



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

VIA ELECTRONIC MAIL

March 22, 2019

Kristina Cottone
Smartlink, LLC
85 Rangeway Road, Building 3, Suite 102
North Billerica, MA 01862

RE: **EM-AT&T-014-190211** – AT&T Mobility, LLC notice of intent to modify an existing telecommunications facility located at 4 Beaver Road, Branford, Connecticut.

Dear Ms. Cottone:

The Connecticut Siting Council (Council) is in receipt of your correspondence of March 21, 2019 submitted in response to the Council's February 20, 2019 notifications of an incomplete request for exempt modification with regard to the above-referenced matter.

The submissions render the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman
Executive Director

MAB/IN/emr

Robidoux, Evan

From: Kristina Cottone <kristina.cottone@smartlinkllc.com>
Sent: Thursday, March 21, 2019 9:34 AM
To: Robidoux, Evan
Cc: CSC-DL Siting Council
Subject: RE: Council 2nd Incomplete Letter for EM-AT&T-014-190211-BeaverRd-Branford
Attachments: 10035093_AE201_190213_CTL02175_REV2.pdf; STAMPED_PDF_ATT_MOBILITY__302536_Cherry_Hill-branford_CT_OAA744361_C3_02_Structural_Analysis_89.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Good morning Evan,

I have attached the requested updated CD's, as well as a new Structural Analysis to account for the mount mods, per your letter below. Please let me know if you need anything further, and also if you would like me to send you a hard copy of these as well.

Thank you,



Kristina Cottone | Real Estate Specialist
Smartlink

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North Billerica MA, 01862

(m) 978.551.8627

Kristina.cottone@Smartlinkllc.com

smartlinkllc.com

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From: Robidoux, Evan <Evan.Robidoux@ct.gov>
Sent: Wednesday, February 20, 2019 2:27 PM
To: Kristina Cottone <kristina.cottone@smartlinkllc.com>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: Council 2nd Incomplete Letter for EM-AT&T-014-190211-BeaverRd-Branford

Please see the attached correspondence.

Evan Robidoux
Clerk Typist
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

GENERAL NOTES

PART 1 – GENERAL REQUIREMENTS

- 1.1 THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
 - A. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
 - B. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
 - C. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC").
 - D. AND NFPA 101 (LIFE SAFETY CODE).
 - E. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM).
 - F. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE).
- 1.2 DEFINITIONS:
 - A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
 - B. COMPANY: AT&T CORPORATION
 - C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
 - D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
 - E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.
- 1.3 POINT OF CONTACT: COMMUNICATION BETWEEN THE COMPANY AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE COMPANY SITE DEVELOPMENT SPECIALIST OR OTHER PROJECT COORDINATOR APPOINTED TO MANAGE THE PROJECT FOR THE COMPANY.
- 1.4 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.
- 1.5 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES, AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.
 - A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.
- 1.6 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.
- 1.7 NOTICE TO PROCEED:
 - A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED.
 - B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE AT&T WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – EXECUTION

- 2.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE, POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.
- 2.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.
- 2.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HERewith, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

- 2.4 COMPANY FURNISHED MATERIAL AND EQUIPMENT: ALL HANDLING, STORAGE AND INSTALLATION OF COMPANY FURNISHED MATERIAL AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
 - A. CONTRACTOR SHALL PROCURE ALL OTHER REQUIRED WORK RELATED MATERIALS NOT PROVIDED BY AT&T TO SUCCESSFULLY CONSTRUCT A WIRELESS FACILITY.
- 2.5 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.
- 2.6 EXISTING CONDITIONS: NOTIFY THE COMPANY REPRESENTATIVE OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

PART 3 – RECEIPT OF MATERIAL & EQUIPMENT

- 3.1 RECEIPT OF MATERIAL AND EQUIPMENT: CONTRACTOR IS RESPONSIBLE FOR AT&T PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
 - A. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
 - B. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
 - C. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
 - D. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO AT&T OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
 - E. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
 - F. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

PART 4 – GENERAL REQUIREMENTS FOR CONSTRUCTION

- 4.1 CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.
- 4.2 EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.
- 4.3 CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
 - A. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
 - B. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.
- 4.4 CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION.
- 4.5 CONDUCT TESTING AS REQUIRED HEREIN.

PART 5 – TESTS AND INSPECTIONS

- 5.1 TESTS AND INSPECTIONS:
 - A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.
 - B. CONTRACTOR SHALL COORDINATE TEST AND INSPECTION SCHEDULES WITH COMPANY'S REPRESENTATIVE WHO MUST BE ON SITE TO WITNESS SUCH TESTS AND INSPECTIONS.
 - C. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
 - D. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
 - E. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.

- F. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
- G. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

PART 6 – TRENCHING AND BACKFILLING

- 6.1 TRENCHING AND BACKFILLING: THE CONTRACTOR SHALL PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCES ENCOUNTERED, TO THE DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS OTHERWISE SPECIFIED.
 - A. PROTECTION OF EXISTING UTILITIES: THE CONTRACTOR SHALL CHECK WITH THE LOCAL UTILITIES AND THE RESPECTIVE UTILITY LOCATOR COMPANIES PRIOR TO STARTING EXCAVATION OPERATIONS IN EACH RESPECTIVE AREA TO ASCERTAIN THE LOCATIONS OF KNOWN UTILITY LINES. THE LOCATIONS, NUMBER AND TYPES OF EXISTING UTILITY LINES DETAILED ON THE CONSTRUCTION DRAWINGS ARE APPROXIMATE AND DO NOT REPRESENT EXACT INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL LINES DAMAGED DURING EXCAVATION AND ALL ASSOCIATED OPERATIONS. ALL UTILITY LINES UNCOVERED DURING THE EXCAVATION OPERATIONS, SHALL BE PROTECTED FROM DAMAGE DURING EXCAVATION AND ASSOCIATED OPERATIONS. ALL REPAIRS SHALL BE APPROVED BY THE UTILITY COMPANY.
 - B. HAND DIGGING: UNLESS APPROVED IN WRITING OTHERWISE, ALL DIGGING WITHIN AN EXISTING CELL SITE COMPOUND IS TO BE DONE BY HAND.
 - C. DURING EXCAVATION, MATERIAL SUITABLE FOR BACKFILLING SHALL BE STOCKPILED IN AN ORDERLY MANNER A SUFFICIENT DISTANCE FROM THE BANKS OF THE TRENCH TO AVOID OVERLOADING AND TO PREVENT SLIDES OR CAVE-INS. ALL EXCAVATED MATERIALS NOT REQUIRED OR SUITABLE FOR BACKFILL SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
 - D. GRADING SHALL BE DONE AS MAY BE NECESSARY TO PREVENT SURFACE WATER FROM FLOWING INTO TRENCHES OR OTHER EXCAVATIONS, AND ANY WATER ACCUMULATING THEREIN SHALL BE REMOVED BY PUMPING OR BY OTHER APPROVED METHOD.
 - E. SHEETING AND SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. UNLESS OTHERWISE INDICATED, EXCAVATION SHALL BE BY OPEN CUT, EXCEPT THAT SHORT SECTIONS OF A TRENCH MAY BE TUNNELED IF, THE CONDUIT CAN BE SAFELY AND PROPERLY INSTALLED AND BACKFILL CAN BE PROPERLY TAMPED IN SUCH TUNNEL SECTIONS. EARTH EXCAVATION SHALL COMPRISE ALL MATERIALS AND SHALL INCLUDE CLAY, SILT, SAND, MUCK, GRAVEL, HARDPAN, LOOSE SHALE, AND LOOSE STONE.
 - F. TRENCHES SHALL BE OF NECESSARY WIDTH FOR THE PROPER LAYING OF THE CONDUIT OR CABLE, AND THE BANKS SHALL BE AS NEARLY VERTICAL AS PRACTICABLE. THE BOTTOM OF THE TRENCHES SHALL BE ACCURATELY GRADED TO PROVIDE UNIFORM BEARING AND SUPPORT FOR EACH SECTION OF THE CONDUIT OR CABLE ON UNDISTURBED SOIL AT EVERY POINT ALONG ITS ENTIRE LENGTH. EXCEPT WHERE ROCK IS ENCOUNTERED, CARE SHALL BE TAKEN NOT TO EXCAVATE BELOW THE DEPTHS INDICATED. WHERE ROCK EXCAVATIONS ARE NECESSARY, THE ROCK SHALL BE EXCAVATED TO A MINIMUM OVER DEPTH OF 6 INCHES BELOW THE TRENCH DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR SPECIFIED. OVER DEPTHS IN THE ROCK EXCAVATION AND UNAUTHORIZED OVER DEPTHS SHALL BE THOROUGHLY BACK FILLED AND TAMPED TO THE APPROPRIATE GRADE. WHENEVER WET OR OTHERWISE UNSTABLE SOIL THAT IS INCAPABLE OF PROPERLY SUPPORTING THE CONDUIT OR CABLE IS ENCOUNTERED IN THE BOTTOM OF THE TRENCH, SUCH SOLID SHALL BE REMOVED TO A MINIMUM OVER DEPTH OF 6 INCHES AND THE TRENCH BACKFILLED TO THE PROPER GRADE WITH EARTH OF OTHER SUITABLE MATERIAL, AS HEREINAFTER SPECIFIED.
 - G. BACKFILLING OF TRENCHES. TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL SPECIFIED TESTS HAVE BEEN PERFORMED AND ACCEPTED. WHERE COMPACTED BACKFILL IS NOT INDICATED THE TRENCHES SHALL BE CAREFULLY BACKFILLED WITH SELECT MATERIAL SUCH AS EXCAVATED SOILS THAT ARE FREE OF ROOTS, SOD, RUBBISH OR STONES, DEPOSITED IN 6 INCH LAYERS AND THOROUGHLY AND CAREFULLY RAMMED UNTIL THE CONDUIT OR CABLE HAS A COVER OF NOT LESS THAN 1 FOOT. THE REMAINDER OF THE BACKFILL MATERIAL SHALL BE GRANULAR IN NATURE AND SHALL NOT CONTAIN ROOTS, SOD, RUBBING, OR STONES OF 2-1/2 INCH MAXIMUM DIMENSION. BACKFILL SHALL BE CAREFULLY PLACED IN THE TRENCH AND IN 1 FOOT LAYERS AND EACH LAYER TAMPED. SETTLING THE BACKFILL WITH WATER WILL BE PERMITTED. THE SURFACE SHALL BE GRADED TO A REASONABLE UNIFORMITY AND THE MOUNDING OVER THE TRENCHES LEFT IN A UNIFORM AND NEAT CONDITION.

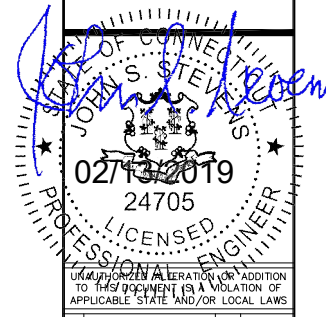
SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	SURFACE MOUNTED PANEL BOARD
	TRANSFORMER
	KILOWATT HOUR METER
	JUNCTION BOX
	PULL BOX TO NEC/TELCO STANDARDS
-----	UNDERGROUND UTILITIES
	EXOTHERMIC WELD CONNECTION
	MECHANICAL CONNECTION
	GROUND ROD
	GROUND ROD WITH INSPECTION SLEEVE
	GROUND BAR
	120AC DUPLEX RECEPTACLE
	GROUND CONDUCTOR
	DC POWER AND FIBER OPTIC TRUNK CABLES
	DC POWER CABLES

REPRESENTS DETAIL NUMBER
 REF. DRAWING NUMBER

ABBREVIATIONS

CIGBE	COAX ISOLATED GROUND BAR EXTERNAL
MIGB	MASTER ISOLATED GROUND BAR
SST	SELF SUPPORTING TOWER
GPS	GLOBAL POSITIONING SYSTEM
TYP.	TYPICAL
DWG	DRAWING
BCW	BARE COPPER WIRE
BFG	BELOW FINISH GRADE
PVC	POLYVINYL CHLORIDE
CAB	CABINET
C	CONDUIT
SS	STAINLESS STEEL
G	GROUND
AWG	AMERICAN WIRE GAUGE
RGS	RIGID GALVANIZED STEEL
AHJ	AUTHORITY HAVING JURISDICTION
TTLNA	TOWER TOP LOW NOISE AMPLIFIER
UNO	UNLESS NOTED OTHERWISE
EMT	ELECTRICAL METALLIC TUBING
AGL	ABOVE GROUND LEVEL

INFINIGY
 INFINIGY ENGINEERING, PLLC
 1033 Waterlily Shaker Rd
 Albany, NY 12205
 Office # (518) 690-0790
 Fax # (518) 690-0793



No.	Submittal / Revision	App'd	Date
2	REVISED FOR PERMIT	BMM	02/13/19
1	ISSUED FOR PERMIT	BMM	01/23/19
0	ISSUED FOR REVIEW	BMM	01/02/19

Drawn: BMM Date: 01/02/19
 Designed: ASW Date: 01/02/19
 Checked: AB Date: 01/02/19
 Project Number: 1106-A0001-C

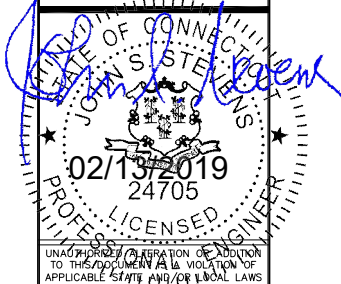
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BRANFORD WEST
 CTL02175
 FA# 10035093
 4 BEAVER ROAD
 BRANFORD, CT 06405

Prepared For:

Drawing Scale:
AS NOTED
 Date:
02/13/19

Drawing Title:
GENERAL NOTES

Drawing Number:
C1



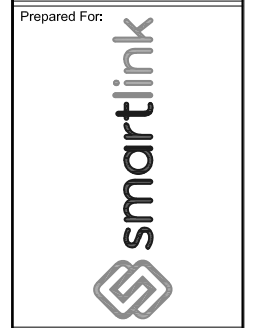
UNLAWFUL TO REPRODUCE OR TRANSMIT IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. VIOLATION OF APPLICABLE STATE AND/OR LOCAL LAWS.

No.	Submittal / Revision	App'd	Date
2	REVISED FOR PERMIT	BMM	02/13/19
1	ISSUED FOR PERMIT	BMM	01/23/19
0	ISSUED FOR REVIEW	BMM	01/02/19

Drawn: BMM Date: 01/02/19
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 Checked: AD Date: 01/02/19

Project Number: 1106-A0001-C

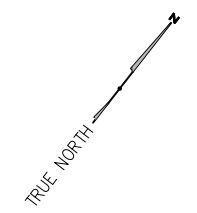
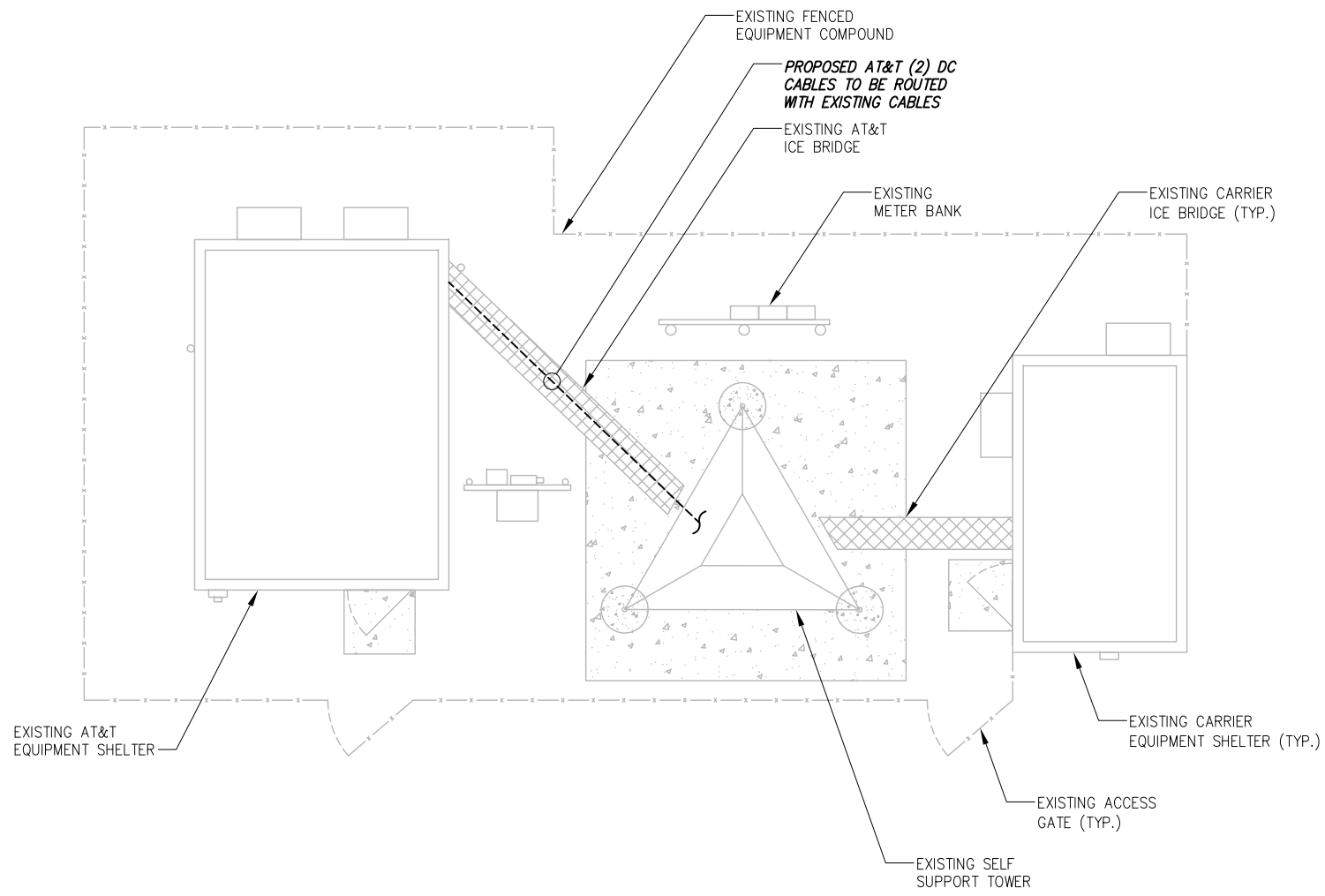
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BRANFORD WEST
 CTL02175
 FA# 10035093
 4 BEAVER ROAD
 BRANFORD, CT 06405



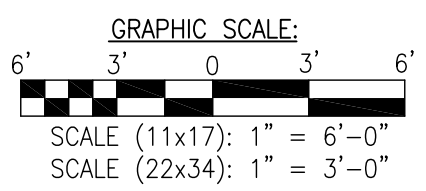
Drawing Scale: AS NOTED
CD
 Date: 02/13/19

Drawing Title:
OVERALL & ENLARGED SITE PLAN

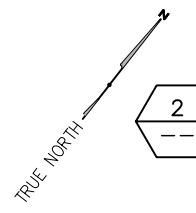
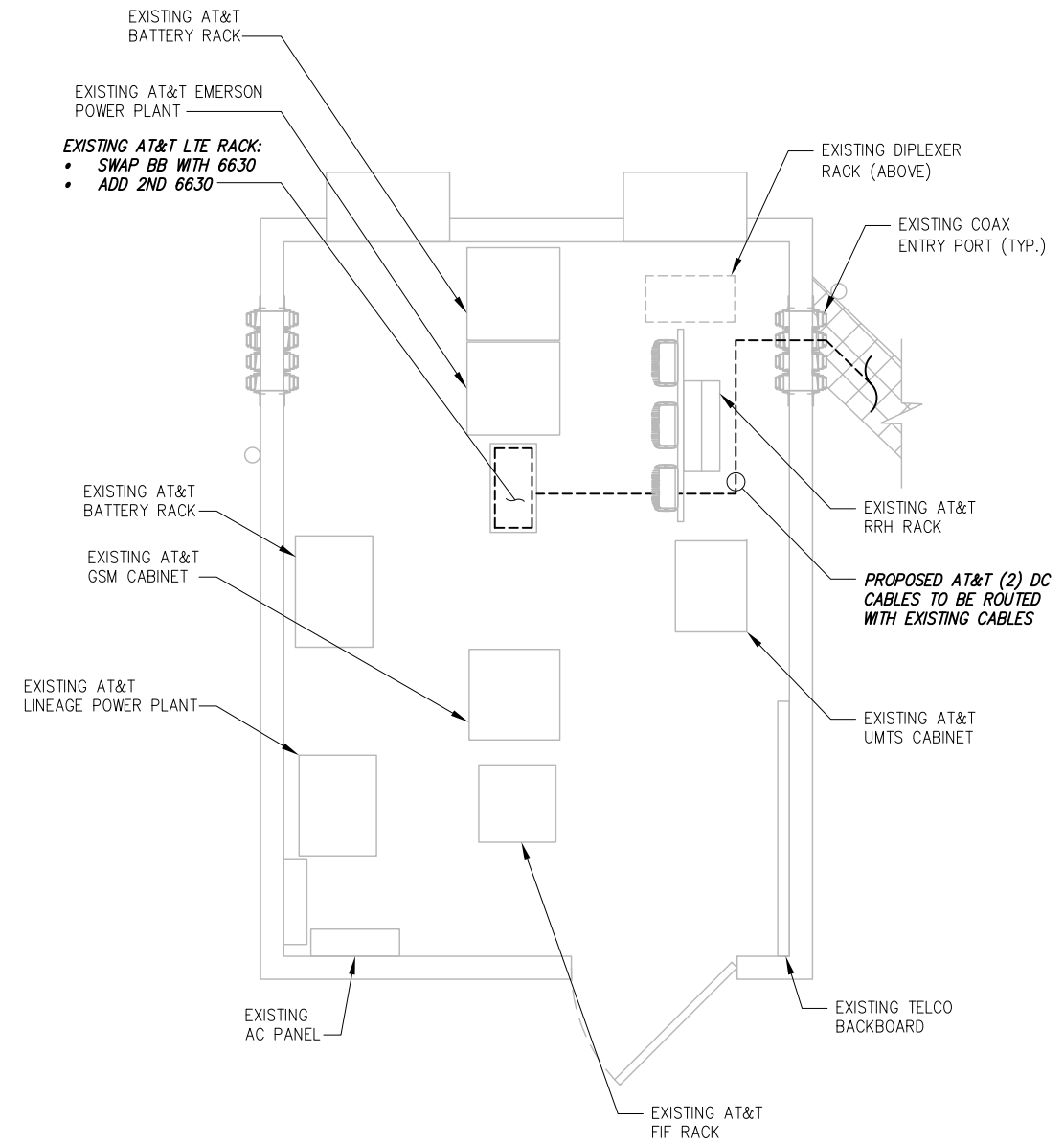
Drawing Number:
C2



