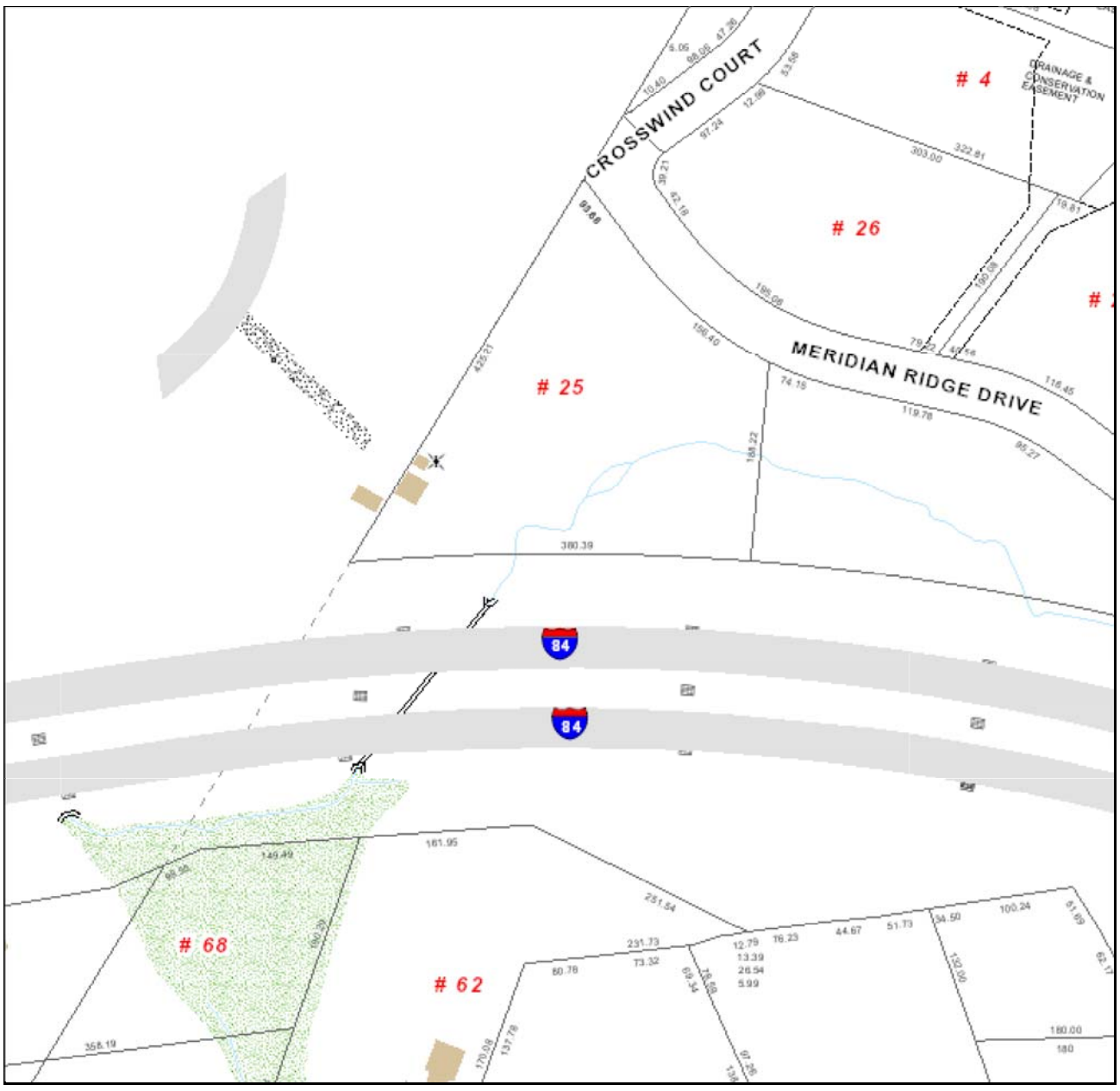
Owner of Record	Book/ Page	Sale Date	Sale Price
HW 1945 LLC	0713/0594	12/25/2009	

Report Created On **3/22/2019**

Town of Newtown

Geographic Information System (GIS)

Date Printed: 3/22/2019



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Newtown and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 150 feet