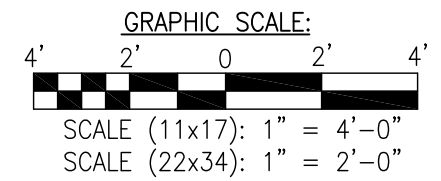
1 SITE PLAN
 SCALE: AS NOTED

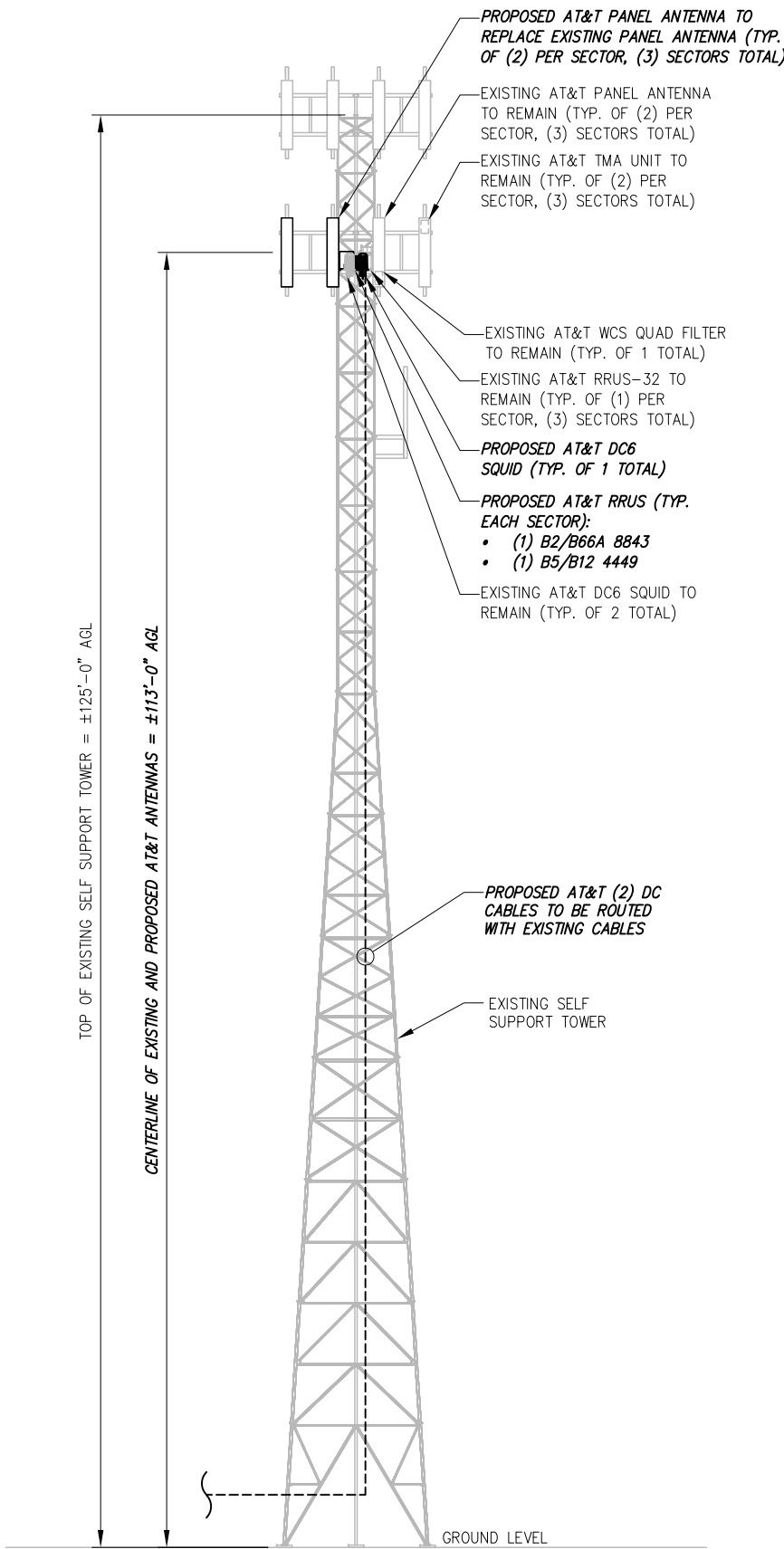


BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING ON 11/26/18 AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.



2 ENLARGED EQUIPMENT PLAN
 SCALE: AS NOTED





1 ELEVATION VIEW
NOT TO SCALE

NOTE:

- INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY WITH RESULTS OF PASSING STRUCTURAL ANALYSIS.
- FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNT, SEE 'POST MOD MOUNT ANALYSIS REPORT' COMPLETED BY INFINIGY, DATED 01/31/19. SEE SHEETS S1-S2 FOR ADDITIONAL MODIFICATION DETAILS.

SEPARATION NOTE:

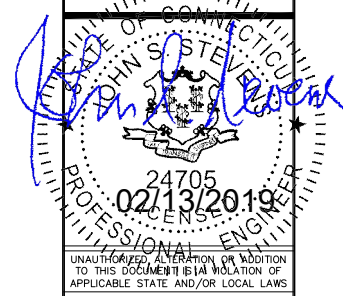
- 3 FEET MINIMUM SEPARATION BETWEEN LTE ANTENNA
- 6 FEET MINIMUM SEPARATION BETWEEN 700BC & 700 DE

FINAL ANTENNA CONFIGURATION & CABLE SCHEDULE BASED ON LTE RFDS DATED 12/14/18, V 2.00

SECTOR	ANTENNA POSITION	ANTENNA STATUS & TECHNOLOGY	ANTENNA MANF/MODEL	TMA/DIPLEXER	RRUS	AZIMUTH	ANTENNA CL HEIGHT	CABLE FEEDER		RAYCAP UNIT
								TYPE	LENGTH	
ALPHA	A-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) LGP21401	--	143°	±113'	(2) (E) 1-5/8" COAX	±125'	(2) (E) DC6 'SQUID' (1) (P) DC6 'SQUID'
	A-2	(E) LTE WCS	ANDREW SBNHH-1D65A	(1) (E) QUAD WCS FILTER	(1) (E) RRUS-32	23°	±113'	(2) (E) 1-5/8" COAX (1) (E) FIBER CABLE (2) (E) DC CABLES	--	
	A-3	(P) LTE 1900	KATHREIN 800-10964	--	(1) (P) B2/B66A 8843	23°	±113'	(1) (P) FIBER CABLES (2) (P) DC CABLES	--	
	A-4	(P) LTE 700/850/WCS /5G 850	KATHREIN 800-10964	--	(1) (P) B5/B12 4449	23°	±113'	SEE A-2 FOR CABLE INFORMATION	--	
BETA	B-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) LGP21401	--	263°	±113'	(2) (E) 1-5/8" COAX	±125'	
	B-2	(E) LTE WCS	ANDREW SBNHH-1D65A	--	(1) (E) RRUS-32	143°	±113'	(2) (E) 1-5/8" COAX	--	
	B-3	(P) LTE 1900	KATHREIN 800-10964	--	(1) (P) B2/B66A 8843	143°	±113'	SEE A-2 FOR CABLE INFORMATION	--	
	B-4	(P) LTE 700/850/WCS /5G 850	KATHREIN 800-10964	--	(1) (P) B5/B12 4449	143°	±113'	SEE A-2 FOR CABLE INFORMATION	--	
GAMMA	G-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) LGP21401	--	23°	±113'	(2) (E) 1-5/8" COAX	±125'	
	G-2	(E) LTE WCS	ANDREW SBNHH-1D65A	--	(1) (E) RRUS-32	263°	±113'	(2) (E) 1-5/8" COAX	--	
	G-3	(P) LTE 1900	KATHREIN 800-10964	--	(1) (P) B2/B66A 8843	263°	±113'	(1) (E) FIBER CABLE (2) (E) DC CABLES	--	
	G-4	(P) LTE 700/850/WCS /5G 850	KATHREIN 800-10964	--	(1) (P) B5/B12 4449	263°	±113'	SEE A-2 FOR CABLE INFORMATION	--	

2 AT&T ANTENNA SCHEDULE
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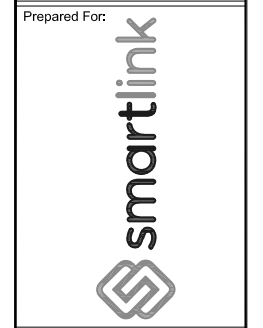
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1106-A0001-C

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FA# 10035093
4 BEAVER ROAD
BRANFORD, CT 06405

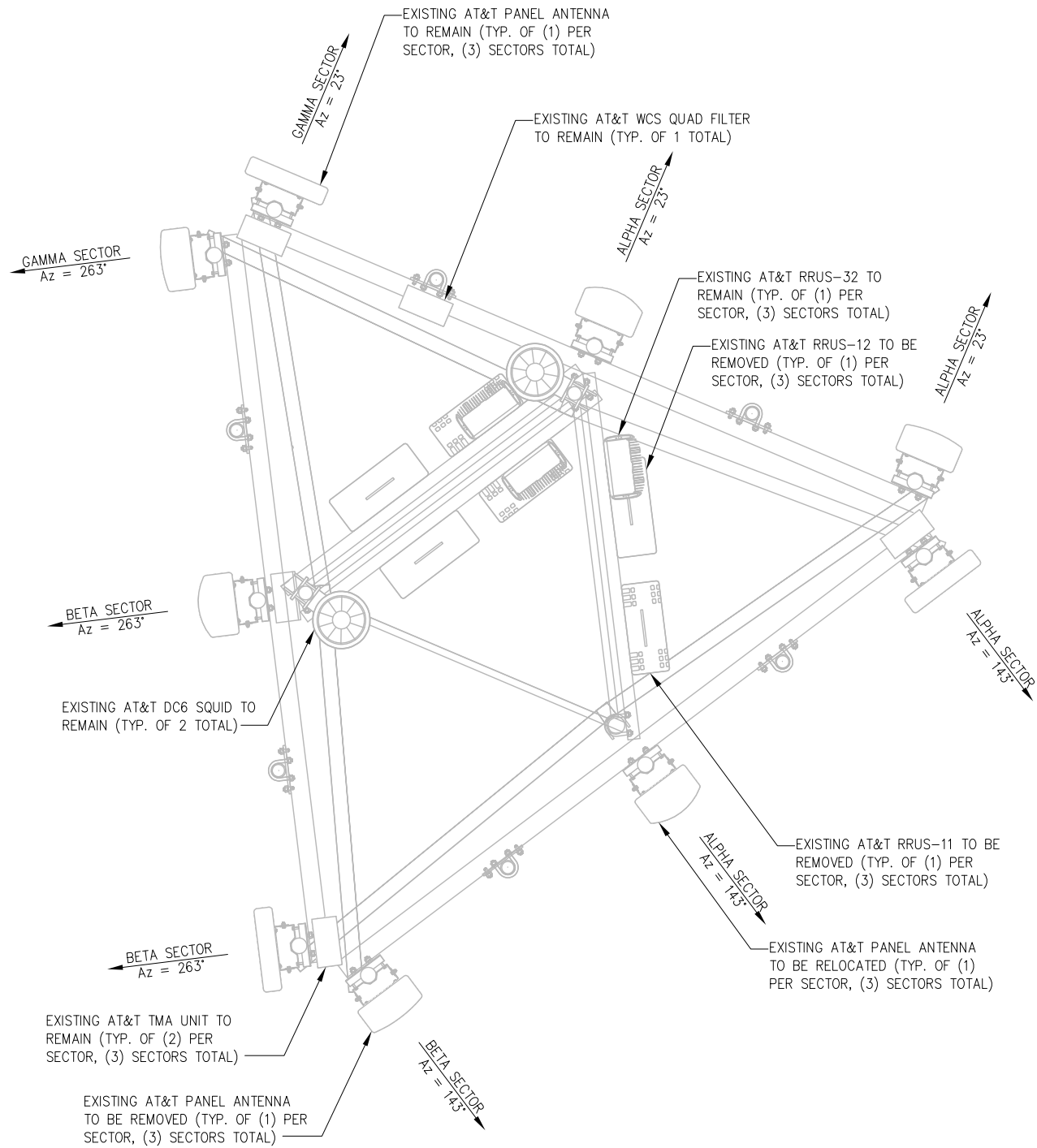


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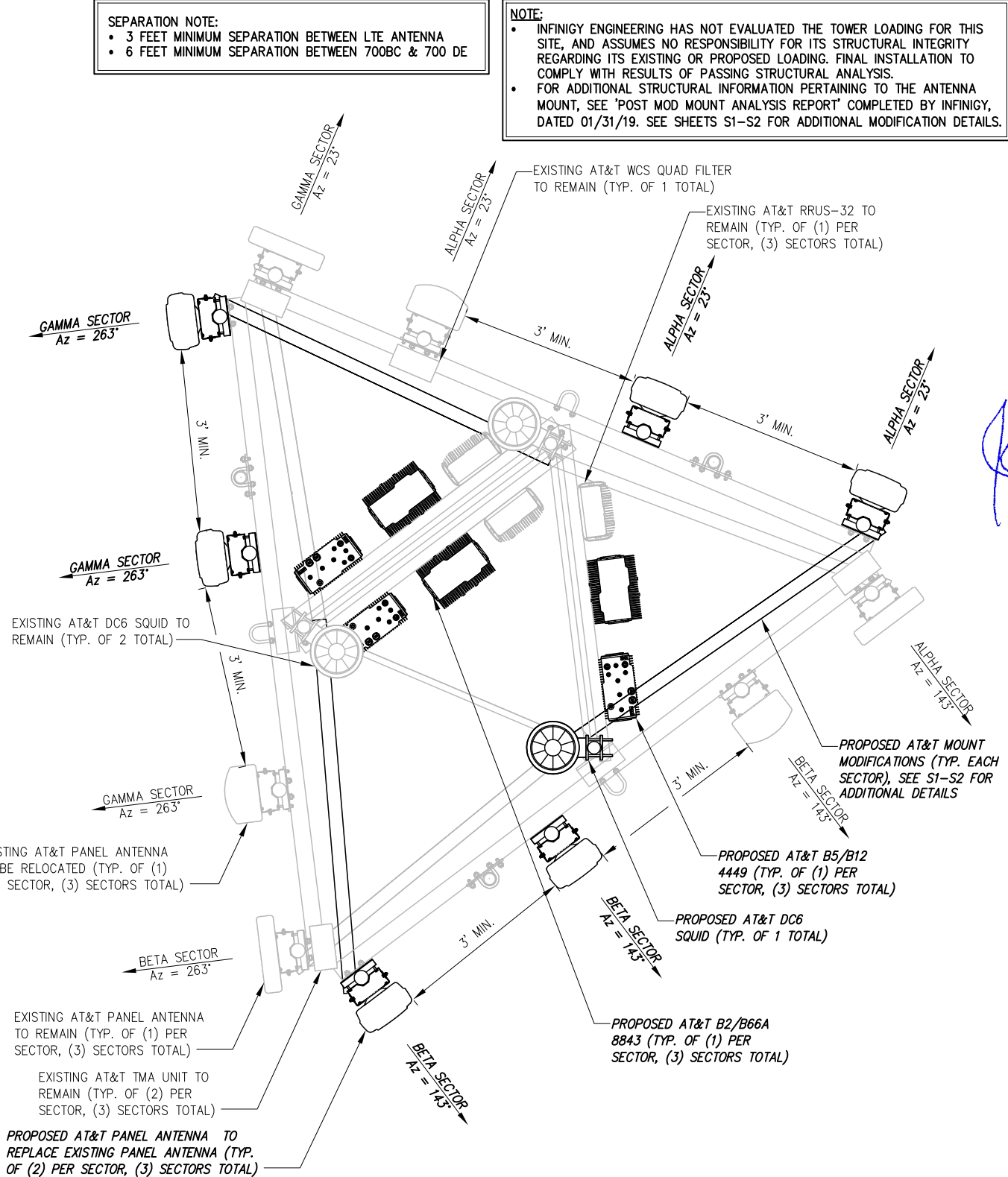
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Drawing Title:
ELEVATION VIEW

Drawing Number:
C3



1 ANTENNA ORIENTATION PLAN (EXISTING)
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2 PROPOSED ANTENNA ORIENTATION PLAN
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02413/2019
PROFESSIONAL ENGINEER
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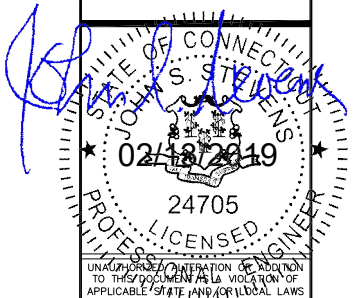
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Prepared For: smartlink

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Date: 02/13/19
Drawing Title: ANTENNA ORIENTATION PLAN
Drawing Number: C4



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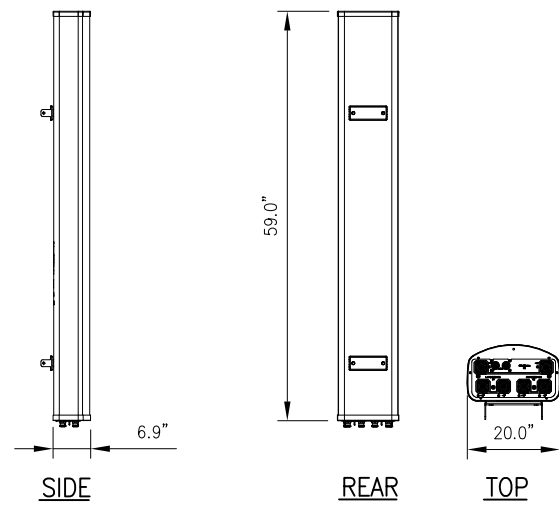
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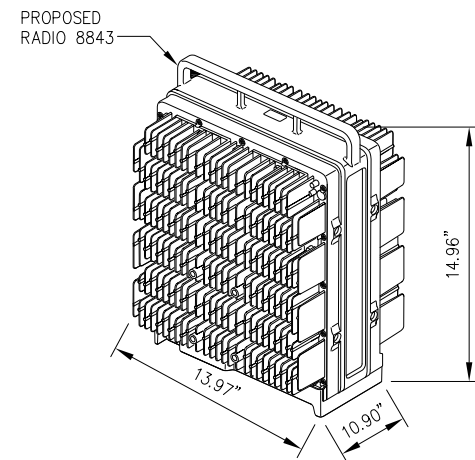
Drawing Title:
EQUIPMENT DETAILS

Drawing Number:
C5



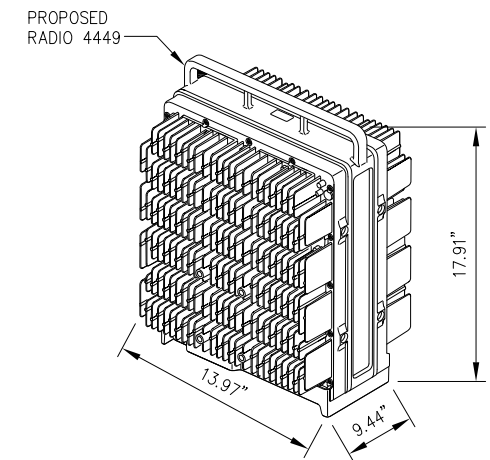
KATHREIN MODEL NO.:	800-10964
RADOME MATERIAL:	FIBERGLASS,
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	59.0"x20.0"x6.9"
WEIGHT, W/ PRE-MOUNTED BRACKETS:	113.0 LBS
CONNECTOR:	7-16 DIN FEMALE

1 ANTENNA DETAIL
 NOT TO SCALE



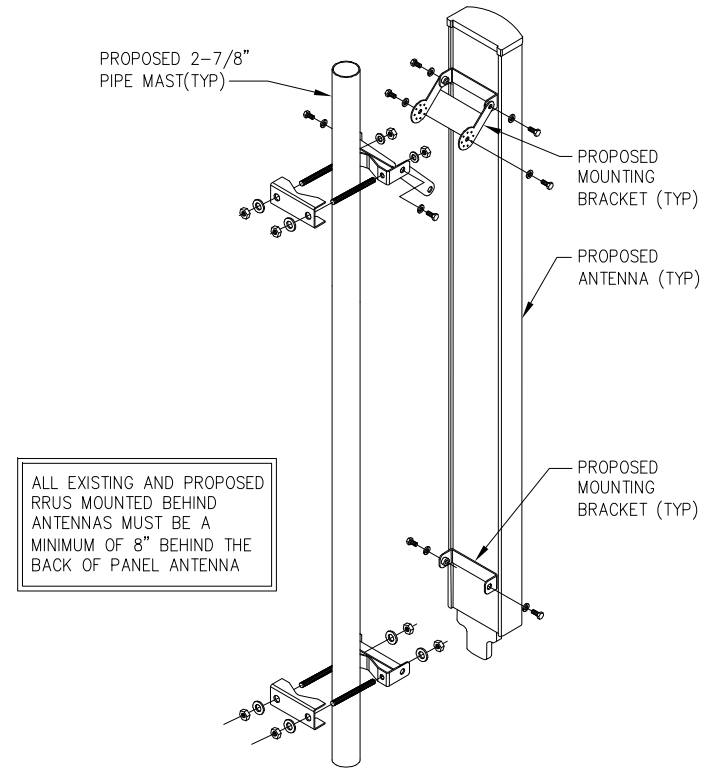
RADIO 8843 SPECIFICATIONS
• HxWxD, (INCHES) : 14.96"x13.97"x10.90"
• WEIGHT (LBS) : 71.87
• COLOR : GRAY

2 ERICSSON RADIO 8843 DETAIL
 NOT TO SCALE

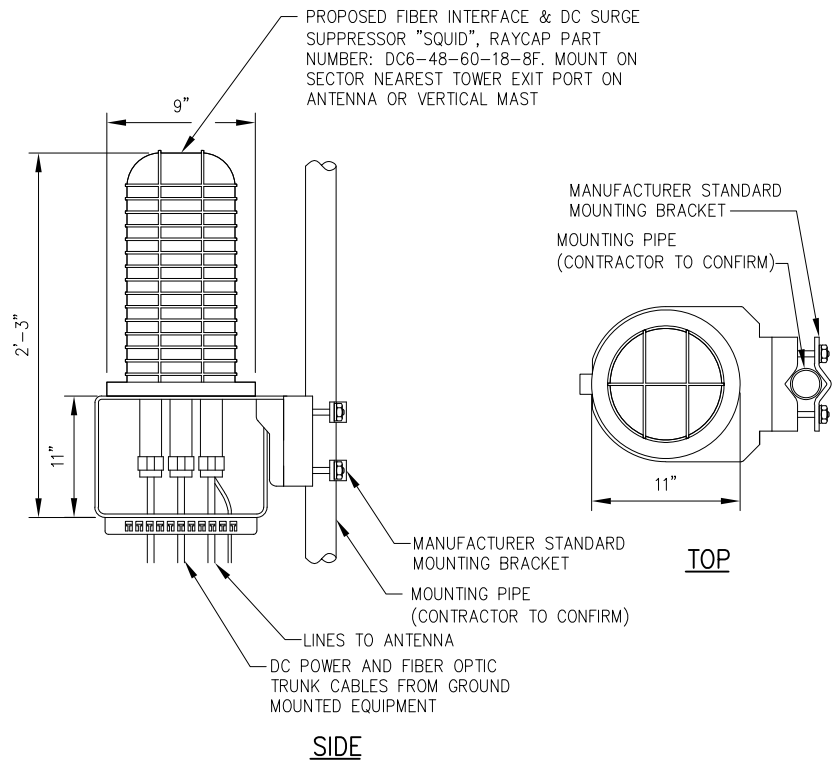


RADIO 4449 SPECIFICATIONS
• HxWxD, (INCHES) : 17.91"x13.97"x9.44"
• WEIGHT (LBS) : 70.54
• COLOR : GRAY

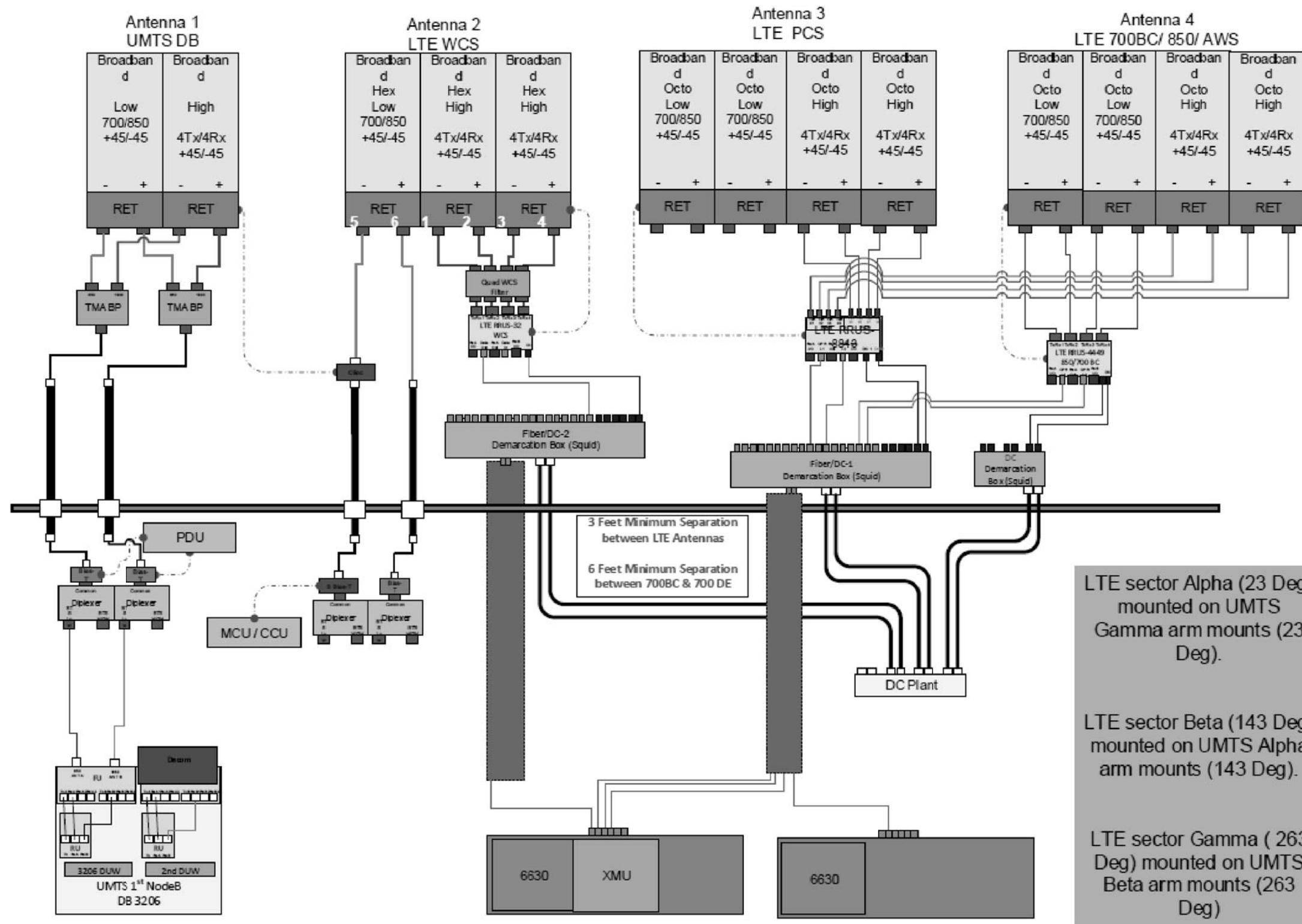
3 ERICSSON RADIO 4449 DETAIL
 NOT TO SCALE



4 MOUNTING DETAIL
 NOT TO SCALE



5 SQUID DETAIL
 NOT TO SCALE



LTE sector Alpha (23 Deg) mounted on UMTS Gamma arm mounts (23 Deg).

LTE sector Beta (143 Deg) mounted on UMTS Alpha arm mounts (143 Deg).

LTE sector Gamma (263 Deg) mounted on UMTS Beta arm mounts (263 Deg).

ALPHA/BETA/GAMMA

1 PLUMBING DIAGRAM (FINAL CONFIGURATION)
 -- NOT TO SCALE

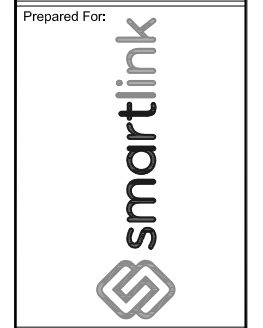


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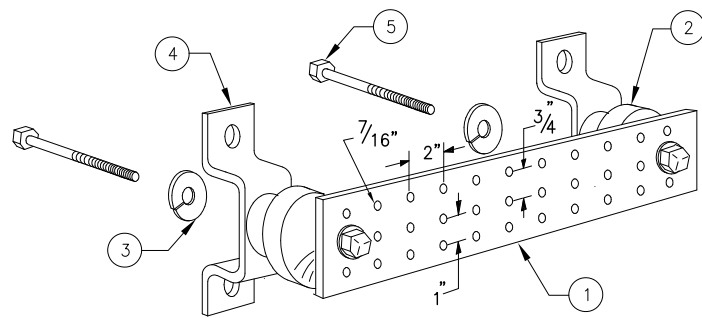
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Drawing Title:
PLUMBING DIAGRAM

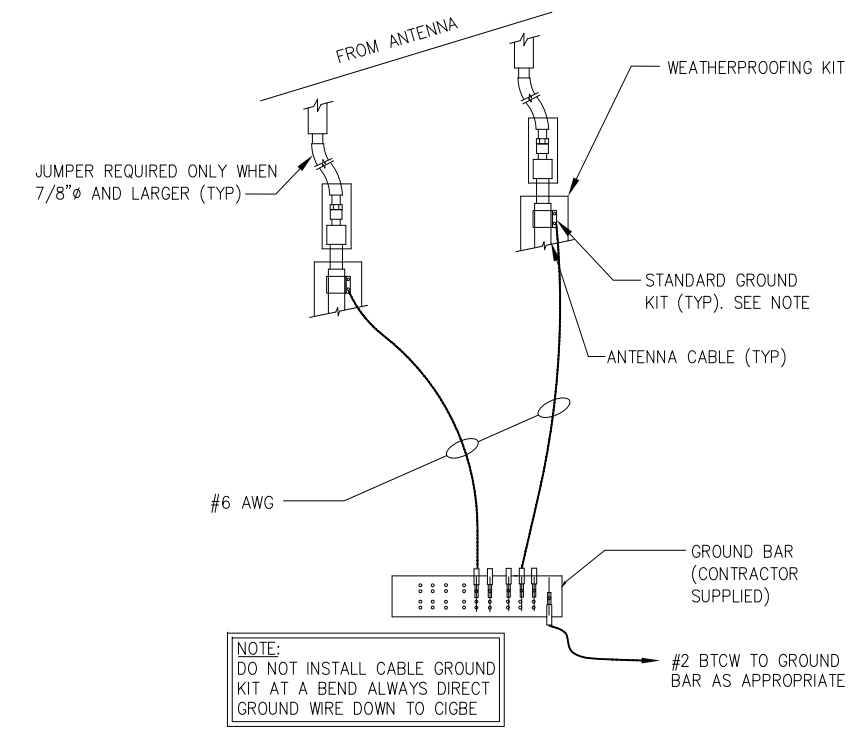
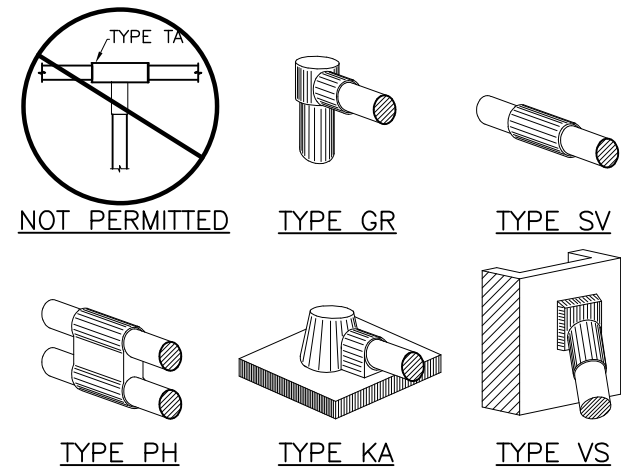
Drawing Number:
C6

*BASED ON LTE RFDS, V. 2.0, DATED 12/14/18

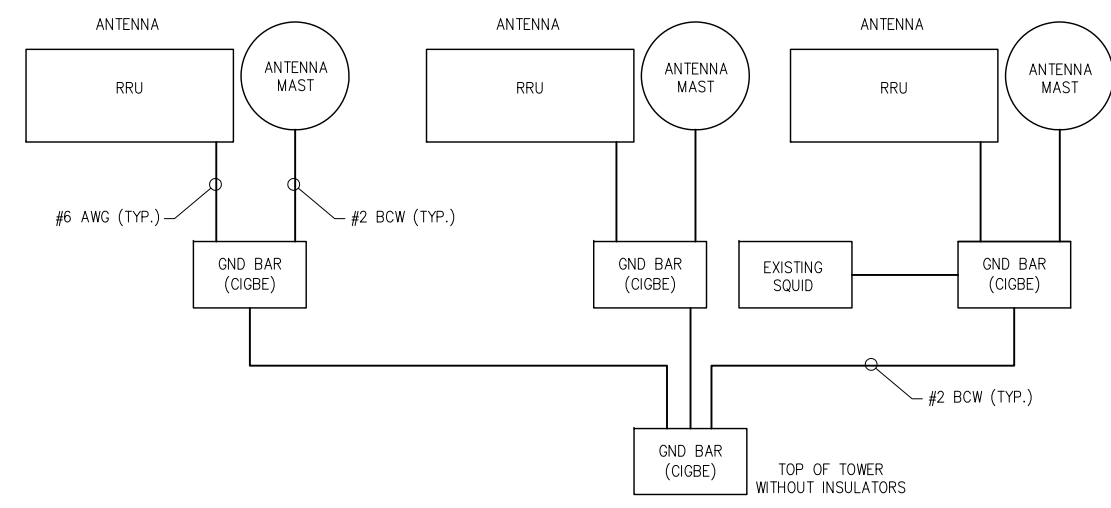


LEGEND

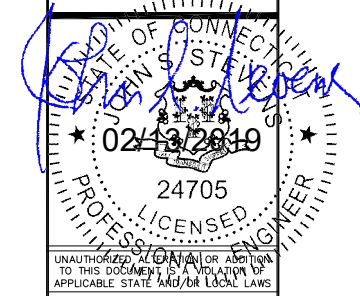
- 1 - SOLID TINNED COPPER GROUND BAR, 1/4"x 4"x 20" MIN., NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
- 2 - INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
- 3 - 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
- 4 - WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056
- 5 - 5/8-11 X 1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1
- 6 - GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY
- 7 - GROUND BARS SHALL NEITHER BE FIELD FABRICATED NOR NEW HOLES DRILLED
- 8 - GROUND LUGS SHALL MATCH THE HOLE SPACING ON THE BAR
- 9 - HARDWARE DIAMETER SHALL BE MINIMUM 3/8"



NOTE:
DO NOT INSTALL CABLE GROUND KIT AT A BEND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE



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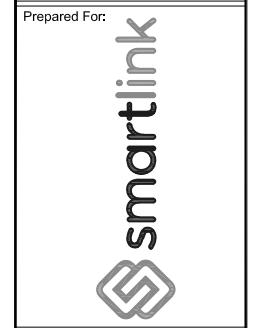


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BRANFORD WEST
CTL02175
FA# 10035093
4 BEAVER ROAD
BANFORD, CT 06405



Drawing Scale: AS NOTED
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Drawing Title:
GROUNDING DETAILS

Drawing Number:
C7

GENERAL NOTES:

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA-222 STANDARD, AWWA-D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
2. ALL CONSTRUCTION METHODS SHOULD FOLLOW STANDARDS OF GOOD CONSTRUCTION PRACTICE.
3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
5. ANY CHANGES OR ADDITIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL CHANGES OR ADDITIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA-1019-A-2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.
7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT INFINIGY ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES, AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVALITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS' RECOMMENDATIONS.
3. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
5. ALL STEEL MEMBERS AND CONNECTIONS SHALL MEET THE FOLLOWING GRADES:
 - ANGLES, CHANNELS, PLATES AND BARS TO BE A36. Fy=36 KSI, U.N.O.
 - W SHAPES TO BE A992. Fy=50 KSI, U.N.O.
 - RECTANGULAR HSS TO BE A500, GRADE B. Fy=46 KSI, U.N.O.
 - ROUND HSS TO BE A500, GRADE B. Fy=42 KSI, U.N.O.
 - STEEL PIPE TO BE A53, GRADE B. Fy=35 KSI, U.N.O.
 - BOLTS TO BE A325-X. Fu=120 KSI, U.N.O.
 - U-BOLTS AND LAG SCREWS TO BE A307 GR A. Fu=60 KSI, U.N.O.
6. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, U.N.O.
7. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
8. ALL HILTI ANCHORS TO BE CARBON STEEL, U.N.O.
 - MECHANICAL ANCHORS: KWIK BOLT-TZ, U.N.O.
 - CMU BLOCK ANCHORS: ADHESIVE - HY120, U.N.O.
 - CONCRETE ANCHORS: ADHESIVE - HY150, U.N.O.
 - CONCRETE REBAR: ADHESIVE - RE600, U.N.O.
9. ALL STUDS TO BE NELSON CAPACITOR DISCHARGE 1/4"-20 LOW CARBON STEEL COPPER-FLASH AT 55 KSI ULT/50 KSI YIELD, U.N.O.
10. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
11. MINIMUM EDGE DISTANCES SHALL CONFORM TO AISC TABLE J3.4.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR IS NOT PERMITTED.
2. EXISTING CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH NEW PROPOSED CONCRETE SHOULD BE WIRE BRUSHED CLEAN AND TREATED WITH APPROPRIATE MECHANICAL SCRATCH COAT AND REPAIR MATERIALS OR APPROPRIATE CHEMICAL METHODS SUCH AS THE APPLICATION OF A BONDING AGENT, EX. SAKRETE OR EQUIVALENT, TO ENSURE A QUALITY BOND BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.

FIBER REINFORCED POLYMER (FRP) NOTES:

1. FRP PLATES, SHAPES, BOLTS AND NUTS (STUD/NUT ASSEMBLIES) SHALL CONFORM TO ASTM D638, 695, 790. PLATES AND SHAPES TO BE FY = 5.35 KSI LW (SAFETY FACTOR OF 8), .945 KSI CW (SAFETY FACTOR OF 8) MIN.
2. IF FIELD FABRICATION IS REQUIRED, ALL CUT EDGES AND DRILLED HOLES TO BE SEALED USING VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
3. ALL FASTENERS TO BE 1/2" DIA FRP THREADED ROD WITH FIBER REINFORCED THERMOPLASTIC NUT, SPACED AT 12 INCHES ON CENTER MAXIMUM, U.N.O., FOR PANELS AND AS DESIGNED FOR STRUCTURAL MEMBERS.
4. THE COLOR AND SURFACE PATTERN OF EXPOSED FRP PANELS SHALL MATCH THE EXTERIOR OF THE EXISTING BUILDING, U.N.O.
5. STUD/NUT ASSEMBLIES SHOULD BE LUBRICATED FOR INSTALLATION
6. ENSURE BEARING SURFACES OF THE NUTS ARE PARALLEL TO THE SURFACES BEING FASTENED.
7. TORQUE BOLTS ACCORDING TO THE FOLLOWING TABLE:

INSTALLATION TORQUE TABLE		
SIZE	ULTIMATE TORQUE STRENGTH	RECOMMENDED MAXIMUM INSTALLATION TORQUE
3/8-16 UNC	8 FT-LBS	4 FT-LBS
1/2-13 UNC	18 FT-LBS	8 FT-LBS
5/8-11 UNC	35 FT-LBS	16 FT-LBS
3/4-10 UNC	50 FT-LBS	24 FT-LBS
1-8 UNC	110 FT-LBS	50 FT-LBS

8. WHEN TIGHTENING FRP STUD/NUT ASSEMBLIES, WRENCHES MUST MAKE FULL CONTACT WITH ALL NUT EDGES. A STANDARD SIX POINT SOCKET IS RECOMMENDED.
9. STUD/NUT ASSEMBLIES SHOULD BE BONDED BY APPLYING BONDING AGENT TO ENTIRE NUT AND EXPOSED STUD.
10. ALL FRP MATERIALS TO BE PROVIDED BY FIBERGRATE COMPOSITE STRUCTURES, DALLAS TX, OR APPROVED EQUAL.
11. ALL FRP SHAPES TO BE DYNAFORM PULTRUDED STRUCTURAL SHAPES.
12. ALL FRP PLATES TO BE FIBERPLATE MOLDED FRP PLATE.
13. ALL FRP PANELS TO BE FIBERPLATE CLADDING PANEL.
14. EACH FRP PANEL TO BE IDENTIFIED WITH LARR#25536 AND FIBERGRATE COMPOSITE STRUCTURAL LABEL.
15. FRP MATERIAL TO BE CLASSIFIED AS CC1 OR BETTER, AND HAVE MAXIMUM FLAME SPREAD OF 50.
16. ALL DESIGN AND CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH LOS ANGELES RESEARCH REPORT RR25536, DATED FEBRUARY 1, 2016.
17. SPECIAL INSPECTIONS MUST BE PROVIDED FOR ALL FRP INSTALLMENTS. SEE SPECIAL INSPECTION SECTION, THIS SHEET.

RATIO OF EDGE DISTANCE TO FRP FASTENER DIAMETER		
	RANGE	RECOMMENDED
EDGE DISTANCE - CL* BOLT TO END	2.0-4.0	3.0
EDGE DISTANCE - CL* BOLT TO SIDE	1.5-3.5	2.5
BOLT PITCH - CL* TO CL*	4.0-5.0	5.0

WOOD CONSTRUCTION NOTES:

1. ALL EXISTING WOOD SHAPES ARE ASSUMED TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN.
2. ALL PROPOSED WOOD SHAPES ARE TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN. U.N.O.
3. ALL EXISTING AND PROPOSED GLUED LAMINATED TIMBERS ARE TO BE 24F-1.8C DOUGLAS FIR BALANCED WITH A REFERENCE DESIGN BENDING VALUE OF 2400 PSI MIN. U.N.O.

MASONRY CONSTRUCTION NOTES:

1. ALL BRICK TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
 - FOR INTERIOR/ABOVE GRADE APPLICATIONS TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 100 PSI SHALL BE USED. FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 133 PSI.
 - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. ALL CMU TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
 - FOR INTERIOR/ABOVE GRADE APPLICATIONS, TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 64 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 158 PSI FOR FULLY GROUTED BLOCKS.
 - FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 84 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 163 PSI FOR FULLY GROUTED BLOCKS.
 - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

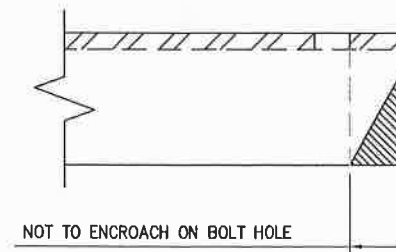
TOWER PLUMB & TENSION NOTES:

1. PLUMB AND TENSION TOWER UPON COMPLETION OF STRUCTURAL MODIFICATIONS DETAILED IN THESE DRAWINGS.
2. RETENSIONING OF EXISTING GUY WIRES SHALL BE PERFORMED AT A TIME WHEN THE WIND VELOCITY IS LESS THAN 10 MPH AT GROUND LEVEL AND WITH NO ICE ON THE STRUCTURE AND GUY WIRES.
3. PLUMB THE TOWER WHILE RETENSIONING THE EXISTING GUY WIRES. THE HORIZONTAL DISTANCE BETWEEN THE VERTICAL CENTERLINES AT ANY TWO ELEVATIONS SHALL NOT EXCEED 0.25% OF THE VERTICAL DISTANCE BETWEEN TWO ELEVATIONS FOR LATTICED STRUCTURES.
4. THE TWIST BETWEEN ANY TWO ELEVATIONS THROUGHOUT THE HEIGHT OF A LATTICE STRUCTURE SHALL NOT EXCEED 0.5 DEGREES IN 10 FEET. THE MAXIMUM TWIST OVER THE LATTICE STRUCTURE HEIGHT SHALL NOT EXCEED 5 DEGREES.