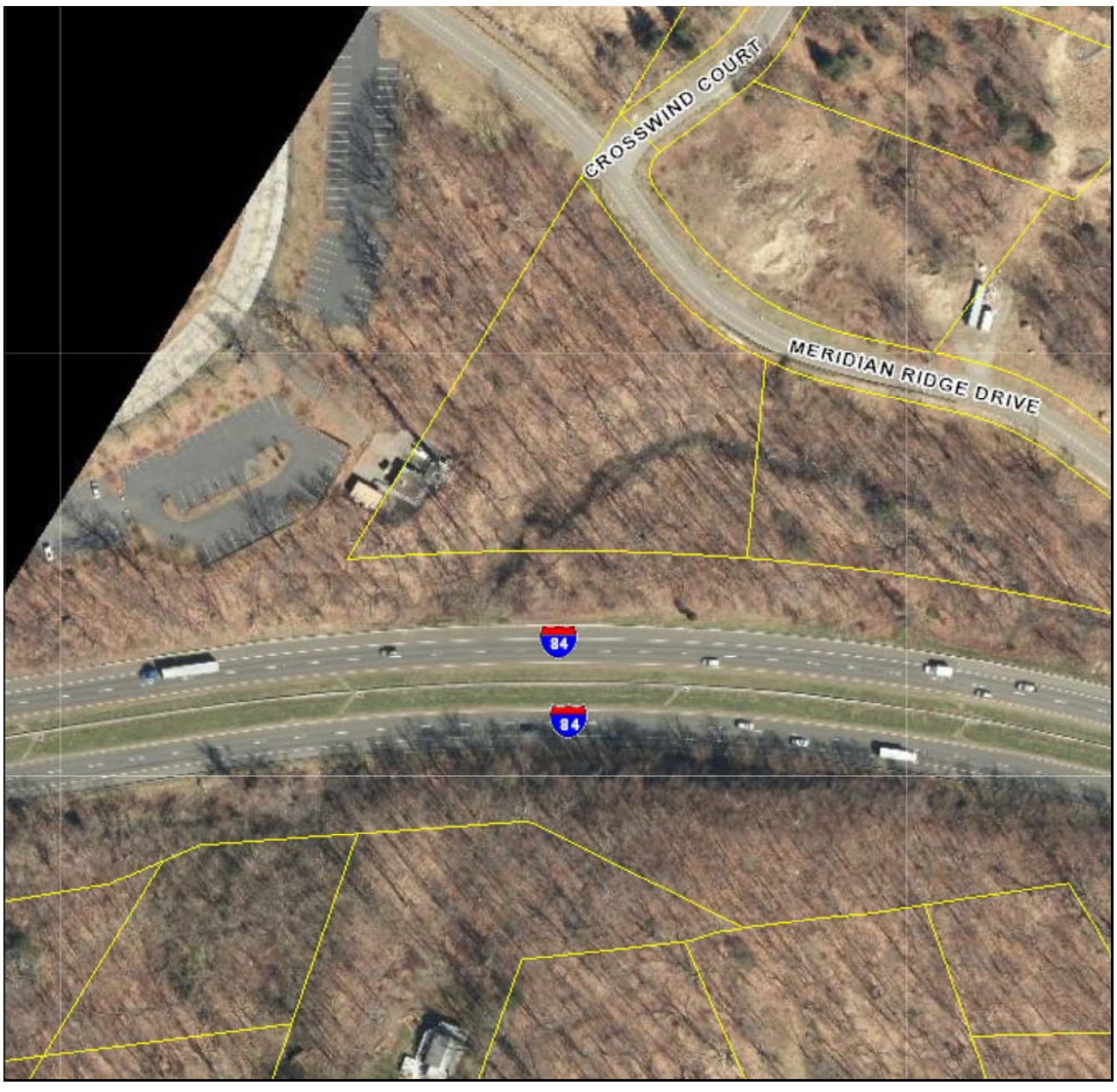
0 150 Feet

N W E S

Town of Newtown

Geographic Information System (GIS)

Date Printed: 3/22/2019



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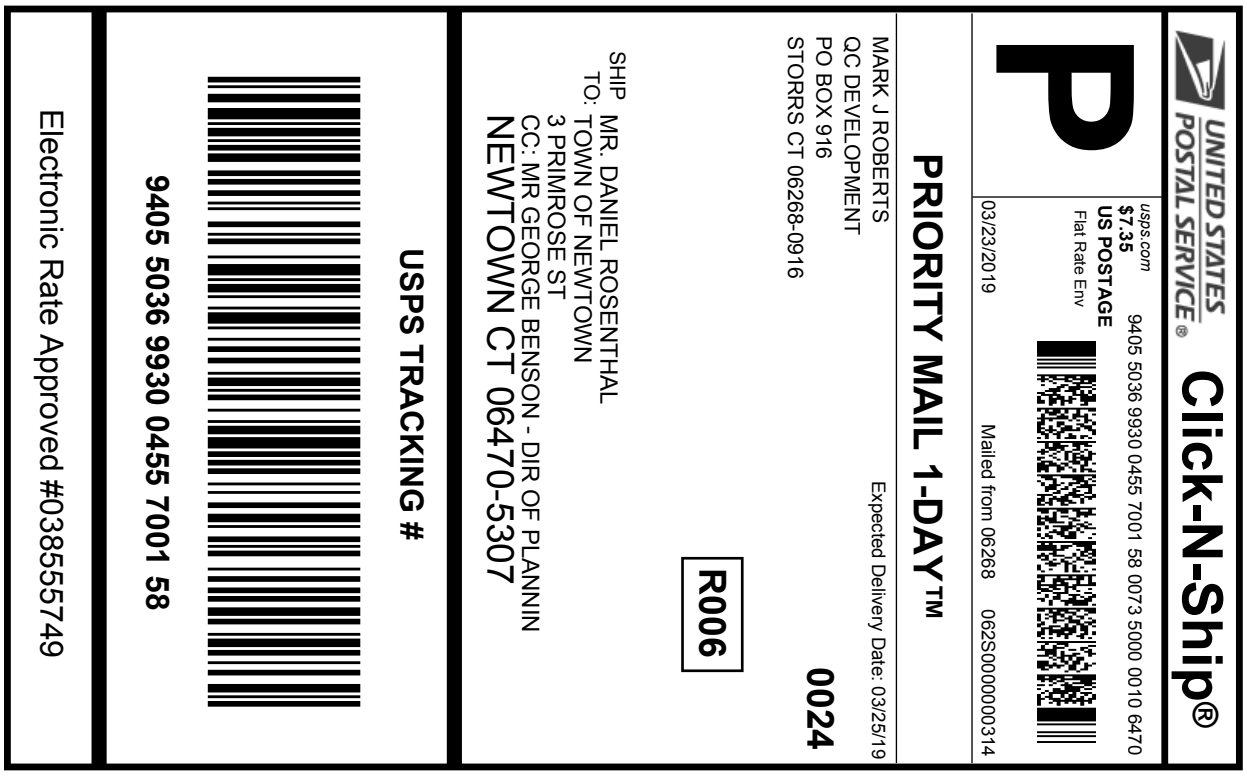
N W E S