SPECIAL INSPECTIONS NOTES:

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER AND APPROVED BY THE JURISDICTION, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH THE THE GOVERNING BUILDING CODE, APPLICABLE SECTION(S) AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
 - a. STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELDS ONLY).
 - b. HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 AND/OR A490 BOLTS) TO BE TIGHTENED PER "TURN-OF-THE-NUT" METHOD.
 - c. MECHANICAL AND EPOXIED ANCHORAGES.
 - d. FIBER REINFORCED POLYMER.
 - THE SPECIAL INSPECTOR MUST VERIFY THAT THE FRP MATERIAL SPECIFIED ON THE APPROVED DESIGN DOCUMENTS IS BEING INSTALLED.
 - THE SPECIAL INSPECTOR MUST VERIFY THAT ALL CUT EDGES AND DRILLED HOLES ARE PROPERLY SEALED USING A VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
 - THE SPECIAL INSPECTOR MUST VERIFY THAT THE STRUCTURE IS BUILT IN ACCORDANCE WITH THE APPROVED DESIGN DOCUMENTS.
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM WORK WITHOUT THE SPECIAL INSPECTIONS.

MAXIMUM ALLOWABLE ANGLE CLIP



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Designed:	BA	Date:	01/21/19
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Project Number: 499-006			

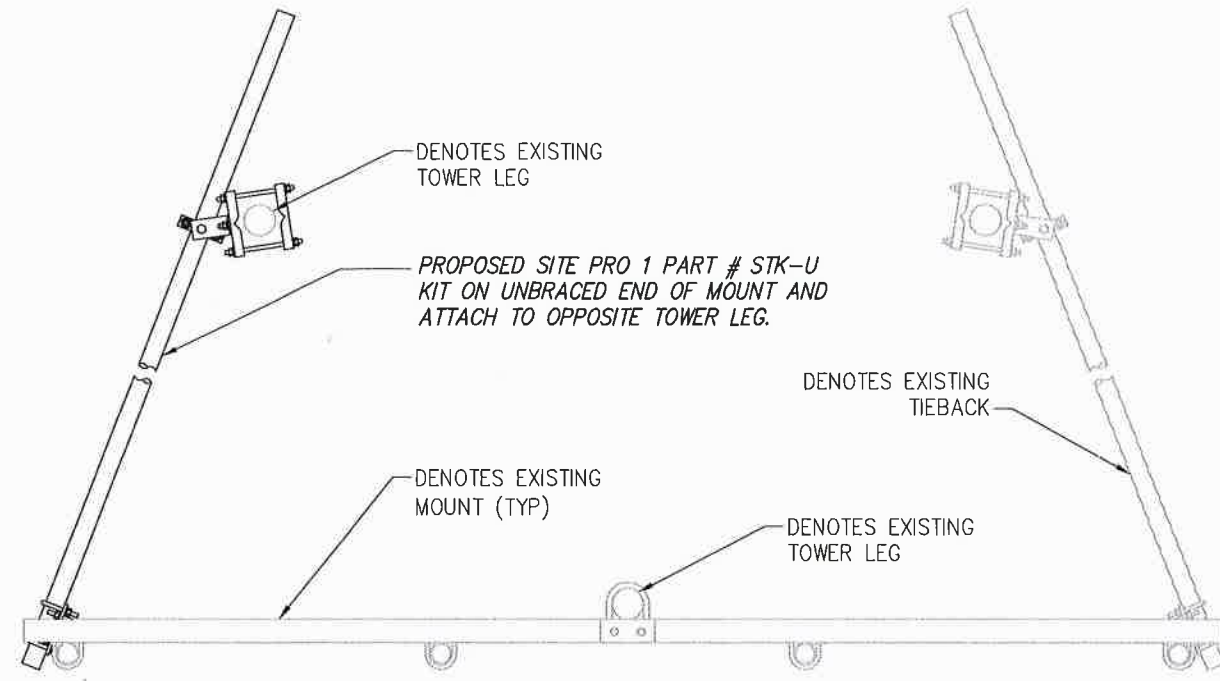
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BRANFORD WEST
CTL02175
FA# 10035093
4 BEAVER ROAD
BRANFORD, CT 06405



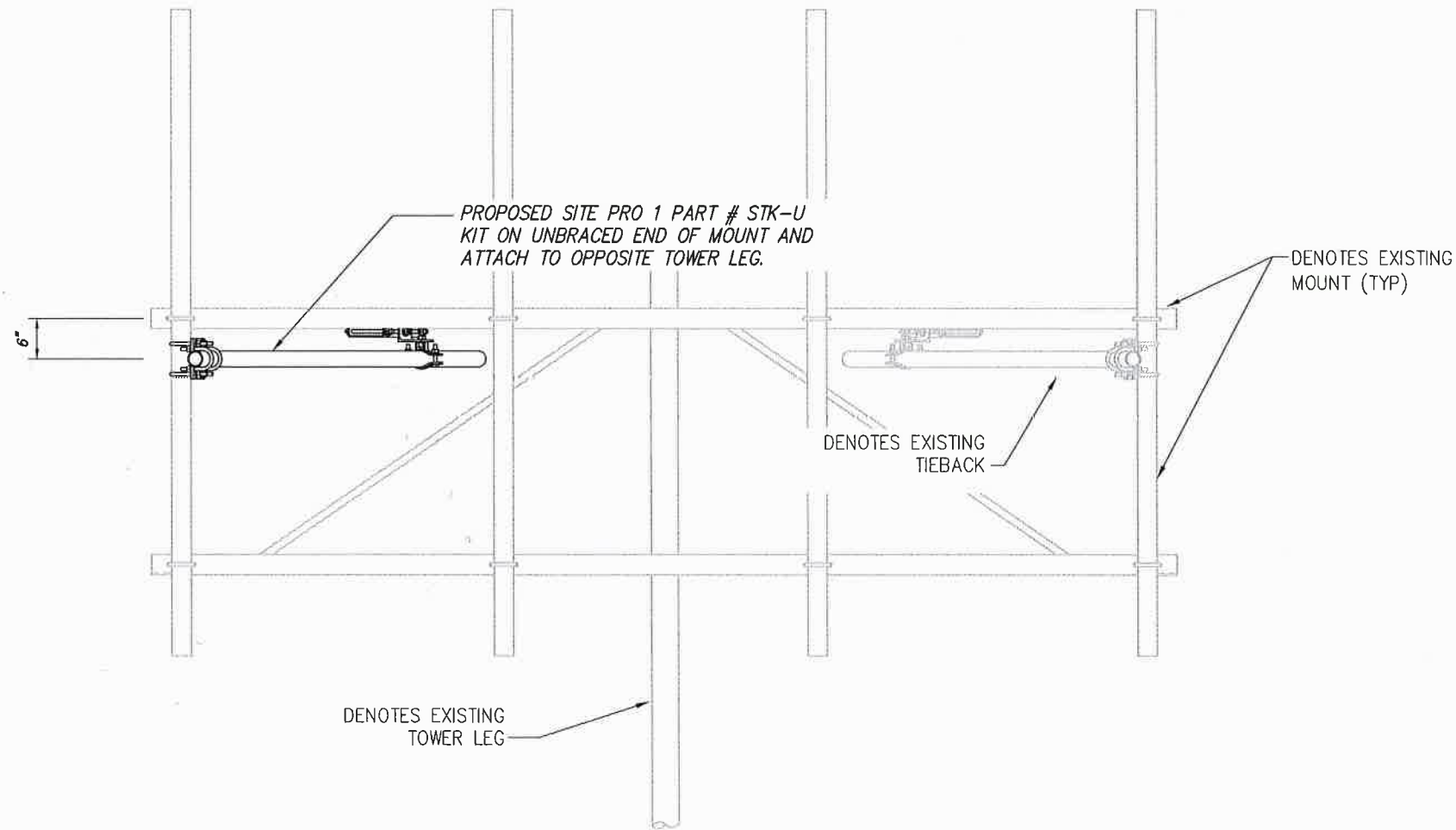
Drawing Scale:
AS NOTED
Date:
01/22/19

Drawing Title
GENERAL NOTES

Drawing Number
S1



1 PLAN VIEW
SCALE: NOT TO SCALE



2 ELEVATION VIEW
SCALE: NOT TO SCALE

INFINIGY

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 850-0750
Fax # (518) 890-0733

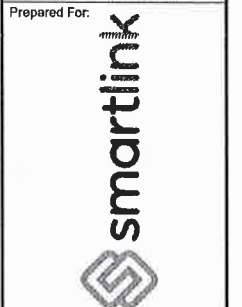


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No.	Submitted / Revision	Appr.	Date
0	ISSUED FOR REVIEW	TAG	01/21/19

Project Number: 499-006

Project Title:
BRANFORD WEST
CTL02175
FA# 10035093
4 BEAVER ROAD
BRANFORD, CT 06405



Drawing Scale:
AS NOTED
Date:
01/22/19

Drawing Title
MOUNT MODIFICATION

Drawing Number
S2



AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by



**TOWER
ENGINEERING
PROFESSIONALS**

Structural Analysis Report

Structure : 125 ft Self Supported Tower
ATC Site Name : Cherry Hill-branford, CT
ATC Site Number : 302536
Engineering Number : OAA744361_C3_02
Proposed Carrier : AT&T Mobility
Carrier Site Name : Beaver Road - Branford
Carrier Site Number : CTL02175 - FA#10035093
Site Location : 4 Beaver Road
Branford, CT 06405-3403
41.280200, -72.841700
County : New Haven
Date : March 14, 2019
Max Usage : 89%
Result : Pass

Prepared By:
Chris Tahara, E.I.
TEP

Reviewed By:



3/15/2019

COA: PEC.0001553



Table of Contents

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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 125 ft self supported tower to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	Rohn Eng. File # 30329PM, dated November 22, 1993
Foundation Drawing	Rohn Eng. File # 30329PM, dated November 11, 1993
Geotechnical Report	French & Parrello Job # 93N019C, dated June 4, 1993

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:	101 mph (3-Second Gust V_{ASD}) / 130 mph (3-Second Gust V_{ULT})
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
Spectral Response:	$S_s = 0.18, S_1 = 0.06$
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

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
125.0	125.0	12	Decibel DB844H90E-XY	Sector Frames	(12) 7/8" Coax	Sprint Nextel
113.0	113.0	1	Commscope WCS-IMFQ-AMT	Sector Frames	(12) 7/8" Coax (4) 0.78" 8 AWG 6 (2) 3" Conduit (2) 0.74" 8 AWG 7 (2) 0.39" Fiber Trunk (1) 3/8" RET Control Cable	AT&T Mobility
		1	Raycap DC6-48-60-18-8F ("Squid")			
		3	Andrew SBNHH-1D65A (33.5 lbs)			
		3	Ericsson RRUS 32 (50.8 lbs)			
		1	Raycap DC6-48-60-18-8F			
		6	Powerwave LGP21401			
		3	Powerwave 7770.00			
100.0	100.0	3	RFS APXV18-206517S-C	Leg	(6) 1 5/8" Coax	Metro PCS
91.0	91.0	1	10' Omni	Side Arm	(1) 7/8" Coax	Other

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
113.0	113.0	3	KMW AM-X-CD-14-65-00T-RET	-	-	AT&T Mobility
		3	Ericsson RRUS-11			
		3	Ericsson RRUS 12			

Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
113.0	113.0	6	Kathrein 80010964	Sector Frames with Face Horizontal Reinforcement	(2) 0.78" 8 AWG 6	AT&T Mobility
		3	Ericsson RRUS 4449 B5, B12			
		1	Raycap DC6-48-60-18			
		3	Ericsson RRUS 8843 B2, B66A			

¹Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax alongside existing AT&T Mobility coax.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	76%	Pass
Diagonals	89%	Pass
Horizontals	11%	Pass
Anchor Bolts	69%	Pass
Leg Bolts	73%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	154.8	209.0	147.9	71%
Axial (Kips)	169.1	228.3	165.5	72%
Total Shear (Kips)	18.3	24.7	18.6	75%

* 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, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
113.0	Raycap DC6-48-60-18-8F	AT&T Mobility	0.303	0.006	0.312
	Ericsson RRUS 8843 B2, B66A				
	Ericsson RRUS 4449 B5, B12				
	Kathrein Scala 80010964				
91.0	10' Omni	Other	0.239		0.319

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



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.

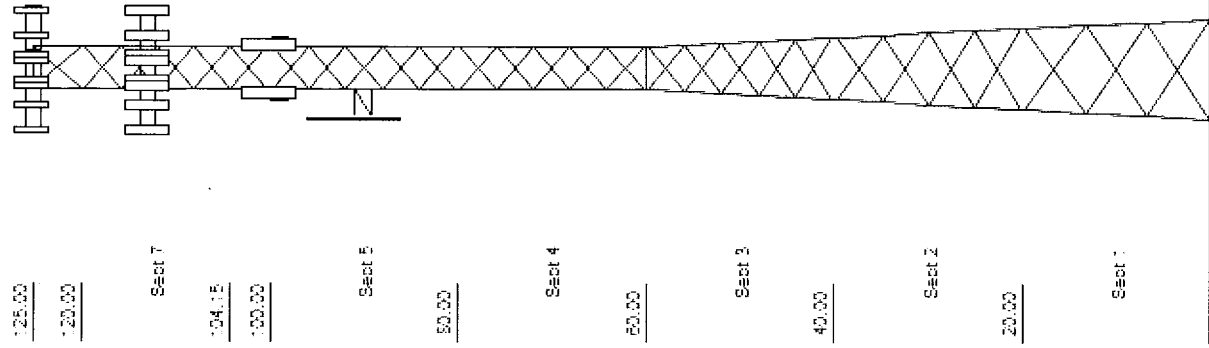
All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with 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		
Tower : 302536	Location : Cherry Hill-	Base Width : 10.75 ft
Client : AT&T MOBILITY		Top Width : 4.56 ft
Code : ANSI/TIA-222-G		Tower Ht : 125.00 ft
		Shape : Triangle

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Loads: 101 mph no ice
 50 mph w/ 3/4" radial ice
 Site Class: D Ss: 0.18 S1: 0.06
 60 mph Serviceability

Sections Properties			
Section	Leg Members	Diagonal Members	Horizontal Members
1	PSP 50 ksi ROHN 5EH	SAE 36 ksi 1.75X1.75X0.125	
2	PSP 50 ksi ROHN 5EH	SAE 36 ksi 1.5X1.5X0.1875	
3	PX 50 ksi 4" DIA PIPE	SAE 36 ksi 1.5X1.5X0.1875	SAE 36 ksi 1.5X1.5X0.125
4	PX 50 ksi 4" DIA PIPE	SAE 36 ksi 2X2X0.25	
5	PX 50 ksi 3" DIA PIPE	SAE 36 ksi 1.5X1.5X0.1875	
6-7	PST 50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.5X1.5X0.1875	
8	PST 50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.5X1.5X0.125	SAE 36 ksi 1.5X1.5X0.125

Discrete Appurtenance		
Elev (ft)	Type	Qty Description
125.00	Mounting Frame	3 Flat Light Sector Frame
125.00	Panel	12 Decibel DB844H90E-XY
113.00	Mounting Frame	3 Flat Light Sector Frame
113.00	Panel	6 Kathrein Scala 80010964
113.00	Panel	3 Andrew SBNHH-ID65A (33.5 lbs)
113.00	Panel	3 Powerwave Allgon 7770.00
113.00		1 Raycap DC6-48-60-18
113.00		3 Ericsson RRUS 32 (50.8 lbs)
113.00		3 Ericsson RRUS 4449 B5, B12
113.00		3 Ericsson RRUS 8843 B2, B66A
113.00		1 Raycap DC6-48-60-18-8F ("Squid
113.00		1 Raycap DC6-48-60-18-8F
113.00		6 Powerwave Allgon LGP21401
113.00		1 Commscope WCS-IMFQ-AMT
100.00	Panel	3 RFS APXV18-206517S-C
91.00	Straight Arm	1 Side Arm
91.00	Whip	1 Generic 10' Omni

Linear Appurtenance		
Elev (ft)	From	To Qty Description
10.00	125.00	1 Wave Guide
10.00	125.00	12 7/8" Coax
10.00	113.00	1 Wave Guide
10.00	113.00	12 7/8" Coax
10.00	113.00	1 3/8" (0.38"-9.5mm)
10.00	113.00	2 3" conduit
10.00	113.00	6 0.78" (19.7mm) 8 AWG
10.00	113.00	2 0.74" (18.7mm) 8 AWG
10.00	113.00	2 0.39" (10mm) Fiber T
10.00	100.00	1 Wave Guide
10.00	100.00	6 1 5/8" Coax
10.00	91.00	1 7/8" Coax

Global Base Foundation Design Loads			
Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	1,476.15	20.73	18.64
DL + WL + IL	484.59	64.81	6.25

Job Information

Tower : 302536 Location : Cherry Hill- Base Width : 10.75 ft
Client : AT&T MOBILITY Top Width : 4.56 ft
Code : ANSI/TIA-222-G Tower Ht : 125.00 ft
Shape : Triangle

Individual Base Foundation Design Loads

Vertical (kip)	Uplift (kip)	Horizontal (kip)
165.47	147.89	12.37

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

3/15/2019 11:30:39 AM

Customer: AT&T MOBILITY

Analysis Parameters

Location:	NEW HAVEN County, CT	Height (ft):	125
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	10.75
Tower Manufacturer:	Rohn	Top Face Width (ft):	4.56
Tower Type:	Self Support	Anchor Bolt Detail Type	c
Kd:			
Ke:			

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	101 mph
Exposure Category:	B	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	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):	1.09		
T ₁ (sec):	6	p:	1.3
S _s :	0.180	S ₁ :	0.060
F _a :	1.600	F _v :	2.400
S _{ds} :	0.192	S _{d1} :	0.096
		C _s :	0.030
		C _{s, Max} :	0.030
		C _{s, Min} :	0.030

Load Cases

1.2D + 1.6W Normal - Pat 1	101 mph Normal with No Ice - Pattern 1
1.2D + 1.6W Normal - Pat 2	101 mph Normal with No Ice - Pattern 2
1.2D + 1.6W Normal - Pat 3	101 mph Normal with No Ice - Pattern 3
1.2D + 1.6W 60 deg - Pat 1	101 mph 60 degree with No Ice - Pattern 1
1.2D + 1.6W 60 deg - Pat 2	101 mph 60 degree with No Ice - Pattern 2
1.2D + 1.6W 60 deg - Pat 3	101 mph 60 degree with No Ice - Pattern 3
1.2D + 1.6W 90 deg - Pat 1	101 mph 90 degree with No Ice - Pattern 1
1.2D + 1.6W 90 deg - Pat 2	101 mph 90 degree with No Ice - Pattern 2
1.2D + 1.6W 90 deg - Pat 3	101 mph 90 degree with No Ice - Pattern 3
1.2D + 1.6W 120 deg - Pat 1	101 mph 120 degree with No Ice - Pattern 1
1.2D + 1.6W 120 deg - Pat 2	101 mph 120 degree with No Ice - Pattern 2
1.2D + 1.6W 120 deg - Pat 3	101 mph 120 degree with No Ice - Pattern 3
1.2D + 1.6W 180 deg - Pat 1	101 mph 180 degree with No Ice - Pattern 1
1.2D + 1.6W 180 deg - Pat 2	101 mph 180 degree with No Ice - Pattern 2
1.2D + 1.6W 180 deg - Pat 3	101 mph 180 degree with No Ice - Pattern 3
1.2D + 1.6W 210 deg - Pat 1	101 mph 210 degree with No Ice - Pattern 1
1.2D + 1.6W 210 deg - Pat 2	101 mph 210 degree with No Ice - Pattern 2
1.2D + 1.6W 210 deg - Pat 3	101 mph 210 degree with No Ice - Pattern 3
1.2D + 1.6W 240 deg - Pat 1	101 mph 240 degree with No Ice - Pattern 1

Site Number: 302536
Site Name: Cherry Hill-branford, CT
Customer: AT&T MOBILITY

Code: ANSI/TIA-222-G
Engineering Number: OAA744361_C3_02

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Analysis Parameters

1.2D + 1.6W 240 deg - Pat 2	101 mph 240 degree with No Ice - Pattern 2
1.2D + 1.6W 240 deg - Pat 3	101 mph 240 degree with No Ice - Pattern 3
1.2D + 1.6W 300 deg - Pat 1	101 mph 300 degree with No Ice - Pattern 1
1.2D + 1.6W 300 deg - Pat 2	101 mph 300 degree with No Ice - Pattern 2
1.2D + 1.6W 300 deg - Pat 3	101 mph 300 degree with No Ice - Pattern 3
1.2D + 1.6W 330 deg - Pat 1	101 mph 330 degree with No Ice - Pattern 1
1.2D + 1.6W 330 deg - Pat 2	101 mph 330 degree with No Ice - Pattern 2
1.2D + 1.6W 330 deg - Pat 3	101 mph 330 degree with No Ice - Pattern 3
0.9D + 1.6W Normal	101 mph Normal with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	101 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	101 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.6W 120 deg	101 mph 120 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	101 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 210 deg	101 mph 210 deg with No Ice (Reduced DL)
0.9D + 1.6W 240 deg	101 mph 240 deg with No Ice (Reduced DL)
0.9D + 1.6W 300 deg	101 mph 300 deg with No Ice (Reduced DL)
0.9D + 1.6W 330 deg	101 mph 330 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 120 deg	50 mph 120 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	50 mph 180 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 210 deg	50 mph 210 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 240 deg	50 mph 240 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 300 deg	50 mph 300 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 330 deg	50 mph 330 deg with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 60 deg	Seismic 60 deg
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 deg
(1.2 + 0.2Sds) * DL + E 120 deg	Seismic 120 deg
(1.2 + 0.2Sds) * DL + E 180 deg	Seismic 180 deg
(1.2 + 0.2Sds) * DL + E 210 deg	Seismic 210 deg
(1.2 + 0.2Sds) * DL + E 240 deg	Seismic 240 deg
(1.2 + 0.2Sds) * DL + E 300 deg	Seismic 300 deg
(1.2 + 0.2Sds) * DL + E 330 deg	Seismic 330 deg
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 60 deg	Seismic (Reduced DL) 60 deg
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 deg
(0.9 - 0.2Sds) * DL + E 120 deg	Seismic (Reduced DL) 120 deg
(0.9 - 0.2Sds) * DL + E 180 deg	Seismic (Reduced DL) 180 deg
(0.9 - 0.2Sds) * DL + E 210 deg	Seismic (Reduced DL) 210 deg
(0.9 - 0.2Sds) * DL + E 240 deg	Seismic (Reduced DL) 240 deg
(0.9 - 0.2Sds) * DL + E 300 deg	Seismic (Reduced DL) 300 deg
(0.9 - 0.2Sds) * DL + E 330 deg	Seismic (Reduced DL) 330 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

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Customer: AT&T MOBILITY

Analysis Parameters

1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg
1.0D + 1.0W Service 120 deg	Serviceability - 60 mph Wind 120 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 210 deg	Serviceability - 60 mph Wind 210 deg
1.0D + 1.0W Service 240 deg	Serviceability - 60 mph Wind 240 deg
1.0D + 1.0W Service 300 deg	Serviceability - 60 mph Wind 300 deg
1.0D + 1.0W Service 330 deg	Serviceability - 60 mph Wind 330 deg

Site Number: 302536

Code:

ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

3/15/2019 11:30:39 AM

Customer: AT&T MOBILITY

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _r (psf)	F _a (WL) (lb)	P _a (DL) (lb)
125.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	23.38	804	202
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.38	960	1440
113.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	22.72	24	35
113.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	22.72	82	102
113.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	22.72	31	24
113.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	22.72	36	38
113.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	22.72	61	259
113.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	22.72	73	256
113.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.67	0.0	0.0	22.72	134	183
113.0	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.80	1.00	0.0	0.0	22.72	94	36
113.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	22.72	266	126
113.0	Andrew SBNHH-	3	34	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	22.72	301	121
113.0	Kathrein Scala	6	82	10.0	4.9	20.0	6.9	0.80	0.62	0.0	0.0	22.72	919	588
113.0	Flat Light Sector	3	400	13.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	22.72	633	1440
100.0	RFS APXV18-	3	26	5.2	6.0	6.8	3.2	1.00	0.68	0.0	0.0	21.94	314	95
91.00	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	21.35	87	30
91.00	Side Arm	1	150	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.35	87	180
Totals		54	4295	286.5									4907	5154

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _r (psf)	F _a (WL) (lb)	P _a (DL) (lb)
125.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	23.38	804	202
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.38	960	1440
113.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	22.72	24	35
113.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	22.72	82	102
113.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	22.72	31	24
113.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	22.72	36	38
113.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	22.72	61	259
113.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	22.72	73	256
113.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.67	0.0	0.0	22.72	134	183
113.0	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.80	1.00	0.0	0.0	22.72	94	36
113.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	22.72	266	126
113.0	Andrew SBNHH-	3	34	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	22.72	301	121
113.0	Kathrein Scala	6	82	10.0	4.9	20.0	6.9	0.80	0.62	0.0	0.0	22.72	919	588
113.0	Flat Light Sector	3	400	13.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	22.72	633	1440
100.0	RFS APXV18-	3	26	5.2	6.0	6.8	3.2	1.00	0.68	0.0	0.0	21.94	314	95
91.00	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	21.35	87	30
91.00	Side Arm	1	150	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.35	87	180
Totals		54	4295	286.5									4907	5154

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _r (psf)	F _a (WL) (lb)	P _a (DL) (lb)
125.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	23.38	804	202
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.38	960	1440
113.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	22.72	24	35
113.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	22.72	82	102

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

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Customer: AT&T MOBILITY

Tower Loading

113.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	22.72	31	24
113.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	22.72	36	38
113.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	22.72	61	259
113.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	22.72	73	256
113.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.67	0.0	0.0	22.72	134	183
113.0	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.80	1.00	0.0	0.0	22.72	94	36
113.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	22.72	266	126
113.0	Andrew SBNHH-	3	34	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	22.72	301	121
113.0	Kathrein Scala	6	82	10.0	4.9	20.0	6.9	0.80	0.62	0.0	0.0	22.72	919	588
113.0	Flat Light Sector	3	400	13.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	22.72	633	1440
100.0	RFS APXV18-	3	26	5.2	6.0	6.8	3.2	1.00	0.68	0.0	0.0	21.94	314	95
91.00	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	21.35	87	30
91.00	Side Arm	1	150	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.35	87	180
Totals		54	4295	286.5									4907	5154

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
125.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	23.38	804	151
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.38	960	1080
113.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	22.72	24	27
113.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	22.72	82	76
113.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	22.72	31	18
113.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	22.72	36	29
113.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	22.72	61	194
113.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	22.72	73	192
113.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.67	0.0	0.0	22.72	134	137
113.0	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.80	1.00	0.0	0.0	22.72	94	27
113.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	22.72	266	95
113.0	Andrew SBNHH-	3	34	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	22.72	301	90
113.0	Kathrein Scala	6	82	10.0	4.9	20.0	6.9	0.80	0.62	0.0	0.0	22.72	919	441
113.0	Flat Light Sector	3	400	13.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	22.72	633	1080
100.0	RFS APXV18-	3	26	5.2	6.0	6.8	3.2	1.00	0.68	0.0	0.0	21.94	314	71
91.00	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	21.35	87	23
91.00	Side Arm	1	150	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.35	87	135
Totals		54	4295	286.5									4907	3865

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
125.0	Decibel DB844H90E-	12	122	3.9	4.0	6.5	8.0	0.80	0.73	0.0	0.0	5.73	133	1496
125.0	Flat Light Sector	3	696	32.7	0.0	0.0	0.0	0.75	0.75	0.0	0.0	5.73	269	2327
113.0	Commscope WCS-	1	62	1.6	0.9	10.6	6.9	0.80	1.00	0.0	0.0	5.57	6	68
113.0	Powerwave Allgon	6	38	1.8	1.2	9.2	2.6	0.80	0.50	0.0	0.0	5.57	20	247
113.0	Raycap DC6-48-60-	1	71	1.9	2.0	9.7	9.7	0.80	1.00	0.0	0.0	5.57	7	75
113.0	Raycap DC6-48-60-	1	92	2.1	2.0	11.0	11.0	0.80	1.00	0.0	0.0	5.57	8	98
113.0	Ericsson RRUS 8843	3	132	2.5	1.2	13.2	10.9	0.80	0.50	0.0	0.0	5.57	14	438
113.0	Ericsson RRUS 4449	3	134	2.9	1.5	13.2	9.4	0.80	0.50	0.0	0.0	5.57	16	444
113.0	Ericsson RRUS 32	3	120	3.8	2.2	12.1	6.7	0.80	0.67	0.0	0.0	5.57	29	392
113.0	Raycap DC6-48-60-	1	112	5.1	2.3	16.7	5.5	0.80	1.00	0.0	0.0	5.57	19	118
113.0	Powerwave Allgon	3	165	6.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	5.57	48	517
113.0	Andrew SBNHH-	3	165	7.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	5.57	62	516

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

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Customer: AT&T MOBILITY

Tower Loading

113.0 Kathrein Scala	6	281	12.3	4.9	20.0	6.9	0.80	0.62	0.0	0.0	5.57	173	1782
113.0 Flat Light Sector	3	693	24.8	0.0	0.0	0.0	0.75	0.67	0.0	0.0	5.57	177	2319
100.0 RFS APXV18-	3	115	7.4	6.0	6.8	3.2	1.00	0.68	0.0	0.0	5.38	69	360
91.00 Generic 10' Omni	1	97	6.4	10.0	3.0	3.0	1.00	1.00	0.0	0.0	5.23	29	102
91.00 Side Arm	1	220	4.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.23	20	250
Totals	54	10691	418.6									1101	11549

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
125.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	8.25	177	168
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.25	212	1200
113.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	8.02	5	30
113.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	8.02	18	85
113.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	8.02	7	20
113.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	8.02	8	32
113.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	8.02	13	216
113.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	8.02	16	213
113.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.67	0.0	0.0	8.02	29	152
113.0	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.80	1.00	0.0	0.0	8.02	21	30
113.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	8.02	59	105
113.0	Andrew SBNHH-	3	34	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	8.02	66	101
113.0	Kathrein Scala	6	82	10.0	4.9	20.0	6.9	0.80	0.62	0.0	0.0	8.02	203	490
113.0	Flat Light Sector	3	400	13.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	8.02	140	1200
100.0	RFS APXV18-	3	26	5.2	6.0	6.8	3.2	1.00	0.68	0.0	0.0	7.74	69	79
91.00	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	7.54	19	25
91.00	Side Arm	1	150	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.54	19	150
Totals		54	4295	286.5									1082	4295

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

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Customer: AT&T MOBILITY

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
10.00	125.0	7/8" Coax	12	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	125.0	Wave Guide	1	1.50	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	113.0	0.39" (10mm) Fiber	2	0.39	0.06	100	Lin App	Individual	0.00	N	1.00	1.00	0.01
10.00	113.0	0.74" (18.7mm) 8	2	0.74	0.49	100	Lin App	Individual	0.00	N	1.00	1.00	0.01
10.00	113.0	0.78" (19.7mm) 8	6	0.78	0.59	100	Lin App	Individual	0.00	N	1.00	1.00	0.01
10.00	113.0	3" conduit	2	3.50	7.58	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	113.0	3/8" (0.38")	1	0.38	0.23	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	113.0	7/8" Coax	12	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.42
10.00	113.0	Wave Guide	1	1.50	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	100.0	1 5/8" Coax	6	1.98	0.82	100	Lin App	Individual	0.00	N	1.00	1.00	0.36
10.00	100.0	Wave Guide	1	1.50	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	91.00	7/8" Coax	1	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.00

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

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Customer: AT&T MOBILITY

Equivalent Lateral Force Method

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

Spectral Response Acceleration for Short Period (S_s):	0.18
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_p):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
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):	1.09
Redundancy Factor (ρ):	1.30
Seismic Force Distribution Exponent (k):	1.29
Total Unfactored Dead Load:	17.28 k
Seismic Base Shear (E):	0.67 k

LoadCase (1.2 + 0.2Sds) * DL + E

Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
8	122.50	203	102,088	0.022	15	252
7	112.08	958	428,694	0.094	64	1,187
6	102.07	303	120,100	0.026	18	375
5	90.00	1,963	661,269	0.145	98	2,431
4	70.00	2,506	609,724	0.134	90	3,103
3	50.00	2,316	364,684	0.080	54	2,868
2	30.00	2,669	217,079	0.048	32	3,305
1	10.00	2,066	40,588	0.009	6	2,558
Decibel DB844H90E-XY	125.00	168	86,535	0.019	13	208
Flat Light Sector Frame	125.00	1,200	618,109	0.136	92	1,486
Commscope WCS-IMFQ-AMT	113.00	30	13,336	0.003	2	37
Powerwave Allgon LGP21401	113.00	85	38,244	0.008	6	105
Raycap DC6-48-60-18-8F	113.00	20	9,041	0.002	1	25
Raycap DC6-48-60-18-8F ("Squid")	113.00	32	14,376	0.003	2	39
Ericsson RRUS 8843 B2, B66A	113.00	216	97,645	0.021	14	267
Ericsson RRUS 4449 B5, B12	113.00	213	96,289	0.021	14	264
Ericsson RRUS 32 (50.8 lbs)	113.00	152	68,894	0.015	10	189
Raycap DC6-48-60-18	113.00	30	13,562	0.003	2	37
Powerwave Allgon 7770.00	113.00	105	47,466	0.010	7	130
Andrew SBNHH-1D65A (33.5 lbs)	113.00	101	45,432	0.010	7	124
Kathrein Scala 80010964	113.00	490	221,329	0.049	33	606
Flat Light Sector Frame	113.00	1,200	542,474	0.119	80	1,486

Site Number: 302536

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

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Customer: AT&T MOBILITY

Equivalent Lateral Force Method

RFS APXV18-206517S-C	100.00	79	30,569	0.007	5	98
Generic 10' Omni	91.00	25	8,541	0.002	1	31
Side Arm	91.00	150	51,248	0.011	8	186
		17,279	4,547,318	1.000	674	21,398

LoadCase (0.9 - 0.2Sds) * DL + E

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
8	122.50	203	102,088	0.022	15	175
7	112.08	958	428,694	0.094	64	826
6	102.07	303	120,100	0.026	18	261
5	90.00	1,963	661,269	0.145	98	1,692
4	70.00	2,506	609,724	0.134	90	2,159
3	50.00	2,316	364,684	0.080	54	1,995
2	30.00	2,669	217,079	0.048	32	2,299
1	10.00	2,066	40,588	0.009	6	1,780
Decibel DB844H90E-XY	125.00	168	86,535	0.019	13	145
Flat Light Sector Frame	125.00	1,200	618,109	0.136	92	1,034
Commscope WCS-IMFQ-AMT	113.00	30	13,336	0.003	2	25
Powerwave Allgon LGP21401	113.00	85	38,244	0.008	6	73
Raycap DC6-48-60-18-8F	113.00	20	9,041	0.002	1	17
Raycap DC6-48-60-18-8F ("Squid")	113.00	32	14,376	0.003	2	27
Ericsson RRUS 8843 B2, B66A	113.00	216	97,645	0.021	14	186
Ericsson RRUS 4449 B5, B12	113.00	213	96,289	0.021	14	184
Ericsson RRUS 32 (50.8 lbs)	113.00	152	68,894	0.015	10	131
Raycap DC6-48-60-18	113.00	30	13,562	0.003	2	26
Powerwave Allgon 7770.00	113.00	105	47,466	0.010	7	90
Andrew SBNHH-1D65A (33.5 lbs)	113.00	101	45,432	0.010	7	87
Kathrein Scala 80010964	113.00	490	221,329	0.049	33	422
Flat Light Sector Frame	113.00	1,200	542,474	0.119	80	1,034
RFS APXV18-206517S-C	100.00	79	30,569	0.007	5	68
Generic 10' Omni	91.00	25	8,541	0.002	1	22
Side Arm	91.00	150	51,248	0.011	8	129
		17,279	4,547,318	1.000	674	14,887

Site Number: 302536

Code: ANSI/TIA-222-G

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Engineering Number: OAA744361_C3_02

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Customer: AT&T MOBILITY

Equivalent Modal Analysis Method

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

Spectral Response Acceleration for Short Period (S_{d1}):	0.18
Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.06
Importance Factor (I_e):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	1.09
Redundancy Factor (ρ):	1.30

LoadCase (1.2 + 0.2Sds) * DL + E

Section	Height		Seismic				Horizontal Force (lb)	Vertical Force (lb)
	Above Base (ft)	Weight (lb)	a	b	c	S_{az}		
8	122.50	203	1.815	1.608	1.004	0.347	31	252
7	112.08	958	1.519	0.550	0.566	0.190	79	1,187
6	102.07	303	1.260	0.069	0.302	0.090	12	375
5	90.00	1,963	0.980	-0.114	0.122	0.031	26	2,431
4	70.00	2,506	0.593	-0.050	0.014	0.030	33	3,103
3	50.00	2,316	0.302	0.045	0.012	0.044	44	2,868
2	30.00	2,669	0.109	0.071	0.036	0.036	42	3,305
1	10.00	2,066	0.012	0.058	0.034	0.023	21	2,558
Decibel DB844H90E-XY	125.00	168	1.890	1.980	1.140	0.393	29	208
Flat Light Sector Frame	125.00	1,200	1.890	1.980	1.140	0.393	204	1,486
Commscope WCS-IMFQ-AMT	113.00	30	1.545	0.617	0.597	0.201	3	37
Powerwave Allgon LQP21401	113.00	85	1.545	0.617	0.597	0.201	7	105
Raycap DC6-48-60-18-8F	113.00	20	1.545	0.617	0.597	0.201	2	25
Raycap DC6-48-60-18-8F ("Squid")	113.00	32	1.545	0.617	0.597	0.201	3	39
Ericsson RRUS 8843 B2, B66A	113.00	216	1.545	0.617	0.597	0.201	19	267
Ericsson RRUS 4449 B5, B12	113.00	213	1.545	0.617	0.597	0.201	19	264
Ericsson RRUS 32 (50.8 lbs)	113.00	152	1.545	0.617	0.597	0.201	13	189
Raycap DC6-48-60-18	113.00	30	1.545	0.617	0.597	0.201	3	37
Powerwave Allgon 7770.00	113.00	105	1.545	0.617	0.597	0.201	9	130
Andrew SBNHH-1D65A (33.5 lbs)	113.00	101	1.545	0.617	0.597	0.201	9	124
Kathrein Scala 80010964	113.00	490	1.545	0.617	0.597	0.201	43	606
Flat Light Sector Frame	113.00	1,200	1.545	0.617	0.597	0.201	105	1,486
RFS APXV18-206517S-C	100.00	79	1.210	0.014	0.262	0.075	3	98
Generic 10' Omni	91.00	25	1.002	-0.109	0.132	0.034	0	31
Side Arm	91.00	150	1.002	-0.109	0.132	0.034	2	186
		17,279	32.118	13.393	12.064	4.138	759	21,398

LoadCase (0.9 - 0.2Sds) * DL + E

Section	Height		Seismic (Reduced DL)				Horizontal Force (lb)	Vertical Force (lb)
	Above Base (ft)	Weight (lb)	a	b	c	S_{az}		
8	122.50	203	1.815	1.608	1.004	0.347	31	175
7	112.08	958	1.519	0.550	0.566	0.190	79	826
6	102.07	303	1.260	0.069	0.302	0.090	12	261

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

3/15/2019 11:30:40 AM

Customer: AT&T MOBILITY

Equivalent Modal Analysis Method

5	90.00	1,963	0.980	-0.114	0.122	0.031	26	1,692
4	70.00	2,506	0.593	-0.050	0.014	0.030	33	2,159
3	50.00	2,316	0.302	0.045	0.012	0.044	44	1,995
2	30.00	2,669	0.109	0.071	0.036	0.036	42	2,299
1	10.00	2,066	0.012	0.058	0.034	0.023	21	1,780
Decibel DB844H90E-XY	125.00	168	1.890	1.980	1.140	0.393	29	145
Flat Light Sector Frame	125.00	1,200	1.890	1.980	1.140	0.393	204	1,034
Commscope WCS-IMFQ-AMT	113.00	30	1.545	0.617	0.597	0.201	3	25
Powerwave Allgon LGP21401	113.00	85	1.545	0.617	0.597	0.201	7	73
Raycap DC6-48-60-18-8F	113.00	20	1.545	0.617	0.597	0.201	2	17
Raycap DC6-48-60-18-8F ("Squid")	113.00	32	1.545	0.617	0.597	0.201	3	27
Ericsson RRUS 8843 B2, B66A	113.00	216	1.545	0.617	0.597	0.201	19	186
Ericsson RRUS 4449 B5, B12	113.00	213	1.545	0.617	0.597	0.201	19	184
Ericsson RRUS 32 (50.8 lbs)	113.00	152	1.545	0.617	0.597	0.201	13	131
Raycap DC6-48-60-18	113.00	30	1.545	0.617	0.597	0.201	3	26
Powerwave Allgon 7770.00	113.00	105	1.545	0.617	0.597	0.201	9	90
Andrew SBNHH-1D65A (33.5 lbs)	113.00	101	1.545	0.617	0.597	0.201	9	87
Kathrein Scala 80010964	113.00	490	1.545	0.617	0.597	0.201	43	422
Flat Light Sector Frame	113.00	1,200	1.545	0.617	0.597	0.201	105	1,034
RFS APXV18-206517S-C	100.00	79	1.210	0.014	0.262	0.075	3	68
Generic 10' Omni	91.00	25	1.002	-0.109	0.132	0.034	0	22
Side Arm	91.00	150	1.002	-0.109	0.132	0.034	2	129
		17,279	32.118	13.393	12.064	4.138	759	14,887

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

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Customer: AT&T MOBILITY

Force/Stress Summary

Section: 1		9N39		Bot Elev (ft): 0.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PSP - ROHN 5 EH	-163.49	1.2D + 1.6W Normal	6.59	100	100	100	43.0	50.0	240.17	0	0	0.00	0.00	68 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 1.75X1.75X0.12	-1.84	1.2D + 1.6W Normal	12.31	48	48	48	204.5	36.0	2.27	1	1	7.95	6.96	81 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PSP - ROHN 5 EH	147.09	1.2D + 1.6W 60 deg -	50	65	274.95	0	0	0.00	0.00			53 Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 1.75X1.75X0.12	1.76	1.2D + 1.6W 210	36	58	11.15	1	1	7.95	4.13	3.81	46	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		138.67	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		154.50	1.2D + 1.6W Normal -	0.00	0		
Bot Tension		148.39	0.9D + 1.6W 60 deg	242.30	69	4	1" A354-BC
Bot Compression		165.76	1.2D + 1.6W Normal -	0.00	0		

Section: 2		8N199		Bot Elev (ft): 20.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PSP - ROHN 5 EH	-152.64	1.2D + 1.6W Normal	4.88	100	100	100	31.8	50.0	255.30	0	0	0.00	0.00	59 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 1.5X1.5X0.1875	-1.64	0.9D + 1.6W 210 deg	9.784	50	50	50	200.3	36.0	2.98	1	1	7.95	10.44	55 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PSP - ROHN 5 EH	137.71	1.2D + 1.6W 60 deg -	50	65	274.95	0	0	0.00	0.00			50 Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 1.5X1.5X0.1875	1.53	1.2D + 1.6W 210	36	58	13.47	1	1	7.95	6.20	4.69	32	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		128.64	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		142.11	1.2D + 1.6W Normal -	0.00	0		
Bot Tension		138.67	0.9D + 1.6W 60 deg	218.07	64	4	1 A325
Bot Compression		0.00		0.00	0		

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

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Customer: AT&T MOBILITY

Force/Stress Summary

Section: 3		7N344		Bot Elev (ft): 40.00				Height (ft): 20.000				Shear		Bear		Use	
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	phiRnv (kip)	phiRn (kip)	%	Controls		
LEG	PX - 4" DIA PIPE	-140.80	1.2D + 1.6W Normal	3.91	100	100	100	31.7	50.0	184.41	0	0	0.00	0.00	76	Member X	
HORIZ	SAE - 1.5X1.5X0.125	-0.26	1.2D + 1.6W Normal	4.677	100	100	100	189.6	36.0	2.26	1	1	7.95	6.96	11	Member Z	
DIAG	SAE - 1.5X1.5X0.1875	-1.52	1.2D + 1.6W 90 deg -	6.268	50	50	50	128.3	36.0	7.21	1	1	7.95	10.44	21	Member Z	