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 0455 7001 58

Trans. #:	459828665
Print Date:	03/22/2019
Ship Date:	03/23/2019
Expected Delivery Date:	03/25/2019

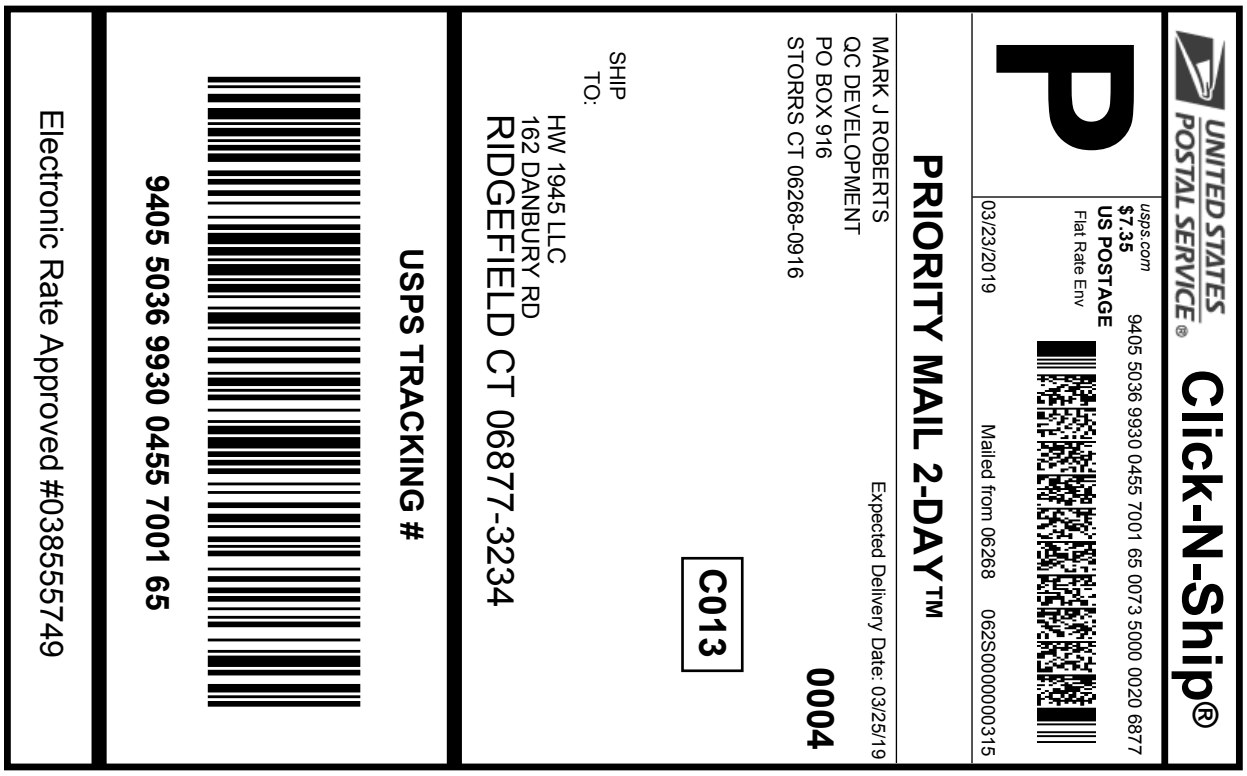
Priority Mail® Postage:	**$7.35**
Total	**$7.35**

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

To: MR. DANIEL ROSENTHAL
TOWN OF NEWTOWN
3 PRIMROSE ST
CC: MR GEORGE BENSON - DIR OF PLANNIN
NEWTOWN CT 06470-5307

* 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.

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



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Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0455 7001 65

Trans. #:	459828665
Print Date:	03/22/2019
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Total	**$7.35**

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

To: HW 1945 LLC
162 DANBURY RD
RIDGEFIELD CT 06877-3234

* 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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