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls	
LEG	PX - 4" DIA PIPE	128.04	1.2D + 1.6W 60 deg -	50	65	198.45	0	0	0.00	0.00			64	Member
HORIZ	SAE - 1.5X1.5X0.125	0.19	1.2D + 1.6W 60 deg -	36	58	9.20	1	1	7.95	4.13	3.13		6	Blk Shear
DIAG	SAE - 1.5X1.5X0.1875	1.41	1.2D + 1.6W 90 deg -	36	58	13.47	1	1	7.95	6.20	4.69		30	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		121.18	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		132.49	1.2D + 1.6W Normal -	0.00	0		
Bot Tension		128.64	0.9D + 1.6W 60 deg	218.07	59	4	1 A325
Bot Compression		0.00		0.00	0		

Section: 4		6N166		Bot Elev (ft): 60.00				Height (ft): 20.000				Shear		Bear		Use	
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	phiRnv (kip)	phiRn (kip)	%	Controls		
LEG	PX - 4" DIA PIPE	-124.70	1.2D + 1.6W Normal	3.90	100	100	100	31.6	50.0	184.46	0	0	0.00	0.00	67	Member X	
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0		
DIAG	SAE - 2X2X0.25	-5.74	1.2D + 1.6W 120	6.090	50	50	50	100.1	36.0	17.97	1	1	7.95	13.92	72	Bolt Shear	

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls	
LEG	PX - 4" DIA PIPE	121.10	0.9D + 1.6W 60 deg	50	65	198.45	0	0	0.00	0.00			61	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00		0	
DIAG	SAE - 2X2X0.25	5.34	1.2D + 1.6W 210	36	58	25.57	1	1	7.95	8.27	8.97		67	Bolt Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		67.16	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		74.77	1.2D + 1.6W Normal -	0.00	0		
Bot Tension		121.18	0.9D + 1.6W 60 deg	166.22	73	4	0.875" A325
Bot Compression		0.00		0.00	0		

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

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Customer: AT&T MOBILITY

Force/Stress Summary

Section: 5		6N309		Bot Elev (ft): 80.00				Height (ft): 20.000				Shear		Bear		Use	
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn (kip)	Num Bolts	Num Holes	phiRnv (kip)	phiRn (kip)	%	Controls	
LEG	PX - 3" DIA PIPE	-69.70	1.2D + 1.6W Normal	3.90	100	100	100	41.1	50.0	120.14	0	0	0.00	0.00	58	Member X	
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0		
DIAG	SAE - 1.5X1.5X0.1875	-4.25	1.2D + 1.6W 210	6.084	50	50	50	124.6	36.0	7.59	1	1	7.95	10.44	56	Member Z	

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls	
LEG	PX - 3" DIA PIPE	66.88	1.2D + 1.6W 60 deg -	50	65	135.90	0	0	0	0.00	0.00		49	Member	
HORIZ		0.00		0	0	0.00	0	0	0	0.00	0.00	0.00	0		
DIAG	SAE - 1.5X1.5X0.1875	4.18	1.2D + 1.6W 330	36	58	13.47	1	1	1	7.95	6.20	4.69	89	Blk Shear	

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		25.86	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		30.60	1.2D + 1.6W Normal -	0.00	0	0	
Bot Tension		67.16	0.9D + 1.6W 60 deg	166.22	40	4	0.875" A325
Bot Compression		0.00		0.00	0	0	

Section: 6		6N30		Bot Elev (ft): 100.0				Height (ft): 4.150				Shear		Bear		Use	
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn (kip)	Num Bolts	Num Holes	phiRnv (kip)	phiRn (kip)	%	Controls	
LEG	PST - 2-1/2" DIA PIP	-26.81	1.2D + 1.6W Normal	3.90	100	100	100	49.4	50.0	64.14	0	0	0.00	0.00	41	Member X	
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0		
DIAG	SAE - 1.5X1.5X0.1875	-3.05	1.2D + 1.6W 90 deg -	6.031	50	50	50	123.5	36.0	7.69	1	1	7.95	10.44	39	Member Z	

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls	
LEG	PST - 2-1/2" DIA PIP	25.57	1.2D + 1.6W 60 deg -	50	65	76.68	0	0	0	0.00	0.00		33	Member	
HORIZ		0.00		0	0	0.00	0	0	0	0.00	0.00	0.00	0		
DIAG	SAE - 1.5X1.5X0.1875	3.03	1.2D + 1.6W 90 deg -	36	58	13.47	1	1	1	7.95	6.20	4.69	64	Blk Shear	

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		19.25	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		23.47	1.2D + 1.6W Normal -	0.00	0	0	
Bot Tension		25.86	0.9D + 1.6W 60 deg	120.41	21	4	0.75" A325
Bot Compression		0.00		0.00	0	0	

Site Number: 302536

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Site Name: Cherry Hill-branford, CT

Engineering Number: OAA744361_C3_02

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Customer: AT&T MOBILITY

Force/Stress Summary

Section: 7		6N30		Bot Elev (ft): 104.1		Height (ft): 15.850										
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phiT Pn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	-20.36	1.2D + 1.6W Normal	3.90	100	100	100	49.4	50.0	64.14	0	0	0.00	0.00	31	Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 1.5X1.5X0.1875	-2.78	1.2D + 1.6W 90 deg -	6.024	50	50	50	123.4	36.0	7.71	1	1	7.95	10.44	36	Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phiT Pn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	16.33	0.9D + 1.6W 60 deg	50	65	76.68	0	0	0.00	0.00		21	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 1.5X1.5X0.1875	2.78	1.2D + 1.6W 90 deg -	36	58	13.47	1	1	7.95	6.20	4.69	59	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		2.34	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		3.59	1.2D + 1.6W 120 deg	0.00	0		
Bot Tension		19.25	0.9D + 1.6W 60 deg	0.00	0		
Bot Compression		0.00		0.00	0		

Section: 8		6N285		Bot Elev (ft): 120.0		Height (ft): 5.000										
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phiT Pn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	-1.89	1.2D + 1.6W Normal	5.00	100	100	100	63.4	50.0	57.18	0	0	0.00	0.00	3	Member X
HORIZ	SAE - 1.5X1.5X0.125	-0.27	1.2D + 1.6W 60 deg -	4.563	100	100	100	185.0	36.0	2.38	1	1	7.95	6.96	11	Member Z
DIAG	SAE - 1.5X1.5X0.125	-1.13	1.2D + 1.6W 90 deg -	6.769	50	50	50	137.2	36.0	4.32	1	1	7.95	6.96	26	Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phiT Pn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	0.81	0.9D + 1.6W 60 deg	50	65	76.68	0	0	0.00	0.00		1	Member
HORIZ	SAE - 1.5X1.5X0.125	0.29	1.2D + 1.6W Normal	36	58	9.20	1	1	7.95	4.13	3.13	9	Blk Shear
DIAG	SAE - 1.5X1.5X0.125	1.12	1.2D + 1.6W 90 deg -	36	58	9.20	1	1	7.95	4.13	3.13	35	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		0.00		0.00	0	0	
Top Compression		1.64	1.2D + 1.0Di + 1.0Wi	0.00	0		
Bot Tension		2.34	0.9D + 1.6W 60 deg	81.36	3	4	5/8 A325
Bot Compression		0.00		0.00	0		

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Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal - Pat 1	6.21	00.00	0	1	0.00	165.47	-12.37	
	6.21	00.00	120	1a	4.63	-72.37	-3.14	
	6.21	00.00	240	1b	-4.63	-72.37	-3.14	
1.2D + 1.6W Normal - Pat 2	6.21	00.00	0	1	0.00	121.79	-8.61	
	6.21	00.00	120	1a	3.12	-50.53	-1.92	
	6.21	00.00	240	1b	-3.12	-50.53	-1.92	
1.2D + 1.6W Normal - Pat 3	6.21	00.00	0	1	0.00	165.47	-12.37	
	6.21	00.00	120	1a	4.63	-72.37	-3.14	
	6.21	00.00	240	1b	-4.63	-72.37	-3.14	
1.2D + 1.6W 60 deg - Pat 1	6.21	00.00	0	1	-0.34	83.69	-6.19	
	6.21	00.00	120	1a	-5.52	83.60	2.82	
	6.21	00.00	240	1b	-9.66	-146.55	-5.59	
1.2D + 1.6W 60 deg - Pat 2	6.21	00.00	0	1	-0.08	62.98	-4.41	
	6.21	00.00	120	1a	-3.85	62.90	2.15	
	6.21	00.00	240	1b	-6.52	-105.15	-3.77	
1.2D + 1.6W 60 deg - Pat 3	6.21	00.00	0	1	-0.34	83.69	-6.19	
	6.21	00.00	120	1a	-5.52	83.60	2.82	
	6.21	00.00	240	1b	-9.66	-146.55	-5.59	
1.2D + 1.6W 90 deg - Pat 1	6.21	00.00	0	1	-0.43	6.97	-0.43	
	6.21	00.00	120	1a	-9.17	140.86	5.09	
	6.21	00.00	240	1b	-8.51	-127.09	-4.67	
1.2D + 1.6W 90 deg - Pat 2	6.21	00.00	0	1	-0.11	6.97	-0.44	
	6.21	00.00	120	1a	-6.39	104.51	3.66	
	6.21	00.00	240	1b	-5.66	-90.75	-3.22	
1.2D + 1.6W 90 deg - Pat 3	6.21	00.00	0	1	-0.43	6.97	-0.43	
	6.21	00.00	120	1a	-9.17	140.86	5.09	
	6.21	00.00	240	1b	-8.51	-127.09	-4.67	
1.2D + 1.6W 120 deg - Pat 1	6.21	00.00	0	1	-0.41	-72.29	5.58	
	6.21	00.00	120	1a	-10.70	165.39	6.19	
	6.21	00.00	240	1b	-5.03	-72.37	-2.45	
1.2D + 1.6W 120 deg - Pat 2	6.21	00.00	0	1	-0.12	-50.45	3.66	
	6.21	00.00	120	1a	-7.45	121.71	4.32	
	6.21	00.00	240	1b	-3.22	-50.53	-1.75	
1.2D + 1.6W 120 deg - Pat 3	6.21	00.00	0	1	-0.41	-72.29	5.58	
	6.21	00.00	120	1a	-10.70	165.39	6.19	
	6.21	00.00	240	1b	-5.03	-72.37	-2.45	
1.2D + 1.6W 180 deg - Pat 1	6.21	00.00	0	1	0.00	-146.48	11.16	
	6.21	00.00	120	1a	-5.20	83.61	3.38	
	6.21	00.00	240	1b	5.20	83.61	3.38	
1.2D + 1.6W 180 deg - Pat 2	6.21	00.00	0	1	0.00	-105.08	7.53	
	6.21	00.00	120	1a	-3.78	62.91	2.27	
	6.21	00.00	240	1b	3.78	62.91	2.27	
1.2D + 1.6W 180 deg - Pat 3	6.21	00.00	0	1	0.00	-146.48	11.16	
	6.21	00.00	120	1a	-5.20	83.61	3.38	

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	6.21	00.00	240	1b	5.20	83.61	3.38
1.2D + 1.6W 210 deg - Pat 1	6.21	00.00	0	1	0.23	-127.02	9.70
	6.21	00.00	120	1a	-0.17	6.89	0.57
	6.21	00.00	240	1b	8.99	140.86	5.41
1.2D + 1.6W 210 deg - Pat 2	6.21	00.00	0	1	0.06	-90.67	6.51
	6.21	00.00	120	1a	-0.33	6.89	0.30
	6.21	00.00	240	1b	6.35	104.51	3.72
1.2D + 1.6W 210 deg - Pat 3	6.21	00.00	0	1	0.23	-127.02	9.70
	6.21	00.00	120	1a	-0.17	6.89	0.57
	6.21	00.00	240	1b	8.99	140.86	5.41
1.2D + 1.6W 240 deg - Pat 1	6.21	00.00	0	1	0.41	-72.29	5.58
	6.21	00.00	120	1a	5.03	-72.37	-2.45
	6.21	00.00	240	1b	10.70	165.39	6.19
1.2D + 1.6W 240 deg - Pat 2	6.21	00.00	0	1	0.12	-50.45	3.66
	6.21	00.00	120	1a	3.22	-50.53	-1.75
	6.21	00.00	240	1b	7.45	121.71	4.32
1.2D + 1.6W 240 deg - Pat 3	6.21	00.00	0	1	0.41	-72.29	5.58
	6.21	00.00	120	1a	5.03	-72.37	-2.45
	6.21	00.00	240	1b	10.70	165.39	6.19
1.2D + 1.6W 300 deg - Pat 1	6.21	00.00	0	1	0.34	83.69	-6.19
	6.21	00.00	120	1a	9.66	-146.55	-5.59
	6.21	00.00	240	1b	5.52	83.60	2.82
1.2D + 1.6W 300 deg - Pat 2	6.21	00.00	0	1	0.08	62.98	-4.41
	6.21	00.00	120	1a	6.52	-105.15	-3.77
	6.21	00.00	240	1b	3.85	62.90	2.15
1.2D + 1.6W 300 deg - Pat 3	6.21	00.00	0	1	0.34	83.69	-6.19
	6.21	00.00	120	1a	9.66	-146.55	-5.59
	6.21	00.00	240	1b	5.52	83.60	2.82
1.2D + 1.6W 330 deg - Pat 1	6.21	00.00	0	1	0.19	140.94	-10.49
	6.21	00.00	120	1a	8.29	-127.10	-5.05
	6.21	00.00	240	1b	0.57	6.89	-0.14
1.2D + 1.6W 330 deg - Pat 2	6.21	00.00	0	1	0.05	104.59	-7.36
	6.21	00.00	120	1a	5.61	-90.75	-3.31
	6.21	00.00	240	1b	0.42	6.89	0.14
1.2D + 1.6W 330 deg - Pat 3	6.21	00.00	0	1	0.19	140.94	-10.49
	6.21	00.00	120	1a	8.29	-127.10	-5.05
	6.21	00.00	240	1b	0.57	6.89	-0.14
0.9D + 1.6W Normal	6.21	00.00	0	1	0.00	163.33	-12.25
	6.21	00.00	120	1a	4.72	-73.89	-3.20
	6.21	00.00	240	1b	-4.72	-73.89	-3.20
0.9D + 1.6W 60 deg	6.21	00.00	0	1	-0.35	81.75	-6.07
	6.21	00.00	120	1a	-5.42	81.69	2.76
	6.21	00.00	240	1b	-9.75	-147.89	-5.64
0.9D + 1.6W 90 deg	6.21	00.00	0	1	-0.43	5.23	-0.32
	6.21	00.00	120	1a	-9.07	138.80	5.03
	6.21	00.00	240	1b	-8.60	-128.48	-4.72
0.9D + 1.6W 120 deg	6.21	00.00	0	1	-0.42	-73.83	5.69
	6.21	00.00	120	1a	-10.60	163.27	6.13
	6.21	00.00	240	1b	-5.12	-73.89	-2.50

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0.9D + 1.6W 180 deg	6.21	00.00	0	1	0.00	-147.83	11.27
	6.21	00.00	120	1a	-5.09	81.69	3.33
	6.21	00.00	240	1b	5.09	81.69	3.33
0.9D + 1.6W 210 deg	6.21	00.00	0	1	0.24	-128.42	9.81
	6.21	00.00	120	1a	-0.07	5.17	0.52
	6.21	00.00	240	1b	8.88	138.80	5.35
0.9D + 1.6W 240 deg	6.21	00.00	0	1	0.42	-73.83	5.69
	6.21	00.00	120	1a	5.12	-73.89	-2.50
	6.21	00.00	240	1b	10.60	163.27	6.13
0.9D + 1.6W 300 deg	6.21	00.00	0	1	0.35	81.75	-6.07
	6.21	00.00	120	1a	9.75	-147.89	-5.64
	6.21	00.00	240	1b	5.42	81.69	2.76
0.9D + 1.6W 330 deg	6.21	00.00	0	1	0.20	138.86	-10.37
	6.21	00.00	120	1a	8.38	-128.48	-5.11
	6.21	00.00	240	1b	0.48	5.17	-0.20
1.2D + 1.0Di + 1.0Wi Normal	6.21	00.00	0	1	0.00	73.66	-4.63
	6.21	00.00	120	1a	1.11	-4.42	-0.81
	6.21	00.00	240	1b	-1.11	-4.42	-0.81
1.2D + 1.0Di + 1.0Wi 60 deg	6.21	00.00	0	1	-0.14	47.49	-2.62
	6.21	00.00	120	1a	-2.33	47.37	1.19
	6.21	00.00	240	1b	-2.89	-30.05	-1.67
1.2D + 1.0Di + 1.0Wi 90 deg	6.21	00.00	0	1	-0.17	21.68	-0.64
	6.21	00.00	120	1a	-3.57	66.38	1.97
	6.21	00.00	240	1b	-2.48	-23.25	-1.34
1.2D + 1.0Di + 1.0Wi 120 deg	6.21	00.00	0	1	-0.15	-4.31	1.37
	6.21	00.00	120	1a	-4.01	73.54	2.32
	6.21	00.00	240	1b	-1.26	-4.42	-0.56
1.2D + 1.0Di + 1.0Wi 180 deg	6.21	00.00	0	1	0.00	-29.94	3.34
	6.21	00.00	120	1a	-2.20	47.37	1.43
	6.21	00.00	240	1b	2.20	47.37	1.43
1.2D + 1.0Di + 1.0Wi 210 deg	6.21	00.00	0	1	0.09	-23.10	2.81
	6.21	00.00	120	1a	-0.47	21.57	0.46
	6.21	00.00	240	1b	3.49	66.35	2.11
1.2D + 1.0Di + 1.0Wi 240 deg	6.21	00.00	0	1	0.15	-4.31	1.37
	6.21	00.00	120	1a	1.26	-4.42	-0.56
	6.21	00.00	240	1b	4.01	73.54	2.32
1.2D + 1.0Di + 1.0Wi 300 deg	6.21	00.00	0	1	0.14	47.49	-2.62
	6.21	00.00	120	1a	2.89	-30.05	-1.67
	6.21	00.00	240	1b	2.33	47.37	1.19
1.2D + 1.0Di + 1.0Wi 330 deg	6.21	00.00	0	1	0.08	66.46	-4.08
	6.21	00.00	120	1a	2.40	-23.22	-1.48
	6.21	00.00	240	1b	0.63	21.57	0.18
(1.2 + 0.2Sds) * DL + E Normal M1	6.21	00.00	0	1	0.00	13.74	-0.90
	6.21	00.00	120	1a	-0.21	3.62	0.13
	6.21	00.00	240	1b	0.21	3.62	0.13
(1.2 + 0.2Sds) * DL + E Normal M2	6.21	00.00	0	1	0.00	15.33	-0.98
	6.21	00.00	120	1a	-0.17	2.82	0.12
	6.21	00.00	240	1b	0.17	2.82	0.12

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(1.2 + 0.2Sds) * DL + E 60 deg M1	6.21	00.00	0	1	0.01	10.37	-0.68
	6.21	00.00	120	1a	-0.59	10.37	0.35
	6.21	00.00	240	1b	0.02	0.24	0.01
(1.2 + 0.2Sds) * DL + E 60 deg M2	6.21	00.00	0	1	0.02	11.08	-0.72
	6.21	00.00	120	1a	-0.61	11.08	0.38
	6.21	00.00	240	1b	-0.03	-1.18	-0.02
(1.2 + 0.2Sds) * DL + E 90 deg M1	6.21	00.00	0	1	0.01	6.99	-0.46
	6.21	00.00	120	1a	-0.73	12.84	0.43
	6.21	00.00	240	1b	0.07	1.14	0.04
(1.2 + 0.2Sds) * DL + E 90 deg M2	6.21	00.00	0	1	0.03	6.99	-0.46
	6.21	00.00	120	1a	-0.78	14.21	0.47
	6.21	00.00	240	1b	0.02	-0.23	0.00
(1.2 + 0.2Sds) * DL + E 120 deg M1	6.21	00.00	0	1	0.01	3.62	-0.24
	6.21	00.00	120	1a	-0.78	13.74	0.45
	6.21	00.00	240	1b	0.22	3.62	0.11
(1.2 + 0.2Sds) * DL + E 120 deg M2	6.21	00.00	0	1	0.02	2.90	-0.21
	6.21	00.00	120	1a	-0.84	15.16	0.48
	6.21	00.00	240	1b	0.20	2.90	0.09
(1.2 + 0.2Sds) * DL + E 180 deg M1	6.21	00.00	0	1	0.00	0.24	-0.02
	6.21	00.00	120	1a	-0.60	10.37	0.33
	6.21	00.00	240	1b	0.60	10.37	0.33
(1.2 + 0.2Sds) * DL + E 180 deg M2	6.21	00.00	0	1	0.00	-1.35	0.05
	6.21	00.00	120	1a	-0.64	11.16	0.34
	6.21	00.00	240	1b	0.64	11.16	0.34
(1.2 + 0.2Sds) * DL + E 210 deg M1	6.21	00.00	0	1	-0.01	1.14	-0.08
	6.21	00.00	120	1a	-0.41	6.99	0.22
	6.21	00.00	240	1b	0.74	12.84	0.42
(1.2 + 0.2Sds) * DL + E 210 deg M2	6.21	00.00	0	1	-0.01	-0.09	-0.03
	6.21	00.00	120	1a	-0.41	6.99	0.21
	6.21	00.00	240	1b	0.79	14.07	0.44
(1.2 + 0.2Sds) * DL + E 240 deg M1	6.21	00.00	0	1	-0.01	3.62	-0.24
	6.21	00.00	120	1a	-0.22	3.62	0.11
	6.21	00.00	240	1b	0.78	13.74	0.45
(1.2 + 0.2Sds) * DL + E 240 deg M2	6.21	00.00	0	1	-0.02	2.90	-0.21
	6.21	00.00	120	1a	-0.20	2.90	0.09
	6.21	00.00	240	1b	0.84	15.16	0.48
(1.2 + 0.2Sds) * DL + E 300 deg M1	6.21	00.00	0	1	-0.01	10.37	-0.68
	6.21	00.00	120	1a	-0.02	0.24	0.01
	6.21	00.00	240	1b	0.59	10.37	0.35
(1.2 + 0.2Sds) * DL + E 300 deg M2	6.21	00.00	0	1	-0.02	11.08	-0.72
	6.21	00.00	120	1a	0.03	-1.18	-0.02
	6.21	00.00	240	1b	0.61	11.08	0.38
(1.2 + 0.2Sds) * DL + E 330 deg M1	6.21	00.00	0	1	-0.01	12.84	-0.85
	6.21	00.00	120	1a	-0.07	1.14	0.05
	6.21	00.00	240	1b	0.40	6.99	0.24
(1.2 + 0.2Sds) * DL + E 330 deg M2	6.21	00.00	0	1	-0.01	14.07	-0.90
	6.21	00.00	120	1a	-0.02	-0.09	0.03
	6.21	00.00	240	1b	0.39	6.99	0.25
(0.9 - 0.2Sds) * DL + E Normal M1	6.21	00.00	0	1	0.00	11.59	-0.76

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	6.21	00.00	120	1a	-0.08	1.50	0.06
	6.21	00.00	240	1b	0.08	1.50	0.06
(0.9 - 0.2Sds) * DL + E Normal M2	6.21	00.00	0	1	0.00	13.17	-0.84
	6.21	00.00	120	1a	-0.05	0.71	0.05
	6.21	00.00	240	1b	0.05	0.71	0.05
(0.9 - 0.2Sds) * DL + E 60 deg M1	6.21	00.00	0	1	0.01	8.23	-0.54
	6.21	00.00	120	1a	-0.46	8.23	0.28
	6.21	00.00	240	1b	-0.10	-1.87	-0.06
(0.9 - 0.2Sds) * DL + E 60 deg M2	6.21	00.00	0	1	0.02	8.94	-0.57
	6.21	00.00	120	1a	-0.49	8.94	0.31
	6.21	00.00	240	1b	-0.16	-3.28	-0.09
(0.9 - 0.2Sds) * DL + E 90 deg M1	6.21	00.00	0	1	0.01	4.86	-0.32
	6.21	00.00	120	1a	-0.61	10.69	0.36
	6.21	00.00	240	1b	-0.05	-0.97	-0.03
(0.9 - 0.2Sds) * DL + E 90 deg M2	6.21	00.00	0	1	0.03	4.86	-0.32
	6.21	00.00	120	1a	-0.66	12.06	0.39
	6.21	00.00	240	1b	-0.10	-2.33	-0.07
(0.9 - 0.2Sds) * DL + E 120 deg M1	6.21	00.00	0	1	0.01	1.50	-0.10
	6.21	00.00	120	1a	-0.66	11.59	0.38
	6.21	00.00	240	1b	0.09	1.50	0.04
(0.9 - 0.2Sds) * DL + E 120 deg M2	6.21	00.00	0	1	0.02	0.79	-0.07
	6.21	00.00	120	1a	-0.71	13.01	0.41
	6.21	00.00	240	1b	0.07	0.79	0.02
(0.9 - 0.2Sds) * DL + E 180 deg M1	6.21	00.00	0	1	0.00	-1.87	0.12
	6.21	00.00	120	1a	-0.48	8.23	0.26
	6.21	00.00	240	1b	0.48	8.23	0.26
(0.9 - 0.2Sds) * DL + E 180 deg M2	6.21	00.00	0	1	0.00	-3.44	0.19
	6.21	00.00	120	1a	-0.51	9.02	0.27
	6.21	00.00	240	1b	0.51	9.02	0.27
(0.9 - 0.2Sds) * DL + E 210 deg M1	6.21	00.00	0	1	-0.01	-0.97	0.06
	6.21	00.00	120	1a	-0.29	4.86	0.15
	6.21	00.00	240	1b	0.61	10.69	0.35
(0.9 - 0.2Sds) * DL + E 210 deg M2	6.21	00.00	0	1	-0.01	-2.19	0.11
	6.21	00.00	120	1a	-0.29	4.86	0.14
	6.21	00.00	240	1b	0.66	11.92	0.37
(0.9 - 0.2Sds) * DL + E 240 deg M1	6.21	00.00	0	1	-0.01	1.50	-0.10
	6.21	00.00	120	1a	-0.09	1.50	0.04
	6.21	00.00	240	1b	0.66	11.59	0.38
(0.9 - 0.2Sds) * DL + E 240 deg M2	6.21	00.00	0	1	-0.02	0.79	-0.07
	6.21	00.00	120	1a	-0.07	0.79	0.02
	6.21	00.00	240	1b	0.71	13.01	0.41
(0.9 - 0.2Sds) * DL + E 300 deg M1	6.21	00.00	0	1	-0.01	8.23	-0.54
	6.21	00.00	120	1a	0.10	-1.87	-0.06
	6.21	00.00	240	1b	0.46	8.23	0.28
(0.9 - 0.2Sds) * DL + E 300 deg M2	6.21	00.00	0	1	-0.02	8.94	-0.57
	6.21	00.00	120	1a	0.16	-3.28	-0.09
	6.21	00.00	240	1b	0.49	8.94	0.31
(0.9 - 0.2Sds) * DL + E 330 deg M1	6.21	00.00	0	1	-0.01	10.69	-0.70
	6.21	00.00	120	1a	0.05	-0.97	-0.02

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	6.21	00.00	240	1b	0.27	4.86	0.17
(0.9 - 0.2Sds) * DL + E 330 deg M2	6.21	00.00	0	1	-0.01	11.92	-0.76
	6.21	00.00	120	1a	0.10	-2.19	-0.05
	6.21	00.00	240	1b	0.27	4.86	0.18
1.0D + 1.0W Service Normal	6.21	00.00	0	1	0.00	40.48	-3.01
	6.21	00.00	120	1a	0.77	-11.60	-0.55
	6.21	00.00	240	1b	-0.77	-11.60	-0.55
1.0D + 1.0W Service 60 deg	6.21	00.00	0	1	-0.08	22.59	-1.64
	6.21	00.00	120	1a	-1.46	22.52	0.75
	6.21	00.00	240	1b	-1.88	-27.83	-1.08
1.0D + 1.0W Service 90 deg	6.21	00.00	0	1	-0.10	5.80	-0.37
	6.21	00.00	120	1a	-2.26	35.05	1.26
	6.21	00.00	240	1b	-1.62	-23.57	-0.88
1.0D + 1.0W Service 120 deg	6.21	00.00	0	1	-0.09	-11.53	0.94
	6.21	00.00	120	1a	-2.60	40.41	1.50
	6.21	00.00	240	1b	-0.86	-11.60	-0.40
1.0D + 1.0W Service 180 deg	6.21	00.00	0	1	0.00	-27.76	2.17
	6.21	00.00	120	1a	-1.38	22.52	0.89
	6.21	00.00	240	1b	1.38	22.52	0.89
1.0D + 1.0W Service 210 deg	6.21	00.00	0	1	0.05	-23.51	1.85
	6.21	00.00	120	1a	-0.28	5.74	0.27
	6.21	00.00	240	1b	2.22	35.05	1.34
1.0D + 1.0W Service 240 deg	6.21	00.00	0	1	0.09	-11.53	0.94
	6.21	00.00	120	1a	0.86	-11.60	-0.40
	6.21	00.00	240	1b	2.60	40.41	1.50
1.0D + 1.0W Service 300 deg	6.21	00.00	0	1	0.08	22.59	-1.64
	6.21	00.00	120	1a	1.88	-27.83	-1.08
	6.21	00.00	240	1b	1.46	22.52	0.75
1.0D + 1.0W Service 330 deg	6.21	00.00	0	1	0.05	35.11	-2.59
	6.21	00.00	120	1a	1.57	-23.57	-0.97
	6.21	00.00	240	1b	0.37	5.74	0.11

Max Uplift: 147.89 (kip)	Moment Ice: 484.59 (kip-ft)	Moment: 1,476.15 (kip-ft)	1.2D + 1.6W Normal - Pat 3
Max Down: 165.47 (kip)	Total Down Ice: 64.81 (kip)	Total Down: 20.73 (kip)	
Max Shear: 12.37 (kip)	Total Shear Ice: 6.25 (kip)	Total Shear: 18.64 (kip)	

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Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
101 mph Normal with No Ice - Pattern 1	91.95	0.907	0.0297	1.2709	1.2709
101 mph Normal with No Ice - Pattern 1	100.00	1.090	0.0291	1.4548	1.4548
101 mph Normal with No Ice - Pattern 1	111.95	1.381	0.0300	1.4222	1.4225
101 mph Normal with No Ice - Pattern 1	125.00	1.707	0.0302	1.4291	1.4294
101 mph Normal with No Ice - Pattern 2	91.95	0.689	0.0209	0.9942	0.9942
101 mph Normal with No Ice - Pattern 2	100.00	0.833	0.0205	1.1496	1.1496
101 mph Normal with No Ice - Pattern 2	111.95	1.062	0.0211	1.1251	1.1253
101 mph Normal with No Ice - Pattern 2	125.00	1.320	0.0212	1.1321	1.1323
101 mph Normal with No Ice - Pattern 3	91.95	0.907	0.0297	1.2709	1.2709
101 mph Normal with No Ice - Pattern 3	100.00	1.090	0.0291	1.4548	1.4548
101 mph Normal with No Ice - Pattern 3	111.95	1.381	0.0300	1.4222	1.4225
101 mph Normal with No Ice - Pattern 3	125.00	1.707	0.0302	1.4291	1.4294
101 mph 60 degree with No Ice - Pattern 1	91.95	0.882	0.0320	1.2377	1.2377
101 mph 60 degree with No Ice - Pattern 1	100.00	1.061	0.0328	1.4130	1.4130
101 mph 60 degree with No Ice - Pattern 1	111.95	1.343	0.0324	1.3861	1.3861
101 mph 60 degree with No Ice - Pattern 1	125.00	1.661	0.0325	1.3911	1.3915
101 mph 60 degree with No Ice - Pattern 2	91.95	0.676	0.0224	0.9759	0.9759
101 mph 60 degree with No Ice - Pattern 2	100.00	0.817	0.0230	1.1252	1.1252
101 mph 60 degree with No Ice - Pattern 2	111.95	1.041	0.0226	1.1049	1.1049
101 mph 60 degree with No Ice - Pattern 2	125.00	1.295	0.0227	1.1103	1.1106
101 mph 60 degree with No Ice - Pattern 3	91.95	0.882	0.0320	1.2377	1.2377
101 mph 60 degree with No Ice - Pattern 3	100.00	1.061	0.0328	1.4130	1.4130
101 mph 60 degree with No Ice - Pattern 3	111.95	1.343	0.0324	1.3861	1.3861
101 mph 60 degree with No Ice - Pattern 3	125.00	1.661	0.0325	1.3911	1.3915
101 mph 90 degree with No Ice - Pattern 1	91.95	0.887	-0.0353	1.2439	1.2440
101 mph 90 degree with No Ice - Pattern 1	100.00	1.067	-0.0354	1.4078	1.4080
101 mph 90 degree with No Ice - Pattern 1	111.95	1.352	-0.0356	1.3940	1.3941
101 mph 90 degree with No Ice - Pattern 1	125.00	1.671	-0.0357	1.4019	1.4023
101 mph 90 degree with No Ice - Pattern 2	91.95	0.678	-0.0249	0.9787	0.9788
101 mph 90 degree with No Ice - Pattern 2	100.00	0.820	-0.0250	1.1180	1.1181
101 mph 90 degree with No Ice - Pattern 2	111.95	1.046	-0.0251	1.1090	1.1090
101 mph 90 degree with No Ice - Pattern 2	125.00	1.301	-0.0252	1.1171	1.1174
101 mph 90 degree with No Ice - Pattern 3	91.95	0.887	-0.0353	1.2439	1.2440
101 mph 90 degree with No Ice - Pattern 3	100.00	1.067	-0.0354	1.4078	1.4080
101 mph 90 degree with No Ice - Pattern 3	111.95	1.352	-0.0356	1.3940	1.3941
101 mph 90 degree with No Ice - Pattern 3	125.00	1.671	-0.0357	1.4019	1.4023
101 mph 120 degree with No Ice - Pattern 1	91.95	0.906	0.0301	1.2691	1.2691
101 mph 120 degree with No Ice - Pattern 1	100.00	1.090	0.0296	1.4527	1.4527
101 mph 120 degree with No Ice - Pattern 1	111.95	1.380	0.0306	1.4203	1.4206
101 mph 120 degree with No Ice - Pattern 1	125.00	1.705	0.0309	1.4272	1.4275
101 mph 120 degree with No Ice - Pattern 2	91.95	0.688	0.0212	0.9925	0.9925
101 mph 120 degree with No Ice - Pattern 2	100.00	0.832	0.0208	1.1475	1.1475
101 mph 120 degree with No Ice - Pattern 2	111.95	1.061	0.0215	1.1232	1.1234
101 mph 120 degree with No Ice - Pattern 2	125.00	1.319	0.0217	1.1303	1.1305
101 mph 120 degree with No Ice - Pattern 3	91.95	0.906	0.0301	1.2691	1.2691
101 mph 120 degree with No Ice - Pattern 3	100.00	1.090	0.0296	1.4527	1.4527
101 mph 120 degree with No Ice - Pattern 3	111.95	1.380	0.0306	1.4203	1.4206
101 mph 120 degree with No Ice - Pattern 3	125.00	1.705	0.0309	1.4272	1.4275
101 mph 180 degree with No Ice - Pattern 1	91.95	0.881	0.0316	1.2360	1.2360
101 mph 180 degree with No Ice - Pattern 1	100.00	1.060	0.0324	1.4115	1.4115
101 mph 180 degree with No Ice - Pattern 1	111.95	1.342	0.0318	1.3842	1.3842
101 mph 180 degree with No Ice - Pattern 1	125.00	1.659	0.0319	1.3893	1.3897
101 mph 180 degree with No Ice - Pattern 2	91.95	0.675	0.0221	0.9741	0.9741
101 mph 180 degree with No Ice - Pattern 2	100.00	0.816	0.0227	1.1237	1.1237
101 mph 180 degree with No Ice - Pattern 2	111.95	1.040	0.0223	1.1030	1.1030

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101 mph 180 degree with No Ice - Pattern 2	125.00	1.293	0.0224	1.1085	1.1088
101 mph 180 degree with No Ice - Pattern 3	91.95	0.881	0.0316	1.2360	1.2360
101 mph 180 degree with No Ice - Pattern 3	100.00	1.060	0.0324	1.4115	1.4115
101 mph 180 degree with No Ice - Pattern 3	111.95	1.342	0.0318	1.3842	1.3842
101 mph 180 degree with No Ice - Pattern 3	125.00	1.659	0.0319	1.3893	1.3897
101 mph 210 degree with No Ice - Pattern 1	91.95	0.887	0.0188	1.2430	1.2432
101 mph 210 degree with No Ice - Pattern 1	100.00	1.067	0.0195	1.4066	1.4067
101 mph 210 degree with No Ice - Pattern 1	111.95	1.351	0.0188	1.3928	1.3929
101 mph 210 degree with No Ice - Pattern 1	125.00	1.670	0.0188	1.4007	1.4012
101 mph 210 degree with No Ice - Pattern 2	91.95	0.678	0.0131	0.9779	0.9779
101 mph 210 degree with No Ice - Pattern 2	100.00	0.820	0.0136	1.1168	1.1169
101 mph 210 degree with No Ice - Pattern 2	111.95	1.045	0.0131	1.1078	1.1080
101 mph 210 degree with No Ice - Pattern 2	125.00	1.299	0.0130	1.1160	1.1163
101 mph 210 degree with No Ice - Pattern 3	91.95	0.887	0.0188	1.2430	1.2432
101 mph 210 degree with No Ice - Pattern 3	100.00	1.067	0.0195	1.4066	1.4067
101 mph 210 degree with No Ice - Pattern 3	111.95	1.351	0.0188	1.3928	1.3929
101 mph 210 degree with No Ice - Pattern 3	125.00	1.670	0.0188	1.4007	1.4012
101 mph 240 degree with No Ice - Pattern 1	91.95	0.906	0.0299	1.2691	1.2691
101 mph 240 degree with No Ice - Pattern 1	100.00	1.090	0.0293	1.4527	1.4527
101 mph 240 degree with No Ice - Pattern 1	111.95	1.380	0.0302	1.4203	1.4206
101 mph 240 degree with No Ice - Pattern 1	125.00	1.705	0.0304	1.4272	1.4275
101 mph 240 degree with No Ice - Pattern 2	91.95	0.688	0.0210	0.9925	0.9925
101 mph 240 degree with No Ice - Pattern 2	100.00	0.832	0.0206	1.1475	1.1475
101 mph 240 degree with No Ice - Pattern 2	111.95	1.061	0.0212	1.1232	1.1234
101 mph 240 degree with No Ice - Pattern 2	125.00	1.319	0.0213	1.1303	1.1305
101 mph 240 degree with No Ice - Pattern 3	91.95	0.906	0.0299	1.2691	1.2691
101 mph 240 degree with No Ice - Pattern 3	100.00	1.090	0.0293	1.4527	1.4527
101 mph 240 degree with No Ice - Pattern 3	111.95	1.380	0.0302	1.4203	1.4206
101 mph 240 degree with No Ice - Pattern 3	125.00	1.705	0.0304	1.4272	1.4275
101 mph 300 degree with No Ice - Pattern 1	91.95	0.882	0.0317	1.2377	1.2377
101 mph 300 degree with No Ice - Pattern 1	100.00	1.061	0.0325	1.4130	1.4130
101 mph 300 degree with No Ice - Pattern 1	111.95	1.343	0.0320	1.3861	1.3861
101 mph 300 degree with No Ice - Pattern 1	125.00	1.661	0.0320	1.3911	1.3915
101 mph 300 degree with No Ice - Pattern 2	91.95	0.676	0.0222	0.9759	0.9759
101 mph 300 degree with No Ice - Pattern 2	100.00	0.817	0.0227	1.1252	1.1252
101 mph 300 degree with No Ice - Pattern 2	111.95	1.041	0.0223	1.1049	1.1049
101 mph 300 degree with No Ice - Pattern 2	125.00	1.295	0.0224	1.1103	1.1106
101 mph 300 degree with No Ice - Pattern 3	91.95	0.882	0.0317	1.2377	1.2377
101 mph 300 degree with No Ice - Pattern 3	100.00	1.061	0.0325	1.4130	1.4130
101 mph 300 degree with No Ice - Pattern 3	111.95	1.343	0.0320	1.3861	1.3861
101 mph 300 degree with No Ice - Pattern 3	125.00	1.661	0.0320	1.3911	1.3915
101 mph 330 degree with No Ice - Pattern 1	91.95	0.888	0.0191	1.2451	1.2452
101 mph 330 degree with No Ice - Pattern 1	100.00	1.068	0.0199	1.4091	1.4092
101 mph 330 degree with No Ice - Pattern 1	111.95	1.353	0.0192	1.3950	1.3951
101 mph 330 degree with No Ice - Pattern 1	125.00	1.673	0.0193	1.4028	1.4033
101 mph 330 degree with No Ice - Pattern 2	91.95	0.679	0.0133	0.9800	0.9800
101 mph 330 degree with No Ice - Pattern 2	100.00	0.821	0.0139	1.1192	1.1193
101 mph 330 degree with No Ice - Pattern 2	111.95	1.047	0.0134	1.1100	1.1101
101 mph 330 degree with No Ice - Pattern 2	125.00	1.302	0.0134	1.1181	1.1184
101 mph 330 degree with No Ice - Pattern 3	91.95	0.888	0.0191	1.2451	1.2452
101 mph 330 degree with No Ice - Pattern 3	100.00	1.068	0.0199	1.4091	1.4092
101 mph 330 degree with No Ice - Pattern 3	111.95	1.353	0.0192	1.3950	1.3951
101 mph 330 degree with No Ice - Pattern 3	125.00	1.673	0.0193	1.4028	1.4033
101 mph Normal with No Ice (Reduced DL)	91.95	0.903	0.0296	1.2651	1.2651
101 mph Normal with No Ice (Reduced DL)	100.00	1.086	0.0290	1.4476	1.4476
101 mph Normal with No Ice (Reduced DL)	111.95	1.375	0.0299	1.4154	1.4157
101 mph Normal with No Ice (Reduced DL)	125.00	1.700	0.0301	1.4221	1.4225
101 mph 60 deg with No Ice (Reduced DL)	91.95	0.879	0.0319	1.2321	1.2321
101 mph 60 deg with No Ice (Reduced DL)	100.00	1.057	0.0327	1.4066	1.4066
101 mph 60 deg with No Ice (Reduced DL)	111.95	1.338	0.0323	1.3794	1.3794
101 mph 60 deg with No Ice (Reduced DL)	125.00	1.654	0.0324	1.3849	1.3853
101 mph 90 deg with No Ice (Reduced DL)	91.95	0.884	-0.0351	1.2385	1.2386

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101 mph 90 deg with No Ice (Reduced DL)	100.00	1.063	-0.0353	1.4013	1.4014
101 mph 90 deg with No Ice (Reduced DL)	111.95	1.346	-0.0355	1.3875	1.3876
101 mph 90 deg with No Ice (Reduced DL)	125.00	1.665	-0.0356	1.3956	1.3960
101 mph 120 deg with No Ice (Reduced DL)	91.95	0.903	0.0300	1.2637	1.2637
101 mph 120 deg with No Ice (Reduced DL)	100.00	1.086	0.0295	1.4460	1.4460
101 mph 120 deg with No Ice (Reduced DL)	111.95	1.374	0.0305	1.4139	1.4143
101 mph 120 deg with No Ice (Reduced DL)	125.00	1.699	0.0308	1.4208	1.4211
101 mph 180 deg with No Ice (Reduced DL)	91.95	0.878	0.0314	1.2308	1.2308
101 mph 180 deg with No Ice (Reduced DL)	100.00	1.056	0.0322	1.4055	1.4055
101 mph 180 deg with No Ice (Reduced DL)	111.95	1.337	0.0317	1.3781	1.3781
101 mph 180 deg with No Ice (Reduced DL)	125.00	1.653	0.0317	1.3836	1.3839
101 mph 210 deg with No Ice (Reduced DL)	91.95	0.884	0.0187	1.2379	1.2380
101 mph 210 deg with No Ice (Reduced DL)	100.00	1.063	0.0194	1.4003	1.4005
101 mph 210 deg with No Ice (Reduced DL)	111.95	1.346	0.0187	1.3866	1.3868
101 mph 210 deg with No Ice (Reduced DL)	125.00	1.664	0.0187	1.3947	1.3952
101 mph 240 deg with No Ice (Reduced DL)	91.95	0.903	0.0298	1.2637	1.2637
101 mph 240 deg with No Ice (Reduced DL)	100.00	1.086	0.0292	1.4460	1.4460
101 mph 240 deg with No Ice (Reduced DL)	111.95	1.374	0.0301	1.4139	1.4143
101 mph 240 deg with No Ice (Reduced DL)	125.00	1.699	0.0303	1.4208	1.4211
101 mph 300 deg with No Ice (Reduced DL)	91.95	0.879	0.0316	1.2321	1.2321
101 mph 300 deg with No Ice (Reduced DL)	100.00	1.057	0.0324	1.4066	1.4066
101 mph 300 deg with No Ice (Reduced DL)	111.95	1.338	0.0318	1.3794	1.3794
101 mph 300 deg with No Ice (Reduced DL)	125.00	1.654	0.0319	1.3849	1.3853
101 mph 330 deg with No Ice (Reduced DL)	91.95	0.885	0.0190	1.2394	1.2395
101 mph 330 deg with No Ice (Reduced DL)	100.00	1.064	0.0198	1.4022	1.4024
101 mph 330 deg with No Ice (Reduced DL)	111.95	1.347	0.0192	1.3883	1.3884
101 mph 330 deg with No Ice (Reduced DL)	125.00	1.666	0.0192	1.3963	1.3967
50 mph Normal with 0.75 in Radial Ice	91.95	0.291	0.0097	0.4009	0.4009
50 mph Normal with 0.75 in Radial Ice	100.00	0.349	0.0096	0.4569	0.4569
50 mph Normal with 0.75 in Radial Ice	111.95	0.440	0.0094	0.4456	0.4457
50 mph Normal with 0.75 in Radial Ice	125.00	0.542	0.0093	0.4479	0.4480
50 mph 60 deg with 0.75 in Radial Ice	91.95	0.289	0.0100	0.3982	0.3982
50 mph 60 deg with 0.75 in Radial Ice	100.00	0.347	0.0100	0.4492	0.4492
50 mph 60 deg with 0.75 in Radial Ice	111.95	0.437	0.0098	0.4430	0.4430
50 mph 60 deg with 0.75 in Radial Ice	125.00	0.538	0.0097	0.4447	0.4447
50 mph 90 deg with 0.75 in Radial Ice	91.95	0.289	-0.0116	0.3978	0.3978
50 mph 90 deg with 0.75 in Radial Ice	100.00	0.347	-0.0116	0.4478	0.4478
50 mph 90 deg with 0.75 in Radial Ice	111.95	0.437	-0.0114	0.4428	0.4428
50 mph 90 deg with 0.75 in Radial Ice	125.00	0.538	-0.0113	0.4448	0.4448
50 mph 120 deg with 0.75 in Radial Ice	91.95	0.290	0.0098	0.3984	0.3984
50 mph 120 deg with 0.75 in Radial Ice	100.00	0.347	0.0097	0.4542	0.4542
50 mph 120 deg with 0.75 in Radial Ice	111.95	0.438	0.0096	0.4429	0.4430
50 mph 120 deg with 0.75 in Radial Ice	125.00	0.539	0.0095	0.4453	0.4454
50 mph 180 deg with 0.75 in Radial Ice	91.95	0.288	0.0099	0.3956	0.3956
50 mph 180 deg with 0.75 in Radial Ice	100.00	0.345	0.0099	0.4466	0.4466
50 mph 180 deg with 0.75 in Radial Ice	111.95	0.434	0.0096	0.4403	0.4403
50 mph 180 deg with 0.75 in Radial Ice	125.00	0.535	0.0095	0.4421	0.4421
50 mph 210 deg with 0.75 in Radial Ice	91.95	0.289	0.0057	0.3961	0.3961
50 mph 210 deg with 0.75 in Radial Ice	100.00	0.346	0.0057	0.4459	0.4460
50 mph 210 deg with 0.75 in Radial Ice	111.95	0.435	0.0055	0.4409	0.4409
50 mph 210 deg with 0.75 in Radial Ice	125.00	0.536	0.0054	0.4429	0.4429
50 mph 240 deg with 0.75 in Radial Ice	91.95	0.290	0.0097	0.3984	0.3984
50 mph 240 deg with 0.75 in Radial Ice	100.00	0.347	0.0096	0.4542	0.4542
50 mph 240 deg with 0.75 in Radial Ice	111.95	0.438	0.0094	0.4429	0.4430
50 mph 240 deg with 0.75 in Radial Ice	125.00	0.539	0.0094	0.4453	0.4454
50 mph 300 deg with 0.75 in Radial Ice	91.95	0.289	0.0100	0.3982	0.3982
50 mph 300 deg with 0.75 in Radial Ice	100.00	0.347	0.0100	0.4492	0.4492
50 mph 300 deg with 0.75 in Radial Ice	111.95	0.437	0.0096	0.4430	0.4430
50 mph 300 deg with 0.75 in Radial Ice	125.00	0.538	0.0095	0.4447	0.4447
50 mph 330 deg with 0.75 in Radial Ice	91.95	0.290	0.0058	0.3990	0.3991
50 mph 330 deg with 0.75 in Radial Ice	100.00	0.347	0.0058	0.4490	0.4491
50 mph 330 deg with 0.75 in Radial Ice	111.95	0.438	0.0056	0.4440	0.4440

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50 mph 330 deg with 0.75 in Radial Ice	125.00	0.539	0.0056	0.4459	0.4460
Seismic Normal M1	91.95	0.042	0.0009	0.0619	0.0619
Seismic Normal M1	100.00	0.051	0.0008	0.0722	0.0722
Seismic Normal M1	111.95	0.066	0.0007	0.0712	0.0712
Seismic Normal M1	125.00	0.082	0.0007	0.0722	0.0722
Seismic Normal M2	91.95	0.056	0.0010	0.0863	0.0863
Seismic Normal M2	100.00	0.068	0.0010	0.1026	0.1026
Seismic Normal M2	111.95	0.089	0.0009	0.1029	0.1029
Seismic Normal M2	125.00	0.113	0.0008	0.1050	0.1050
Seismic 60 deg M1	91.95	0.042	0.0009	0.0620	0.0620
Seismic 60 deg M1	100.00	0.051	0.0009	0.0710	0.0710
Seismic 60 deg M1	111.95	0.066	0.0007	0.0714	0.0714
Seismic 60 deg M1	125.00	0.082	0.0007	0.0724	0.0724
Seismic 60 deg M2	91.95	0.055	0.0010	0.0850	0.0850
Seismic 60 deg M2	100.00	0.067	0.0009	0.0998	0.0998
Seismic 60 deg M2	111.95	0.087	0.0008	0.1015	0.1015
Seismic 60 deg M2	125.00	0.111	0.0007	0.1027	0.1027
Seismic 90 deg M1	91.95	0.042	-0.0010	0.0619	0.0619
Seismic 90 deg M1	100.00	0.051	-0.0010	0.0712	0.0712
Seismic 90 deg M1	111.95	0.066	-0.0008	0.0713	0.0713
Seismic 90 deg M1	125.00	0.082	-0.0008	0.0723	0.0723
Seismic 90 deg M2	91.95	0.056	-0.0012	0.0863	0.0863
Seismic 90 deg M2	100.00	0.068	-0.0012	0.1011	0.1011
Seismic 90 deg M2	111.95	0.089	-0.0010	0.1030	0.1030
Seismic 90 deg M2	125.00	0.113	-0.0010	0.1048	0.1048
Seismic 120 deg M1	91.95	0.042	0.0009	0.0619	0.0619
Seismic 120 deg M1	100.00	0.051	0.0009	0.0722	0.0722
Seismic 120 deg M1	111.95	0.066	0.0007	0.0712	0.0712
Seismic 120 deg M1	125.00	0.082	0.0007	0.0722	0.0722
Seismic 120 deg M2	91.95	0.055	0.0010	0.0849	0.0849
Seismic 120 deg M2	100.00	0.067	0.0009	0.1010	0.1010
Seismic 120 deg M2	111.95	0.088	0.0008	0.1013	0.1013
Seismic 120 deg M2	125.00	0.111	0.0007	0.1034	0.1034
Seismic 180 deg M1	91.95	0.042	0.0009	0.0620	0.0620
Seismic 180 deg M1	100.00	0.051	0.0008	0.0710	0.0710
Seismic 180 deg M1	111.95	0.066	0.0007	0.0714	0.0714
Seismic 180 deg M1	125.00	0.082	0.0007	0.0724	0.0724
Seismic 180 deg M2	91.95	0.056	0.0011	0.0864	0.0864
Seismic 180 deg M2	100.00	0.068	0.0010	0.1015	0.1015
Seismic 180 deg M2	111.95	0.089	0.0009	0.1031	0.1031
Seismic 180 deg M2	125.00	0.113	0.0008	0.1043	0.1043
Seismic 210 deg M1	91.95	0.042	0.0005	0.0619	0.0619
Seismic 210 deg M1	100.00	0.051	0.0005	0.0712	0.0712
Seismic 210 deg M1	111.95	0.066	0.0004	0.0713	0.0713
Seismic 210 deg M1	125.00	0.082	0.0004	0.0723	0.0723
Seismic 210 deg M2	91.95	0.055	0.0005	0.0849	0.0849
Seismic 210 deg M2	100.00	0.067	0.0005	0.0995	0.0995
Seismic 210 deg M2	111.95	0.088	0.0004	0.1015	0.1015
Seismic 210 deg M2	125.00	0.111	0.0004	0.1032	0.1032
Seismic 240 deg M1	91.95	0.042	0.0009	0.0619	0.0619
Seismic 240 deg M1	100.00	0.051	0.0008	0.0722	0.0722
Seismic 240 deg M1	111.95	0.066	0.0007	0.0712	0.0712
Seismic 240 deg M1	125.00	0.082	0.0007	0.0722	0.0722
Seismic 240 deg M2	91.95	0.055	0.0010	0.0849	0.0849
Seismic 240 deg M2	100.00	0.067	0.0009	0.1010	0.1010
Seismic 240 deg M2	111.95	0.088	0.0008	0.1013	0.1013
Seismic 240 deg M2	125.00	0.111	0.0007	0.1034	0.1034
Seismic 300 deg M1	91.95	0.042	0.0009	0.0620	0.0620
Seismic 300 deg M1	100.00	0.051	0.0008	0.0710	0.0710
Seismic 300 deg M1	111.95	0.066	0.0007	0.0714	0.0714
Seismic 300 deg M1	125.00	0.082	0.0007	0.0724	0.0724
Seismic 300 deg M2	91.95	0.055	0.0010	0.0850	0.0850

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Seismic 300 deg M2	100.00	0.067	0.0009	0.0998	0.0998
Seismic 300 deg M2	111.95	0.087	0.0008	0.1015	0.1015
Seismic 300 deg M2	125.00	0.111	0.0007	0.1027	0.1027
Seismic 330 deg M1	91.95	0.042	0.0005	0.0619	0.0619
Seismic 330 deg M1	100.00	0.051	0.0005	0.0712	0.0712
Seismic 330 deg M1	111.95	0.066	0.0004	0.0713	0.0713
Seismic 330 deg M1	125.00	0.082	0.0004	0.0723	0.0723
Seismic 330 deg M2	91.95	0.055	0.0006	0.0849	0.0849
Seismic 330 deg M2	100.00	0.067	0.0005	0.0995	0.0995
Seismic 330 deg M2	111.95	0.088	0.0004	0.1015	0.1015
Seismic 330 deg M2	125.00	0.111	0.0004	0.1032	0.1032
Seismic (Reduced DL) Normal M1	91.95	0.042	0.0009	0.0616	0.0616
Seismic (Reduced DL) Normal M1	100.00	0.051	0.0008	0.0716	0.0716
Seismic (Reduced DL) Normal M1	111.95	0.065	0.0007	0.0708	0.0708
Seismic (Reduced DL) Normal M1	125.00	0.082	0.0007	0.0716	0.0716
Seismic (Reduced DL) Normal M2	91.95	0.056	0.0010	0.0859	0.0859
Seismic (Reduced DL) Normal M2	100.00	0.068	0.0010	0.1019	0.1019
Seismic (Reduced DL) Normal M2	111.95	0.089	0.0009	0.1023	0.1023
Seismic (Reduced DL) Normal M2	125.00	0.112	0.0008	0.1042	0.1042
Seismic (Reduced DL) 60 deg M1	91.95	0.042	0.0009	0.0616	0.0616
Seismic (Reduced DL) 60 deg M1	100.00	0.051	0.0009	0.0708	0.0708
Seismic (Reduced DL) 60 deg M1	111.95	0.065	0.0007	0.0709	0.0709
Seismic (Reduced DL) 60 deg M1	125.00	0.082	0.0007	0.0716	0.0716
Seismic (Reduced DL) 60 deg M2	91.95	0.055	0.0010	0.0846	0.0846
Seismic (Reduced DL) 60 deg M2	100.00	0.067	0.0009	0.0995	0.0995
Seismic (Reduced DL) 60 deg M2	111.95	0.087	0.0008	0.1009	0.1009
Seismic (Reduced DL) 60 deg M2	125.00	0.110	0.0007	0.1018	0.1018
Seismic (Reduced DL) 90 deg M1	91.95	0.042	-0.0010	0.0616	0.0616
Seismic (Reduced DL) 90 deg M1	100.00	0.051	-0.0010	0.0707	0.0707
Seismic (Reduced DL) 90 deg M1	111.95	0.065	-0.0008	0.0709	0.0709
Seismic (Reduced DL) 90 deg M1	125.00	0.082	-0.0008	0.0716	0.0716
Seismic (Reduced DL) 90 deg M2	91.95	0.056	-0.0012	0.0859	0.0859
Seismic (Reduced DL) 90 deg M2	100.00	0.068	-0.0012	0.1004	0.1004
Seismic (Reduced DL) 90 deg M2	111.95	0.089	-0.0010	0.1024	0.1024
Seismic (Reduced DL) 90 deg M2	125.00	0.112	-0.0010	0.1042	0.1042
Seismic (Reduced DL) 120 deg M1	91.95	0.042	0.0009	0.0616	0.0616
Seismic (Reduced DL) 120 deg M1	100.00	0.051	0.0008	0.0716	0.0716
Seismic (Reduced DL) 120 deg M1	111.95	0.065	0.0007	0.0708	0.0708
Seismic (Reduced DL) 120 deg M1	125.00	0.082	0.0007	0.0716	0.0716
Seismic (Reduced DL) 120 deg M2	91.95	0.055	0.0010	0.0845	0.0845
Seismic (Reduced DL) 120 deg M2	100.00	0.067	0.0009	0.1003	0.1003
Seismic (Reduced DL) 120 deg M2	111.95	0.087	0.0008	0.1008	0.1008
Seismic (Reduced DL) 120 deg M2	125.00	0.110	0.0007	0.1027	0.1027
Seismic (Reduced DL) 180 deg M1	91.95	0.042	0.0009	0.0616	0.0616
Seismic (Reduced DL) 180 deg M1	100.00	0.051	0.0008	0.0708	0.0708
Seismic (Reduced DL) 180 deg M1	111.95	0.065	0.0007	0.0709	0.0709
Seismic (Reduced DL) 180 deg M1	125.00	0.082	0.0007	0.0716	0.0716
Seismic (Reduced DL) 180 deg M2	91.95	0.056	0.0010	0.0860	0.0860
Seismic (Reduced DL) 180 deg M2	100.00	0.068	0.0010	0.1011	0.1011
Seismic (Reduced DL) 180 deg M2	111.95	0.089	0.0009	0.1025	0.1025
Seismic (Reduced DL) 180 deg M2	125.00	0.112	0.0008	0.1034	0.1034
Seismic (Reduced DL) 210 deg M1	91.95	0.042	0.0005	0.0616	0.0616
Seismic (Reduced DL) 210 deg M1	100.00	0.051	0.0005	0.0707	0.0707
Seismic (Reduced DL) 210 deg M1	111.95	0.065	0.0004	0.0709	0.0709
Seismic (Reduced DL) 210 deg M1	125.00	0.082	0.0004	0.0716	0.0716
Seismic (Reduced DL) 210 deg M2	91.95	0.055	0.0005	0.0845	0.0845
Seismic (Reduced DL) 210 deg M2	100.00	0.067	0.0005	0.0988	0.0988
Seismic (Reduced DL) 210 deg M2	111.95	0.087	0.0004	0.1009	0.1009
Seismic (Reduced DL) 210 deg M2	125.00	0.110	0.0004	0.1027	0.1027
Seismic (Reduced DL) 240 deg M1	91.95	0.042	0.0009	0.0616	0.0616
Seismic (Reduced DL) 240 deg M1	100.00	0.051	0.0008	0.0716	0.0716
Seismic (Reduced DL) 240 deg M1	111.95	0.065	0.0007	0.0708	0.0708

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Seismic (Reduced DL) 240 deg M1	125.00	0.082	0.0007	0.0716	0.0716
Seismic (Reduced DL) 240 deg M2	91.95	0.055	0.0009	0.0845	0.0845
Seismic (Reduced DL) 240 deg M2	100.00	0.067	0.0009	0.1003	0.1003
Seismic (Reduced DL) 240 deg M2	111.95	0.087	0.0008	0.1008	0.1008
Seismic (Reduced DL) 240 deg M2	125.00	0.110	0.0007	0.1027	0.1027
Seismic (Reduced DL) 300 deg M1	91.95	0.042	0.0009	0.0616	0.0616
Seismic (Reduced DL) 300 deg M1	100.00	0.051	0.0008	0.0708	0.0708
Seismic (Reduced DL) 300 deg M1	111.95	0.065	0.0007	0.0709	0.0709
Seismic (Reduced DL) 300 deg M1	125.00	0.082	0.0007	0.0716	0.0716
Seismic (Reduced DL) 300 deg M2	91.95	0.055	0.0010	0.0846	0.0846
Seismic (Reduced DL) 300 deg M2	100.00	0.067	0.0009	0.0995	0.0995
Seismic (Reduced DL) 300 deg M2	111.95	0.087	0.0008	0.1009	0.1009
Seismic (Reduced DL) 300 deg M2	125.00	0.110	0.0007	0.1018	0.1018
Seismic (Reduced DL) 330 deg M1	91.95	0.042	0.0005	0.0616	0.0616
Seismic (Reduced DL) 330 deg M1	100.00	0.051	0.0005	0.0707	0.0707
Seismic (Reduced DL) 330 deg M1	111.95	0.065	0.0004	0.0709	0.0709
Seismic (Reduced DL) 330 deg M1	125.00	0.082	0.0004	0.0716	0.0716
Seismic (Reduced DL) 330 deg M2	91.95	0.055	0.0006	0.0845	0.0845
Seismic (Reduced DL) 330 deg M2	100.00	0.067	0.0005	0.0988	0.0988
Seismic (Reduced DL) 330 deg M2	111.95	0.087	0.0004	0.1009	0.1009
Seismic (Reduced DL) 330 deg M2	125.00	0.110	0.0004	0.1027	0.1027
Serviceability - 60 mph Wind Normal	91.95	0.198	0.0056	0.2779	0.2779
Serviceability - 60 mph Wind Normal	100.00	0.239	0.0055	0.3182	0.3182
Serviceability - 60 mph Wind Normal	111.95	0.302	0.0051	0.3113	0.3113
Serviceability - 60 mph Wind Normal	125.00	0.373	0.0050	0.3130	0.3130
Serviceability - 60 mph Wind 60 deg	91.95	0.193	0.0056	0.2702	0.2702
Serviceability - 60 mph Wind 60 deg	100.00	0.232	0.0055	0.3081	0.3081
Serviceability - 60 mph Wind 60 deg	111.95	0.293	0.0051	0.3030	0.3030
Serviceability - 60 mph Wind 60 deg	125.00	0.363	0.0050	0.3037	0.3037
Serviceability - 60 mph Wind 90 deg	91.95	0.194	-0.0064	0.2713	0.2713
Serviceability - 60 mph Wind 90 deg	100.00	0.233	-0.0063	0.3071	0.3072
Serviceability - 60 mph Wind 90 deg	111.95	0.295	-0.0059	0.3044	0.3044
Serviceability - 60 mph Wind 90 deg	125.00	0.365	-0.0057	0.3057	0.3057
Serviceability - 60 mph Wind 120 deg	91.95	0.198	0.0057	0.2764	0.2764
Serviceability - 60 mph Wind 120 deg	100.00	0.238	0.0056	0.3167	0.3167
Serviceability - 60 mph Wind 120 deg	111.95	0.301	0.0052	0.3098	0.3098
Serviceability - 60 mph Wind 120 deg	125.00	0.372	0.0051	0.3115	0.3115
Serviceability - 60 mph Wind 180 deg	91.95	0.192	0.0056	0.2687	0.2687
Serviceability - 60 mph Wind 180 deg	100.00	0.231	0.0055	0.3066	0.3066
Serviceability - 60 mph Wind 180 deg	111.95	0.292	0.0051	0.3015	0.3015
Serviceability - 60 mph Wind 180 deg	125.00	0.361	0.0049	0.3022	0.3022
Serviceability - 60 mph Wind 210 deg	91.95	0.193	0.0032	0.2705	0.2705
Serviceability - 60 mph Wind 210 deg	100.00	0.232	0.0032	0.3063	0.3063
Serviceability - 60 mph Wind 210 deg	111.95	0.294	0.0029	0.3035	0.3036
Serviceability - 60 mph Wind 210 deg	125.00	0.364	0.0028	0.3048	0.3049
Serviceability - 60 mph Wind 240 deg	91.95	0.198	0.0057	0.2764	0.2764
Serviceability - 60 mph Wind 240 deg	100.00	0.238	0.0055	0.3167	0.3167
Serviceability - 60 mph Wind 240 deg	111.95	0.301	0.0052	0.3098	0.3098
Serviceability - 60 mph Wind 240 deg	125.00	0.372	0.0050	0.3115	0.3115
Serviceability - 60 mph Wind 300 deg	91.95	0.193	0.0056	0.2702	0.2702
Serviceability - 60 mph Wind 300 deg	100.00	0.232	0.0055	0.3081	0.3081
Serviceability - 60 mph Wind 300 deg	111.95	0.293	0.0051	0.3030	0.3030
Serviceability - 60 mph Wind 300 deg	125.00	0.363	0.0049	0.3037	0.3037
Serviceability - 60 mph Wind 330 deg	91.95	0.194	0.0033	0.2722	0.2722
Serviceability - 60 mph Wind 330 deg	100.00	0.233	0.0032	0.3081	0.3081
Serviceability - 60 mph Wind 330 deg	111.95	0.296	0.0030	0.3053	0.3053
Serviceability - 60 mph Wind 330 deg	125.00	0.365	0.0029	0.3066	0.3066